Primavera Tutorial

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1. Introduction

This guide is intended as a beginners guide to Primavera. By the end it, you should be able to confidently enter information into Primavera, and be able to present it in a sharp and meaningful manner.

This guide will also look at resources, multiple layouts, progress reporting, filters and target programmes.

The assumption when writing this guide is that Primavera has already been loaded onto the user's computer. Further, it assumes no knowledge of Primavera by the user, but it does presume a level of computer literacy in the user.

The first thing to note about Primavera, and to bear in mind as you work through this tutorial, is that it saves every change made while you work. As such there is no simple "undo" button – any changes made can only be reversed by re-entering the data. When you exit the programme the only thing that you are asked to save is the layout that you have defined: everything else has been auto-saved.

A recommended way of using this guide is to follow the steps first on the example provided, then on a project which has more relevance to you.

Primavera does allow you to have more than one project open at any one time – simply open or create another project and you can move between the <u>two projects</u> at will by selecting the project from under the "Window" tab at the top of the page.
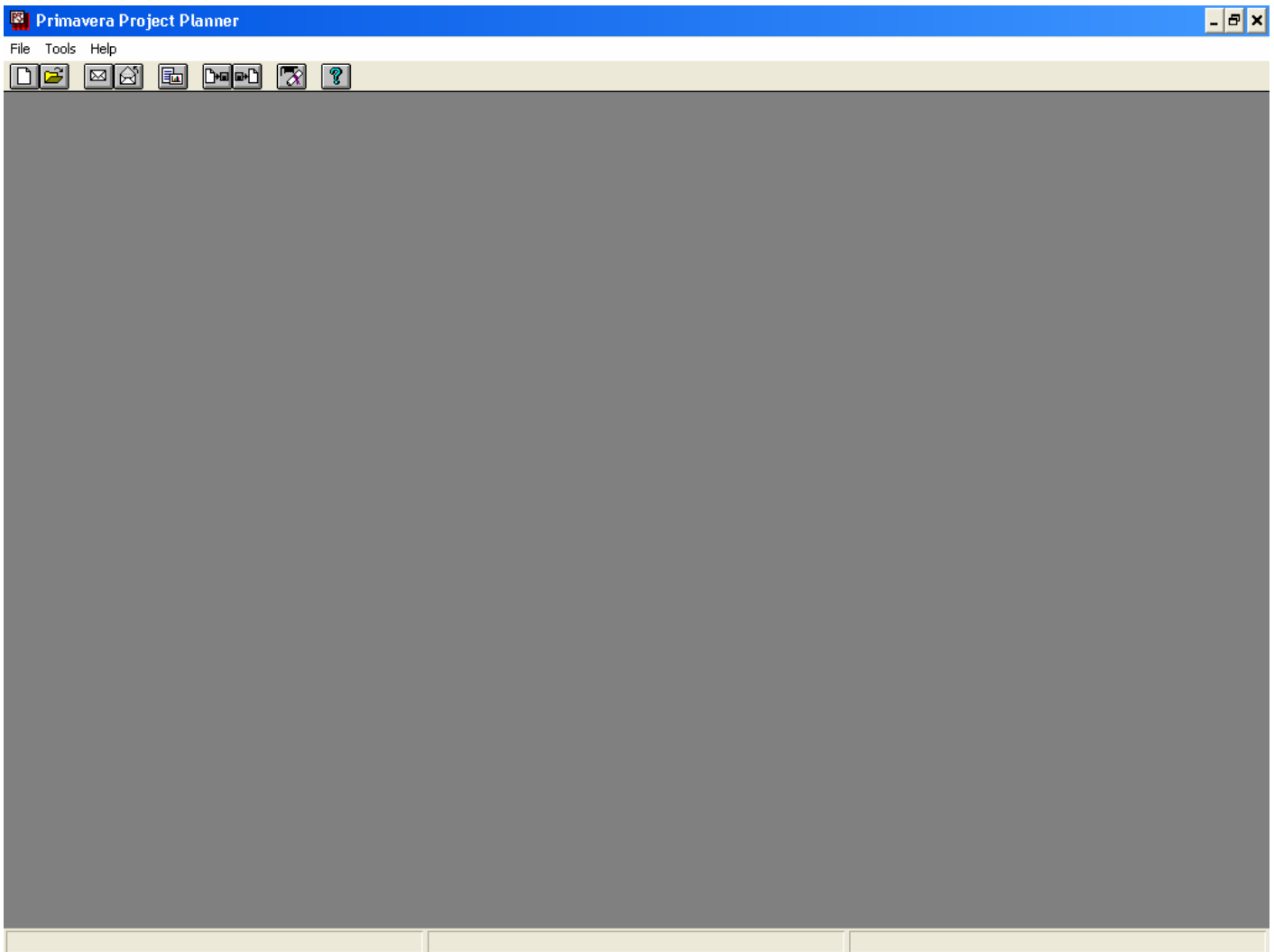
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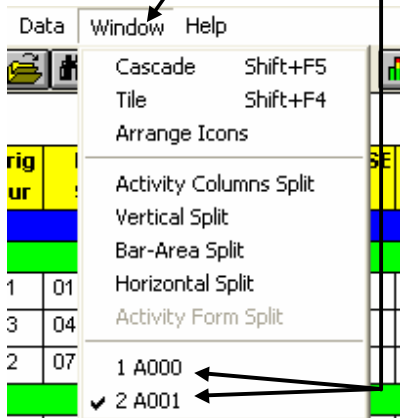
2. Getting Started

The first step is to open the installed programme:

Select the Primavera Project Planner icon in the Primavera programme folder.

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Once Primavera has been opened, your welcome screen should look something like this….
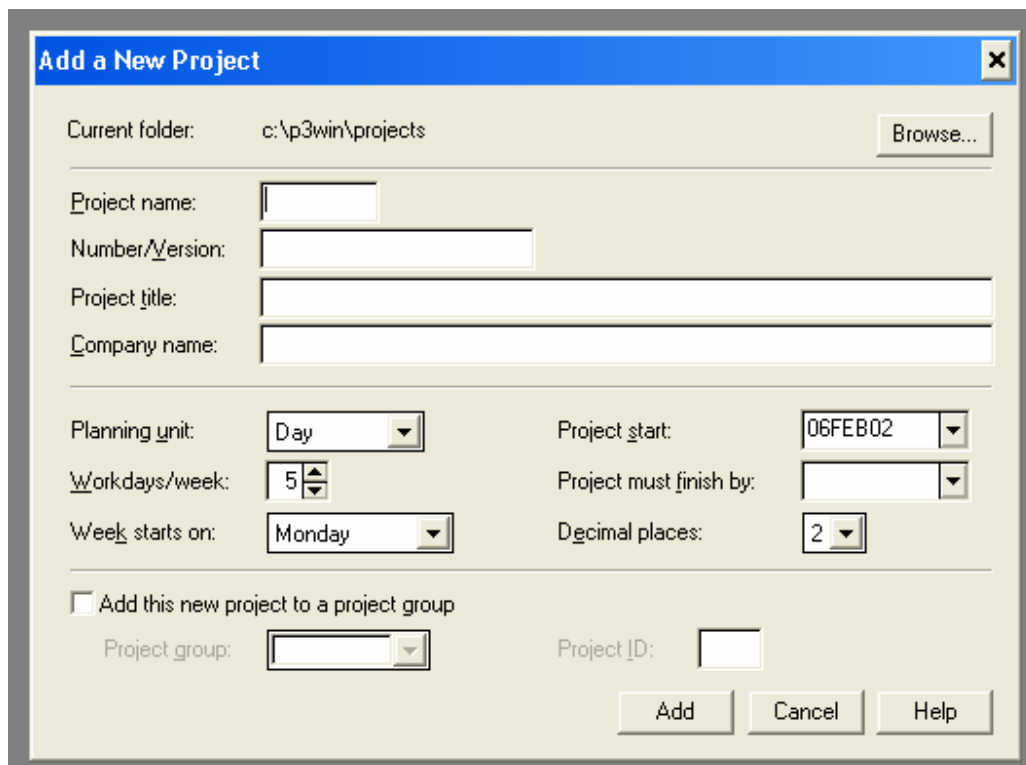

Note: you may be asked for a User Name and password. Unless defined otherwise in the set up, your password is the same as the user name. The user name is as defined in set up.

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To start on your first programme you need to select the menu "File" and Option "New"
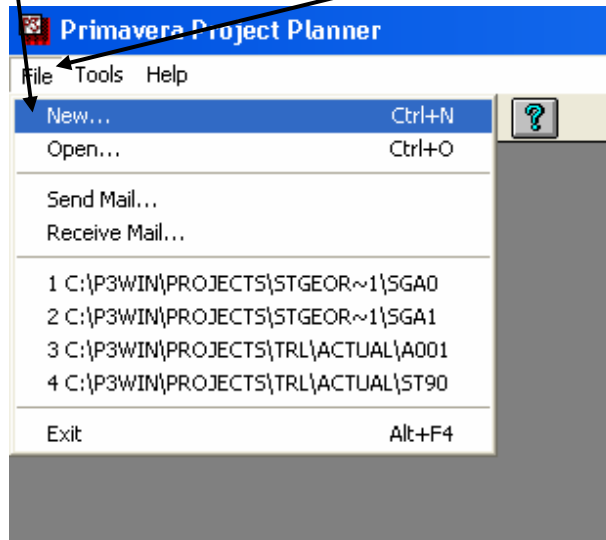
This will open this menu on-screen:

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Project Name: This is a 4 character code that will identify your programme. It can be any alphanumeric character.

Note that the new project will be saved in the folder c:\p3win\projects. It is good practice to set up a "Project" folder which will keep the project files together in one place. The reason for this is that a Primavera project consists of 24 individual files: a single folder containing several projects would have hundreds of files in it!

Number/Version: This indicates the revision number of the programme.

Project Title: This is the title of the current project

Company Name: This is the name of the company for whom this work is being done.

Planning Unit: This is the planning unit of the programme: it is the minimum duration (except 0) of any activity. It can be any unit from Hour to Month.

Workdays/week: This sets up, on your base calendar, your working days schedule.

Week starts on: This is the first day of the week. For instance, 5 workdays a week in a week starting on Monday would mean Monday to Friday are work days.

In some countries there is a six day working week, starting on Saturday. Thus there would be 6 workdays/week and the Week starts on would be set to Saturday.

Project Start: This is the earliest work day of the project. Note that it may be desirable to have a Project Start

several weeks before the first activity, in order to be able to indicate supply/design milestones required for work to commence.

Project must finish by: This is the immutable end date of the project. It can, however, be changed at a later date.

Decimal Places: Generally used in resource assignment and calculation (not in calculation of the programme: Primavera does not support fractions of a planning unit).

> **NB: YOU MUST "TAB" BETWEEN FIELDS OR MOUSE CLICK ON THE NEXT FIELD TO BE ENTERED. PRESSING ENTER WILL TAKE YOU IMMEDIATELY TO THE NEXT SCREEN AND THE DETAILS NOT ENTERED IN WILL NOT BE SAVED AS PART OF THE PROGRAMME.**

After all of this information has been entered, we have a screen that looks like this:

Note that a separate folder in **\projects** has been created called **\house**. (This was done in Internet Explorer)

Once this information has been entered click the "Add" button (**i**) and your project has been created.

3. Entering Your First Activities

Upon entering your project you will be greeted by this screen:
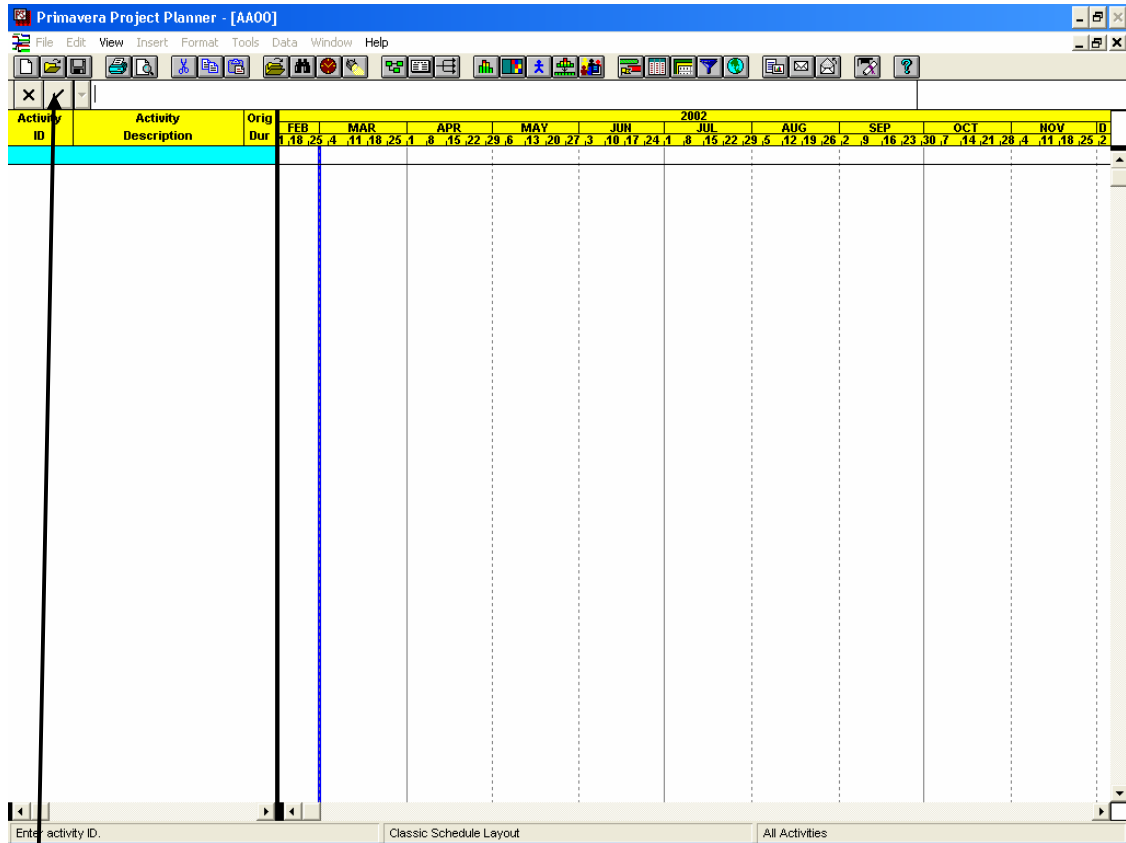
Before continuing any further you must enter the first "Activity ID" or activity number. All future Activity IDs will follow this number sequentially, increasing the number by a fixed amount. The Activity ID can be Alphanumeric.

Enter "A010" and either press enter or click the mouse cursor on the tick. There will be a thick black line around the Activity ID box indicating that this is the field being edited. Press the right arrow to highlight the "Activity Description" box, and enter "Start Project" in this field.

Once entered, it should look like this:

Press the down arrow button (or the "plus" sign) and notice that the Activity ID auto-increments as the new activity appears. Enter in the next several activities so it looks like this:

The activities for your first programme have been entered.

Note that the amount by which Primavera auto-increments the next activity can be adjusted by selecting "Tools" – "Options" – "Activity Inserting…" from the drop-down menus.

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Finally we need to assign each activity a duration. This is done by highlighting the "Orig Dur" box and entering in the required duration. Enter the durations as shown below:

Activity ID	Activity Description	Orig Dur	
A010	Start Project	1	▲▽ Start Project
A020	Clear Site	3	▲◼▽ Clear Site
A030	Set Out	2	▲◼▽ Set Out
A040	Foundations	10	▲◼◼◼▽ Foundations
A050	Floor Slabs	7	▲◼◼▽ Floor Slabs
A060	Superstructure	20	▲◼◼◼◼◼▽ Superstructure
A070	Roof	10	▲◼◼◼▽ Roof
A080	Services and Finishes	20	▲◼◼◼◼◼▽ Services and Finishes
A090	Snagging	5	▲◼▽ Snagging
A100	Handover	1	▲▽ Handover

We are now ready to apply logic to our programme, but before we move on we need to correct the project layout…

4. Establishing Your Layout

Using your mouse, move the cursor over the thick black line separating the Activity details and the Gant chart until it appears as

two vertical lines bisected by one horizontal line with arrow heads pointing left and right.
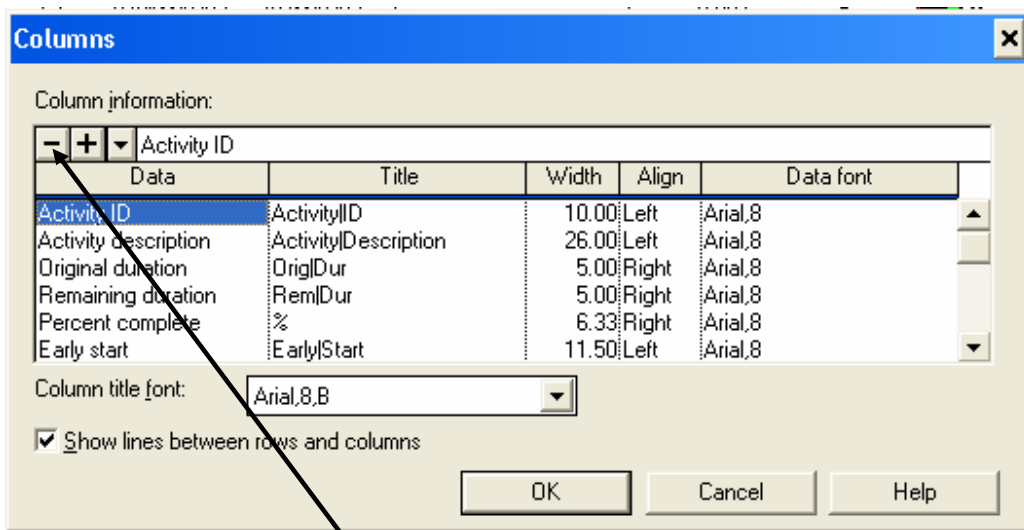

Now press the left mouse button down and drag the cursor to the right: once you have moved the cursor across two thirds of the screen, release the mouse button.

Several new columns are exposed, as shown above. At this point in time we do not need those columns.

Press F11 and this menu should appear.

The first thing we need to do is get rid of the columns which we don't need. Highlight "Remaining Duration" (press the down arrow 3 times or click on it with your mouse) and either press the delete button on your computer or click on the "-"sign in the top left corner of this menu with your mouse.

"Remaining duration" should disappear and "Percent complete" should now be highlighted. Delete this line also. Next highlight "Resource" which should now be visible on your menu. Delete this and the next item that appears, "Budgeted Cost".

You should be left with this:

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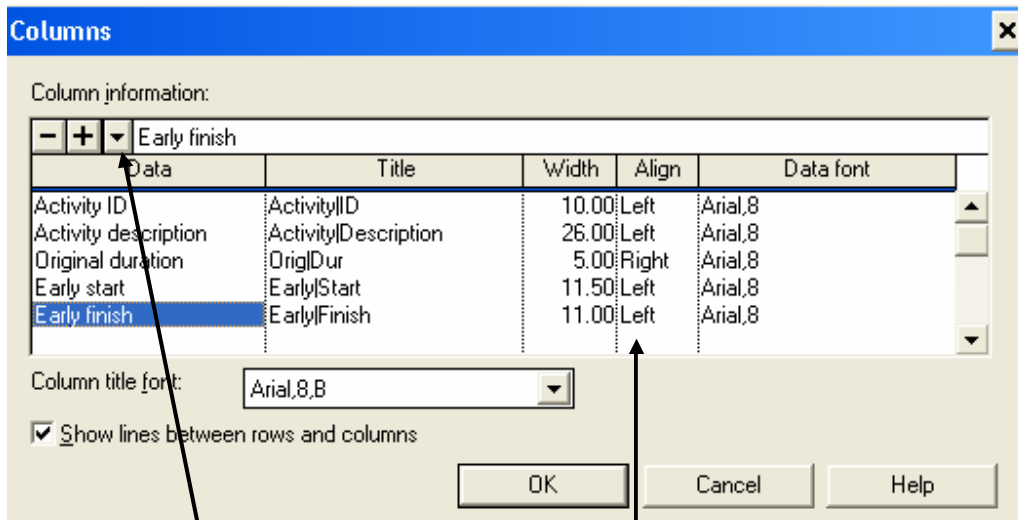
Next we need to align out columns correctly. Using your arrow keys, or by clicking on it with the mouse, highlight the "Align" of "Early Finish". Next press the letter "C" and enter: the Alignment should change from left to centre. Alternatively you can highlight the down arrow symbol next to the "+" sign and select "centre" from the options.

Repeat this process and centre-align Early Start, Original Duration and Activity ID.

Finally we can adjust the column widths. Highlight the "Width" cell of "Early Finish" and type in the number 10 and enter. Repeat this process with "Early Start".

In this menu we can also add columns. Highlight the empty space under "Early Finish" then press the down arrow button we used to select the alignment earlier. The list of columns available for adding is then displayed. Highlight and click on one to bring it into your layout.

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Now we have our layout looking how we want it, click the "OK" button to return to the main screen. Next highlight the black line separating the activity detail and the Gant chart and drag it back to maximise the Gant area visible while still displaying all of our columns.

Your screen should look something like this:
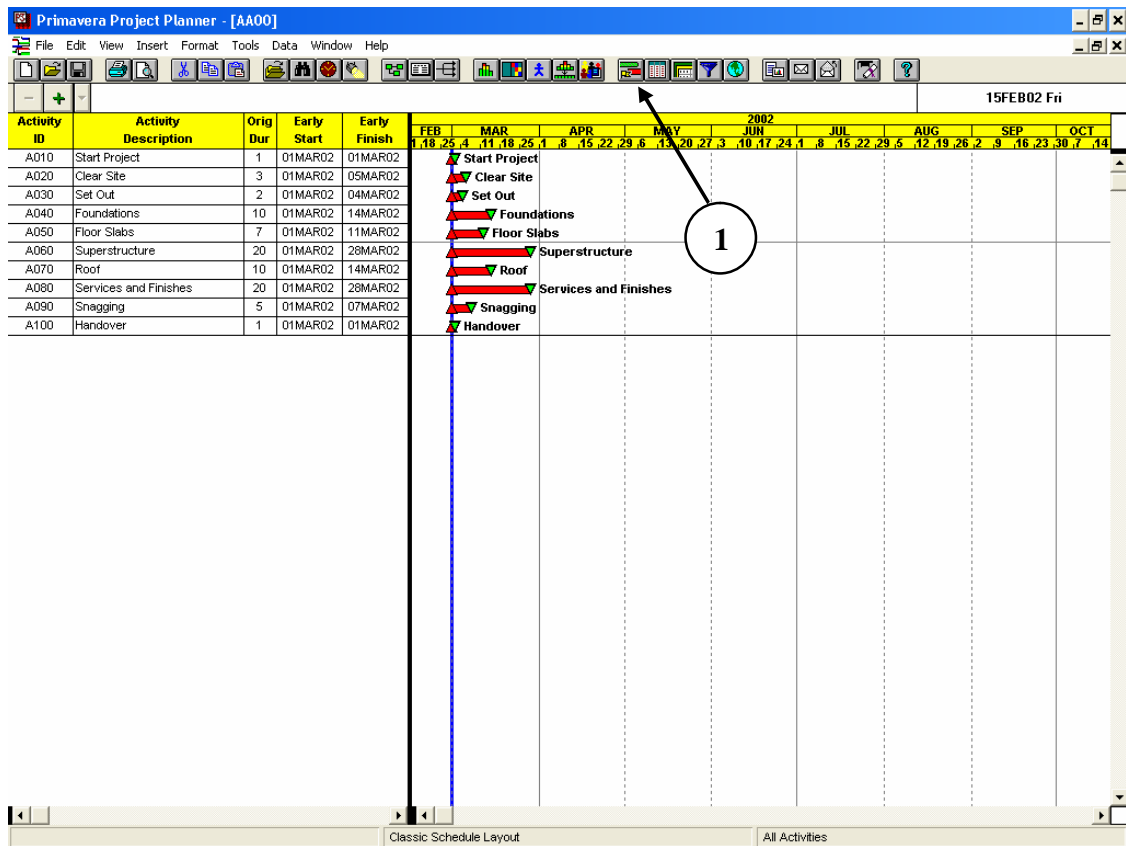
Our next aim is to format the bars. This can be done by either clicking the "Bar" icon (**1**), Format > Bar (from the drop-down menu), or by pressing Ctrl+F11.

The following menu should appear:

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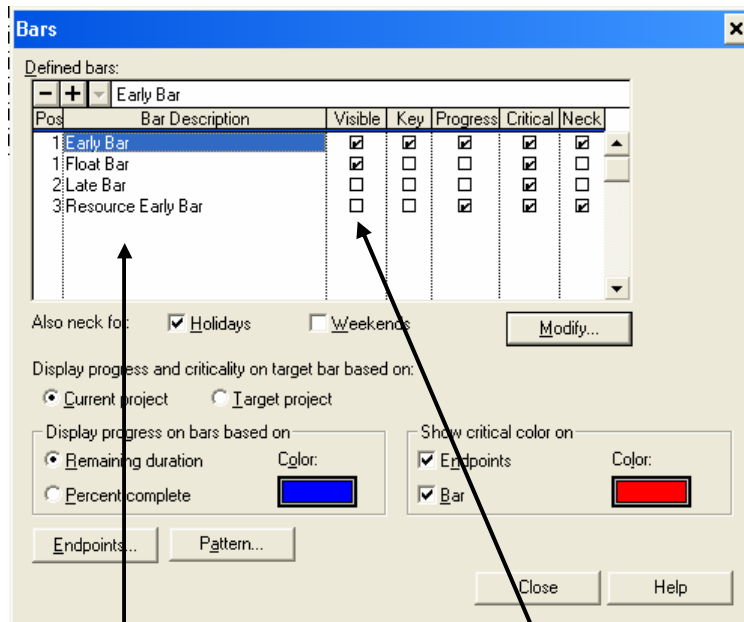
Four bars are shown here: two of them are visible (The Early and Float Bars). To avoid confusion, we will delete all of the bars which we do not need to see. Highlight "Float Bar" either by pressing the down arrow until it is highlighted or by clicking on it with your mouse; press delete and this window should appear:
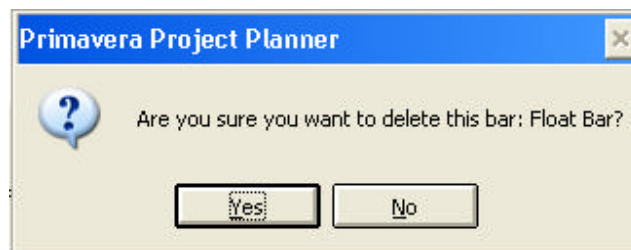
Click "Yes" and the bar should disappear. Repeat this with the "Late Bar" and "Resource Early Bar".

Your window should now look something like this:
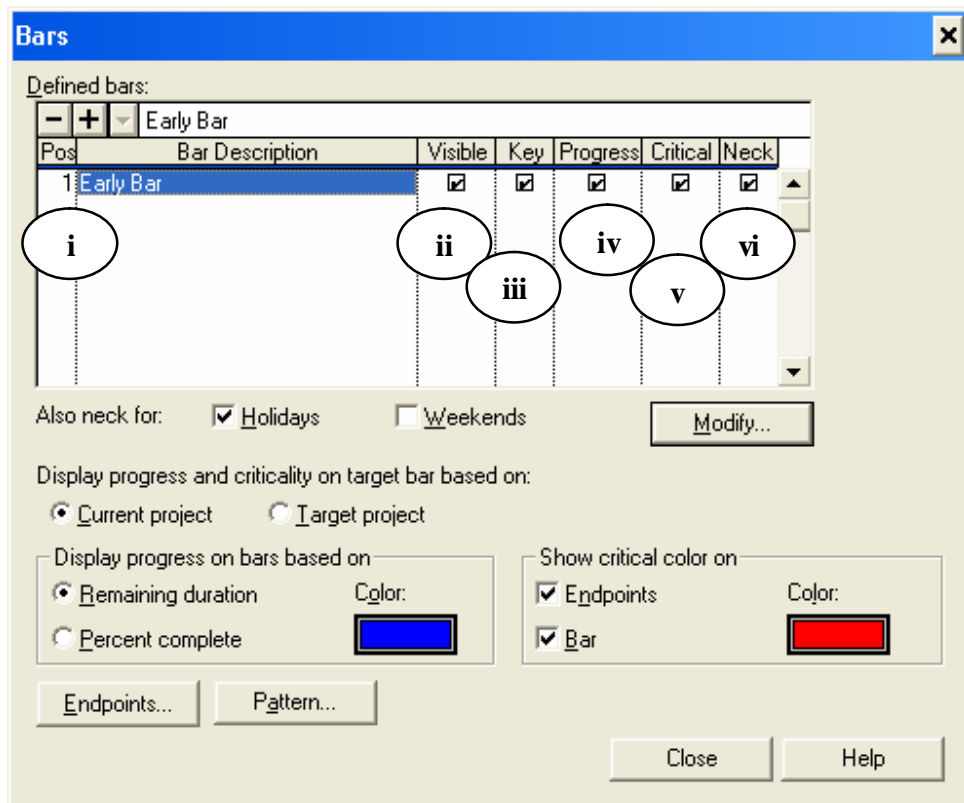
i   The "position" is the position of the bar on the activity line. "1" is central, "2" is below that and "3" is above. "4" is further below and "5" is further above.

ii   "Visible indicates that the bar is visible.

iii   "Key" indicates that this is the key bar from which links are shown

iv   "Progress" Indicates that, once progressed, progress is shown on that bar

v   "Critical" indicates that if an activity is critical, it is shown as such by being coloured as indicated (see **iv** overleaf)

vi   "Neck" states that for periods of inactivity, such as holidays or weekends, the bar is "necked"
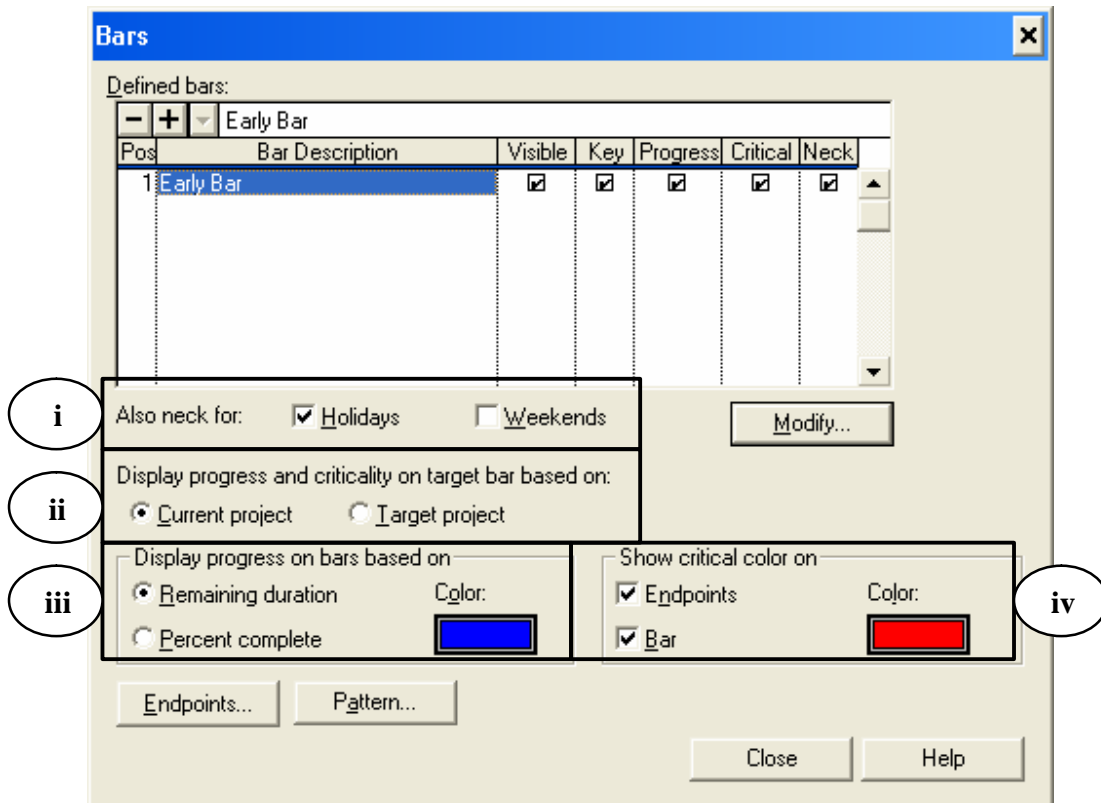
i This allows you to show the bar "necked"

 for periods of inactivity, such as weekends or holidays. By default, the bars are necked when, due to progress or resource constraints, no work can take place.

ii This option becomes relevant when a "target" or "baseline" project has been defined, and allows you to show criticality on the target bar based on either the current project or the target project

iii Percentage complete can differ greatly from remaining duration (a ten day activity can be 90% complete but, due to late delivery or access problems, still have a 10 day estimated remaining duration). This option allows you to choose which to display.

iv Finally this option allows you to mask or show the criticality of activities on the bar or endpoints.

"Endpoints" allows you to define the type of endpoint used for the various bars available, as well as their size and colour.

"Pattern" allows you to apply a pattern to the fill of the bar.

"Modify" allows you to further modify the details of that bar. Click on the "Modify" button to proceed to our next step in defining our layout.

This menu will appear:

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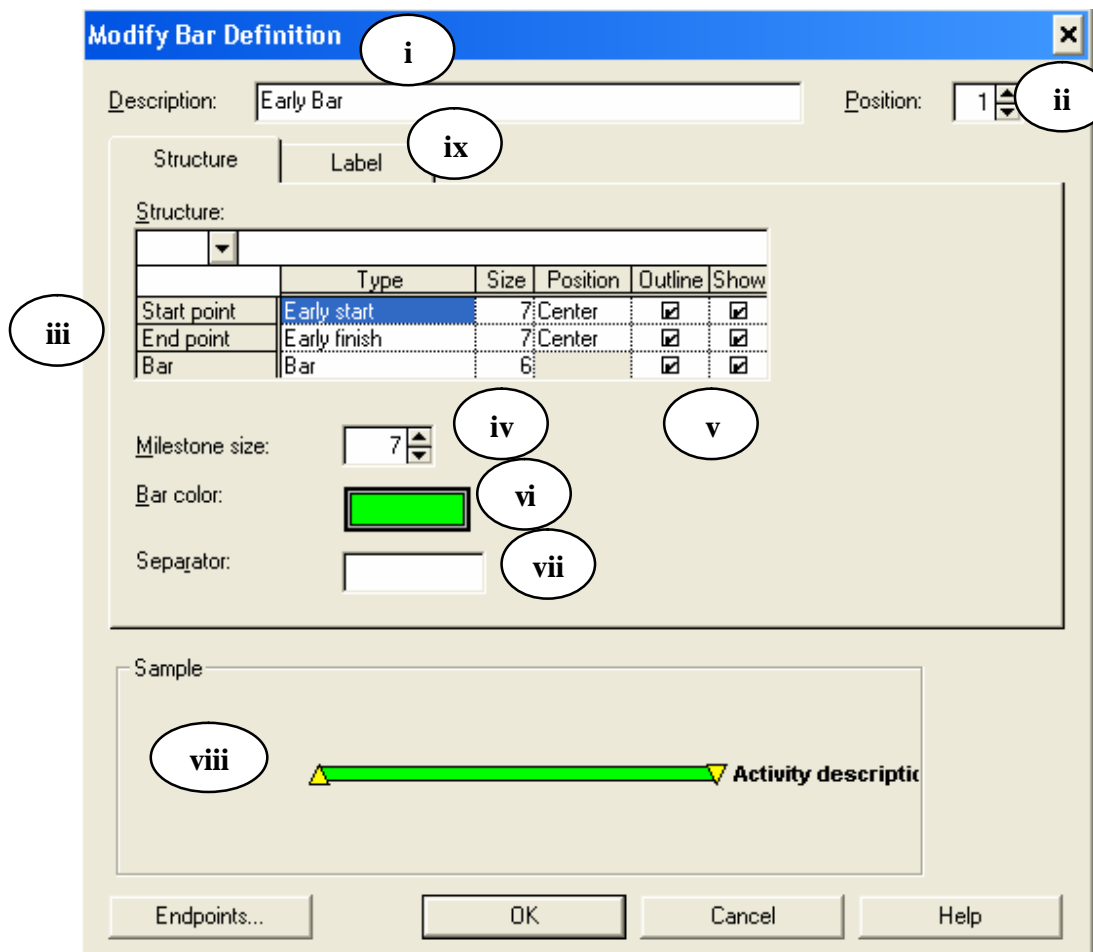
i This is the description of the bar – it can be renamed as anything.

ii This, again, is the position of the bar. The number can be adjusted both by highlighting it and entering in the new number, or by clicking (with your mouse button) the up and down arrows to the right of the box to increase or decrease the number.

iii. This is the Start and End point definition area. At the moment they are defined as Early Start and Early Finish. However, a Late Bar could be defined, with the Start Point defined as "Late Start" and the 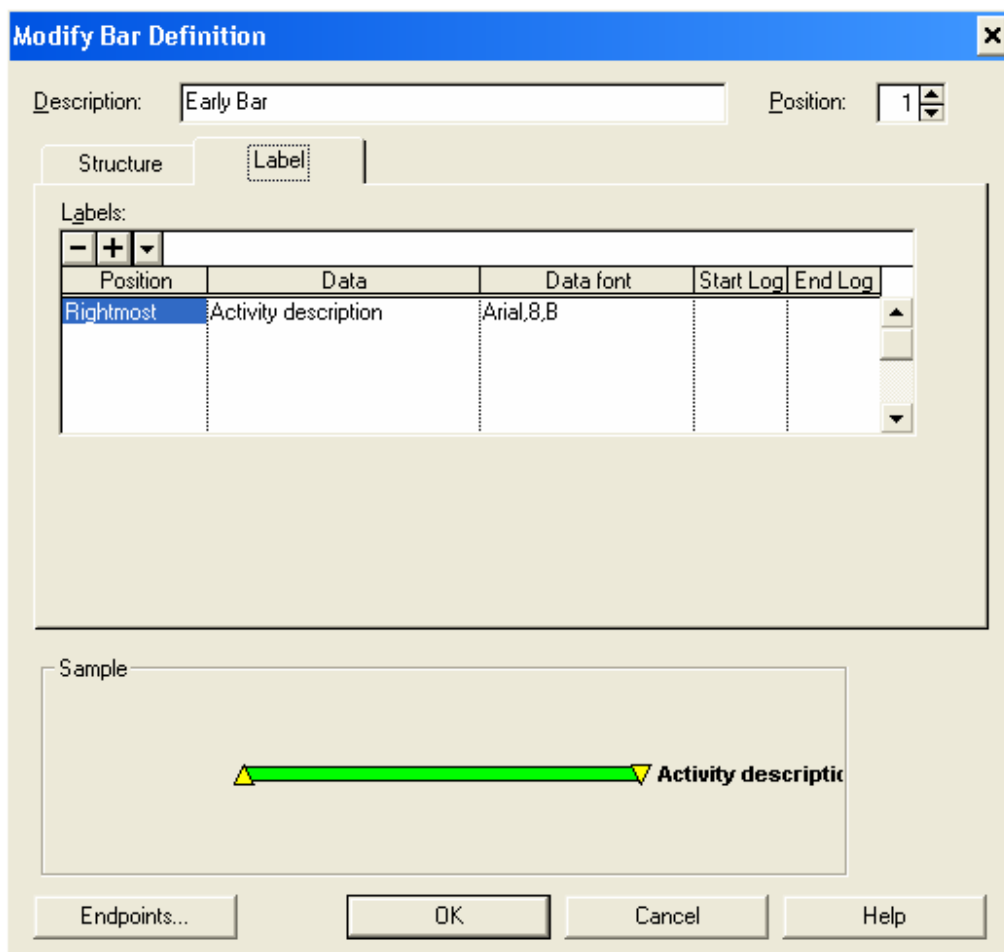Finish Point as "Late Finish". Alternatively a Float Bar could be shown, its start point being "Early Finish" and the finish point being "Late Finish".

The "Bar" category allows you to define the type of bar. It can be a bar, a solid line or a dashed line. The "size" category would then define the height, in pixels, of this bar.

iv. Primavera allows the definition of Milestone points, or 0 duration target dates on your programme. This box allows you to define the height, in pixels, of these milestones.

v. This defines whether the end point or bar is shown, or is merely outlined.

vi. This allows you to define the colour of the bar (unless critical)

vii. "Separator" allows you to define the separating item if more than one data item is defined in one part of the bar. More details of this will follow in the "Label" description section.

viii. This shows a sample of what the bar will look like.
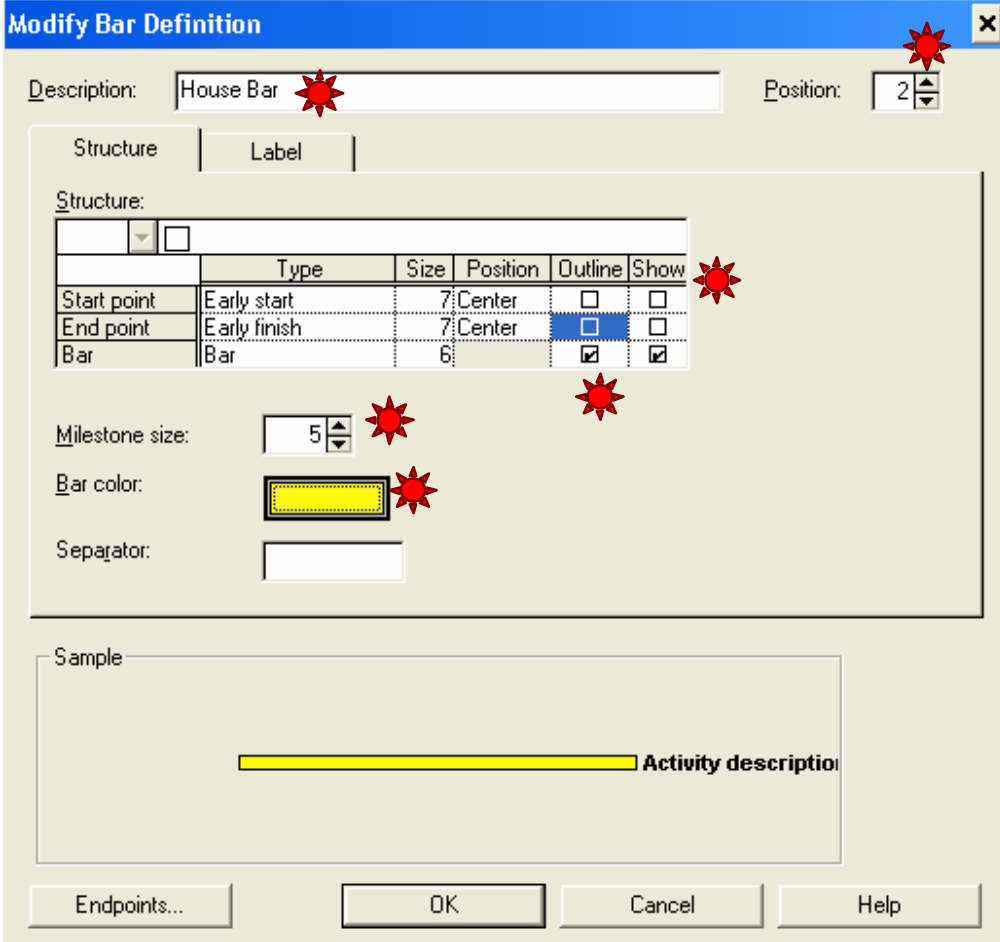
If we click the "Label" tab (**ix**) the menu will change to this:

Modify Bar Definition

Description: Early Bar   Position: 1

Structure | Label

Labels:

Position	Data	Data font	Start Log	End Log
Rightmost	Activity description	Arial,8,B		

Sample

Activity descriptio

Endpoints...   OK   Cancel   Help

This allows us to add labels to our bars in various positions. The impact that these labels will have on the layout is shown on the sample below. Any data item from the activity detail can be added as a bar label.

In the same way as we have adjusted activities in other menus, alter the bar structure layout so that it looks like this:

(Changes are indicated ✸)

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And alter the Label layout as follows:

Modify Bar Definition

Description: House Bar   Position: 2

| Structure | Label |

Labels:

Original duration

Position	Data	Data font	Start Log	End Log
Rightmost	Original duration	Arial,8,B		
Left	Early start	Arial,8		
Right	Early finish	Arial,8		
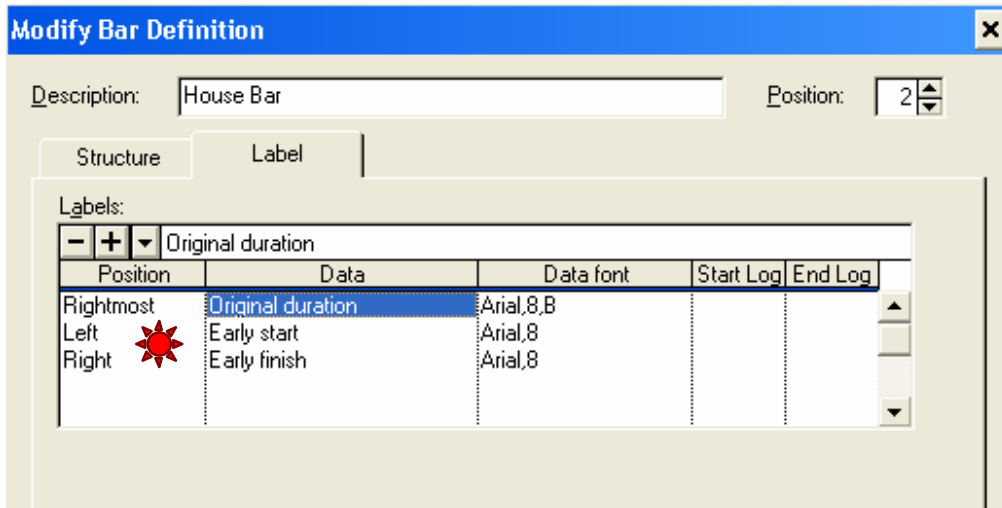
If you click "OK" in the "Modify Bar Definition" window and "Close" in the bars window our layout should now look something like this:

File Edit View Insert Format Tools Data Window Help

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	
A010	Start Project	1	01MAR02	01MAR02	01MAR02 ■01MAR02 1
A020	Clear Site	3	01MAR02	05MAR02	01MAR02 ■—■ 05MAR02 3
A030	Set Out	2	01MAR02	04MAR02	01MAR02 ■—■ 04MAR02 2
A040	Foundations	10	01MAR02	14MAR02	01MAR02 ■——■ 14MAR02 10
A050	Floor Slabs	7	01MAR02	11MAR02	01MAR02 ■——■ 11MAR02 7
A060	Superstructure	20	01MAR02	28MAR02	01MAR02 ■———■ 28MAR02 20
A070	Roof	10	01MAR02	14MAR02	01MAR02 ■——■ 14MAR02 10
A080	Services and Finishes	20	01MAR02	28MAR02	01MAR02 ■———■ 28MAR02 20
A090	Snagging	5	01MAR02	07MAR02	01MAR02 ■—■ 07MAR02 5
A100	Handover	1	01MAR02	01MAR02	01MAR02 ■01MAR02 1

Now we are ready to move on and develop our programme.

5. Developing the Programme

With our layout established we can develop our programme and apply logic to it. It currently looks like this:

| Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	
A010	Start Project	1	01MAR02	01MAR02	01MAR02 ■ 01MAR02 **1**
A020	Clear Site	3	01MAR02	05MAR02	01MAR02 ■━■ 05MAR02 **3**
A030	Set Out	2	01MAR02	04MAR02	01MAR02 ■━■ 04MAR02 **2**
A040	Foundations	10	01MAR02	14MAR02	01MAR02 ■━━━━■ 14MAR02 **10**
A050	Floor Slabs	7	01MAR02	11MAR02	01MAR02 ■━━■ 11MAR02 **7**
A060	Superstructure	20	01MAR02	28MAR02	01MAR02 ■━━━━━━━━■ 28MAR02 **20**
A070	Roof	10	01MAR02	14MAR02	01MAR02 ■━━━━■ 14MAR02 **10**
A080	Services and Finishes	20	01MAR02	28MAR02	01MAR02 ■━━━━━━━━■ 28MAR02 **20**
A090	Snagging	5	01MAR02	07MAR02	01MAR02 ■━■ 07MAR02 **5**
A100	Handover	1	01MAR02	01MAR02	01MAR02 ■ 01MAR02 **1**

We need to link the activities together to form our construction programme (plan or schedule).

There are several ways of nominating successors and predecessors for activities. The quickest is to use our mouse. In order to do this we need to turn the relationship lines option "on". Click your mouse over the ⊞ button in the top toolbar. You can now link activities with your mouse. Place your mouse on the bottom right hand corner of activity A010 until a three-pronged forked arrow appears. Now depress the left mouse button and drag to the start of the activity you wish to link to.

Try this out from A010 to A020. Once the three pronged cursor is at the start of the activity bar you would like to link to, release the mouse button and the link should appear:

01MAR02 ■ 01MAR02 **1**
01MAR02 ■━■ 05MAR02 **3**

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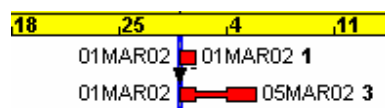
The second way of linking activities is through the Successor input window. Highlight activity A010 and press Ctrl-J .This window appears:
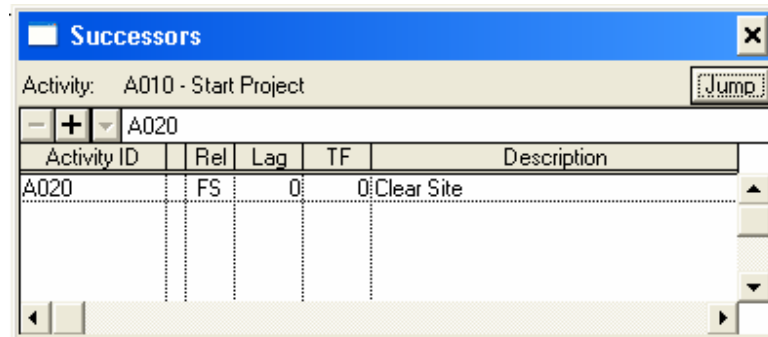

You can see the activity that we have designated A010's successor shown here. The "Rel" column indicates the type of relationship that exists between the two activities. In this case it is a FS – Finish to Start, but could be a Finish-Finish, Start-Start or Start-Finish.

The Lag indicates any Lag you want to put on the link. For instance, if it was a FS with +3 days lag, the second activity could only start three days after the finish of the first. Likewise a SS with +5 days lag would mean that the second activity could only start five days after the start of the first.

The lag can be negative. For instance, a FS relationship with a -3 day lag would mean that activity two could start three days before the end of activity one.

Press Enter. The box should jump immediately to the next activity and look like this:
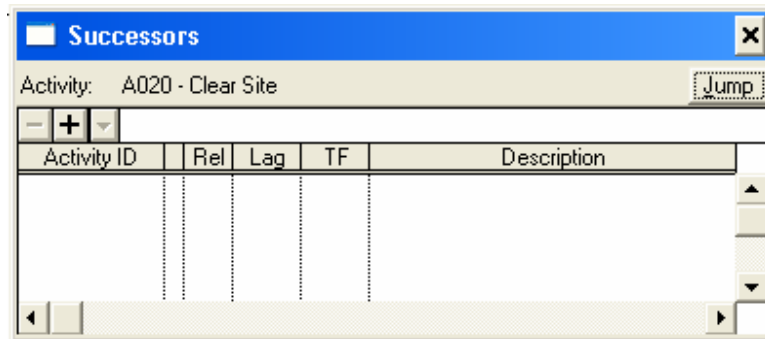

Highlight the area underneath the "Activity ID" column heading and it will highlight blue an area in which you can enter an Activity number. Type in "A030" and press enter.
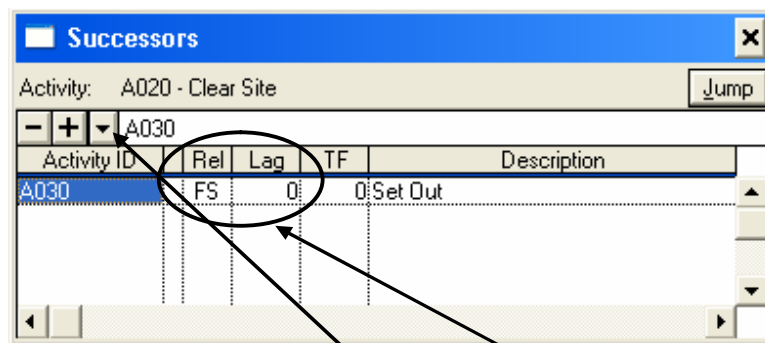
The programme will automatically enter in the successor's description and will provide a default link of Finish to Start with 0 days lag.

Instead of typing in "A030" you could merely, once a blank area has been highlighted under "Activity ID" press the down-arrow and select the required activity ID.

This will appear:
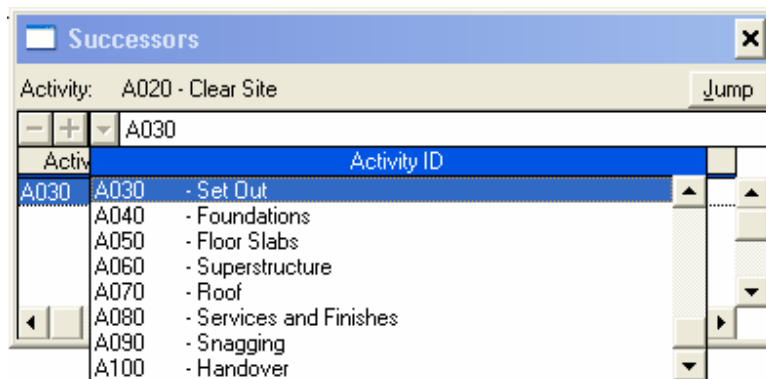
Now highlight the activity that you would like to link to and click it with your mouse. It will then appear in your successor list.

Next make A040 the successor of A030, and A050 the successor of A040. However, we need a different kind of link between A040 (Foundations) and A050 (Floor Slabs). We know that 5 days after the completion of the foundations the floor slabs should be in. Thus, we can change the link type to a "FF" link and the lag to 5 days.

We also know that two days after the start of the floor slabs, we can start on the superstructure. Thus the link from A050 to A060 is a SS with 2 days lag.

However, we also know that we will need at least 5 days after the completion of the Floor Slabs before the superstructure can be completed. To show this we add a second link between A050 and A060.
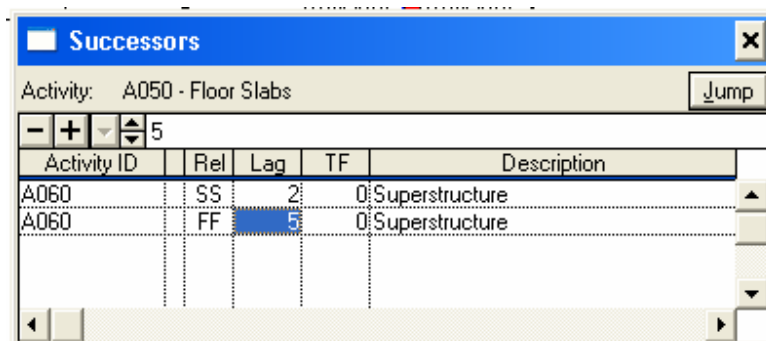
Enter in the links mentioned above, and the following:

A060 to A070 – FS

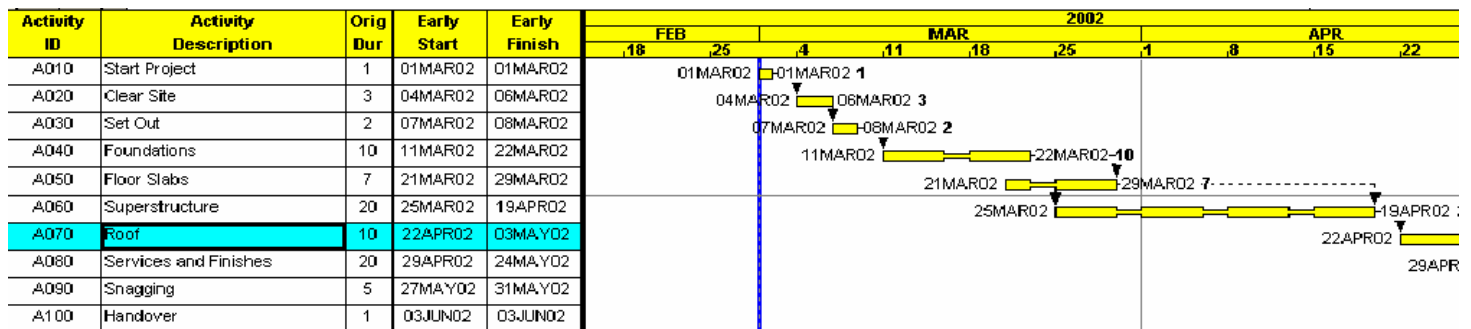A070 to A080 – FS with -5 day lag

A080 to A090 – FS

A090 to A100 – FS

Then close the Successor activity box, either by pressing Ctrl-J again or by clicking the small "x" in the top right corner of the box.

Our programme is now linked. Primavera now requires the programme to be "scheduled" in order to calculate the new end date. Press F9 to schedule the programme.

The result should be:

| Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	2002
A010	Start Project	1	01MAR02	01MAR02	01MAR02 ▭ 01MAR02 1
A020	Clear Site	3	04MAR02	06MAR02	04MAR02 ▭ 06MAR02 3
A030	Set Out	2	07MAR02	08MAR02	07MAR02 ▭ 08MAR02 2
A040	Foundations	10	11MAR02	22MAR02	11MAR02 ▭▭ 22MAR02 10
A050	Floor Slabs	7	21MAR02	29MAR02	21MAR02 ▭ 29MAR02 7 ------------
A060	Superstructure	20	25MAR02	19APR02	25MAR02 ▭▭▭▭ 19APR02
A070	Roof	10	22APR02	03MAY02	22APR02 ▭
A080	Services and Finishes	20	29APR02	24MAY02	29APR
A090	Snagging	5	27MAY02	31MAY02	
A100	Handover	1	03JUN02	03JUN02	

Our first problem is that the full width of the bar chart is not visible on the screen. Move your mouse cursor over the timescale and double left-click.

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This window should appear:
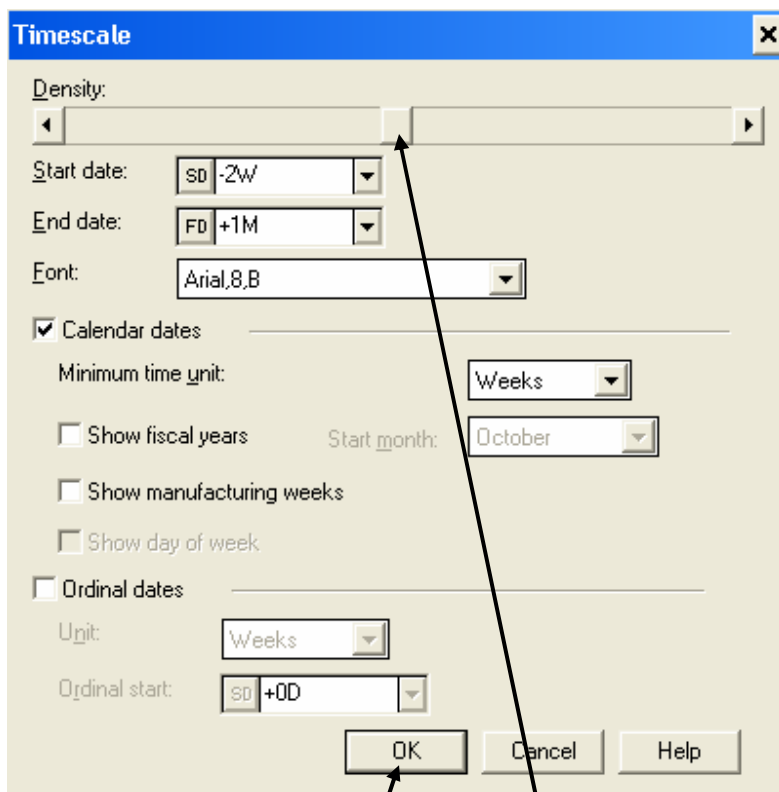
The cursor on the bar under the word "Density" is flashing. Click on this cursor and drag it to the left and right. You will see your timescale expand and contract. Adjust it so that the last week visible on the right hand side of the screen is the first week in June. Release the bar-adjusting cursor and press "OK".

Your screen should now look like this:
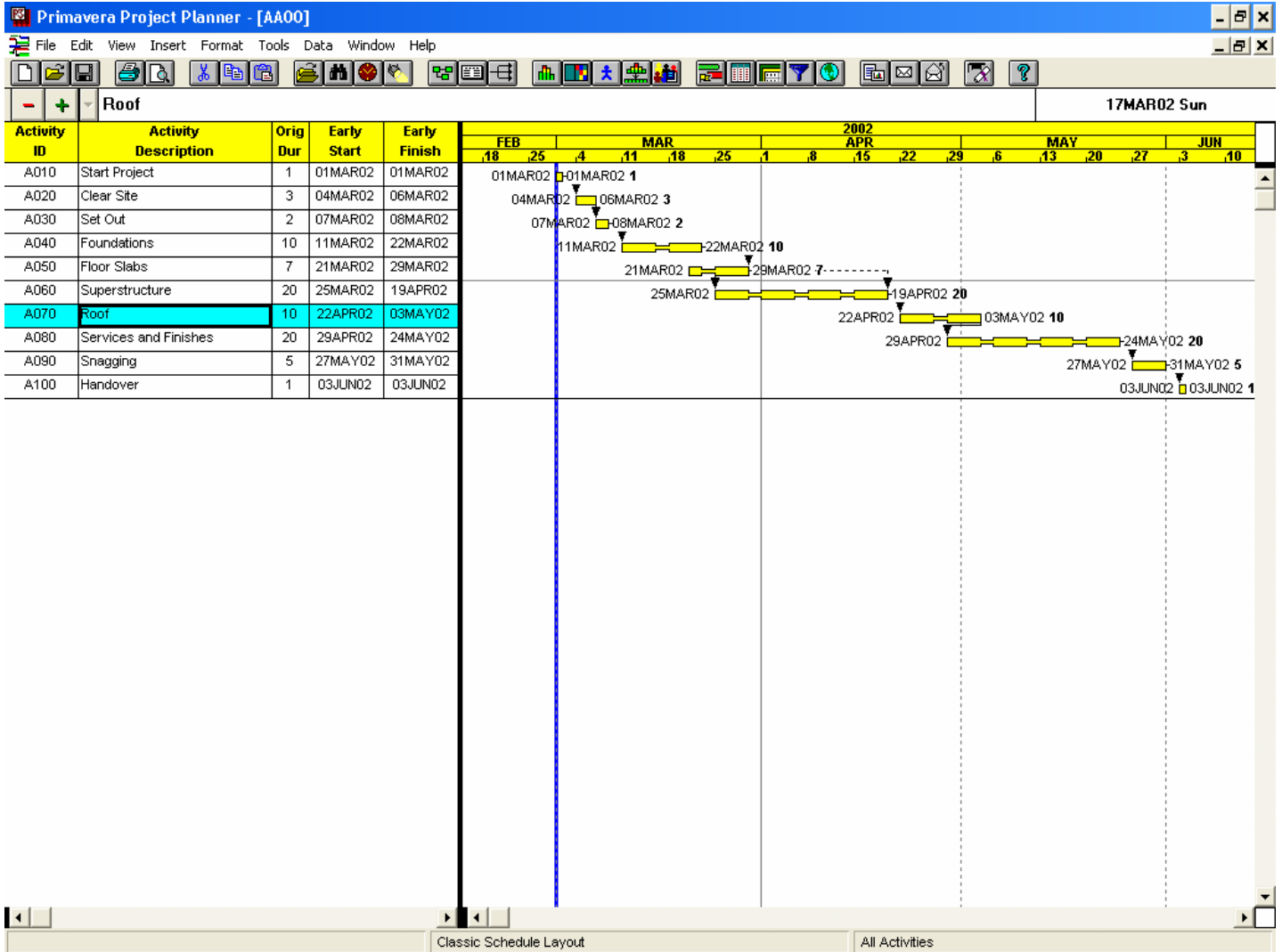
We are now ready to organise our programme.

6. Organising the Programme

Primavera can organise projects in two main ways: through Activity codes and through a "Work Breakdown Structure" (WBS).

6.1 Organising By Work Breakdown Structure

The WBS is a structured way to lay out a programme: it can accommodate several levels of programme. Establishing your WBS involves typing in a mini-programme of headings.

For example:

1 Contract Start
       1,1   Site Establishment
2 Demolitions
       2,1   Church
       2,2   Church Hall
3 Construction - Flats
       3,01 New Flats - Structure
              3,01,1   Basement
              3,01,2   Ground Floor
              3,01,3   First Floor
              3,01,7   Roof
       3,02 New Flats - Brickwork & Finishes
              3,02,1   Basement
              3,02,2   Ground Floor
              3,02,3   First Floor
              3,02,7   Roof
4 Construction - New Church
       4,01 New Church - Structure
              4,01,1   Foundations
              4,01,2   Ground Floor
              4,01,3   First Floor
       4,02 New Church - Brickwork & Finishes
              4,02,1   Ground Floor
              4,02,2   First Floor
              4,02,3   Roof
  5 External Works
  6 Handover

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For complex programmes, it is wise to establish the WBS before the actual programming is started.
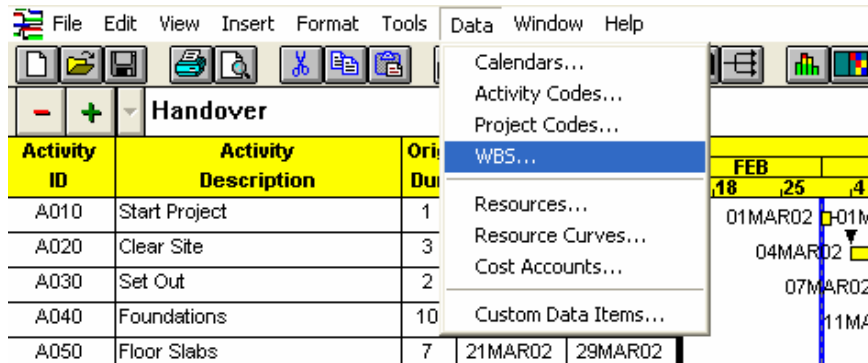
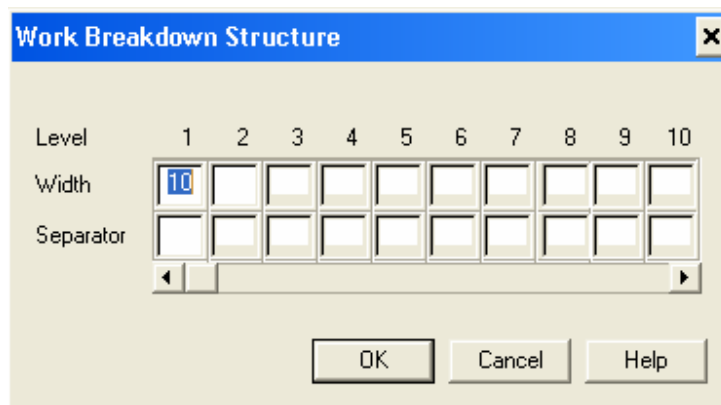Select Data-WBS… from the drop-down menus. The following window will appear:
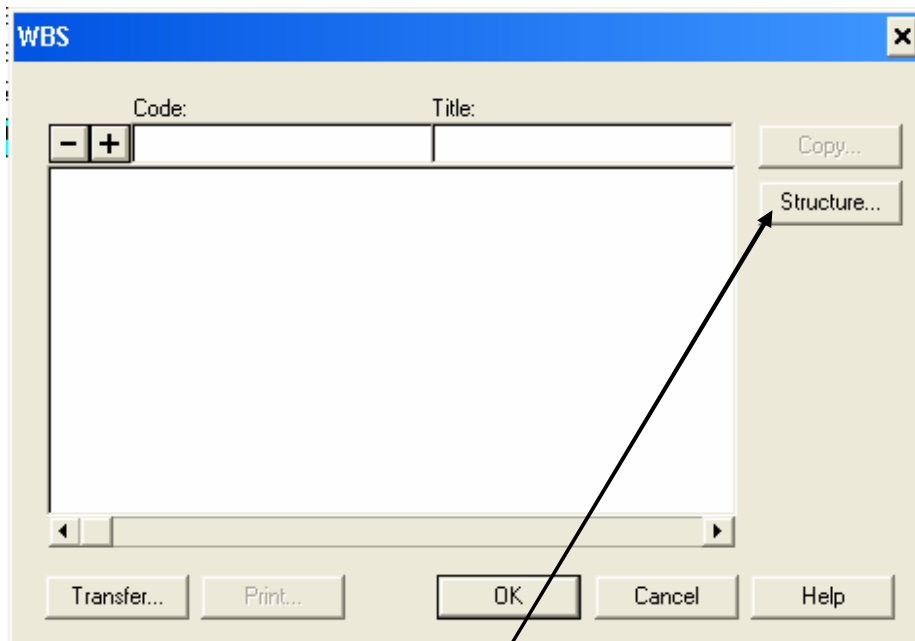
This is the WBS Editor window.

The first thing we need to do here is set up the structure of our WBS. This is done by clicking the "Structure" button.

The following window appears:


This is the WBS Structure Editor.

We want to set up a simple two level WBS, so highlight the number 10 (this is the number of characters allowed in that level: it can be any number from 1 to 48). We want it to be two characters wide, so type in the number 2.

Next we need to identify the separator that will appear between fields. Click on the box below the "2" that has just been entered and type a ",".

Our second level also requires a two character field: in the box below Level 2 enter another "2" and place another "," below it.
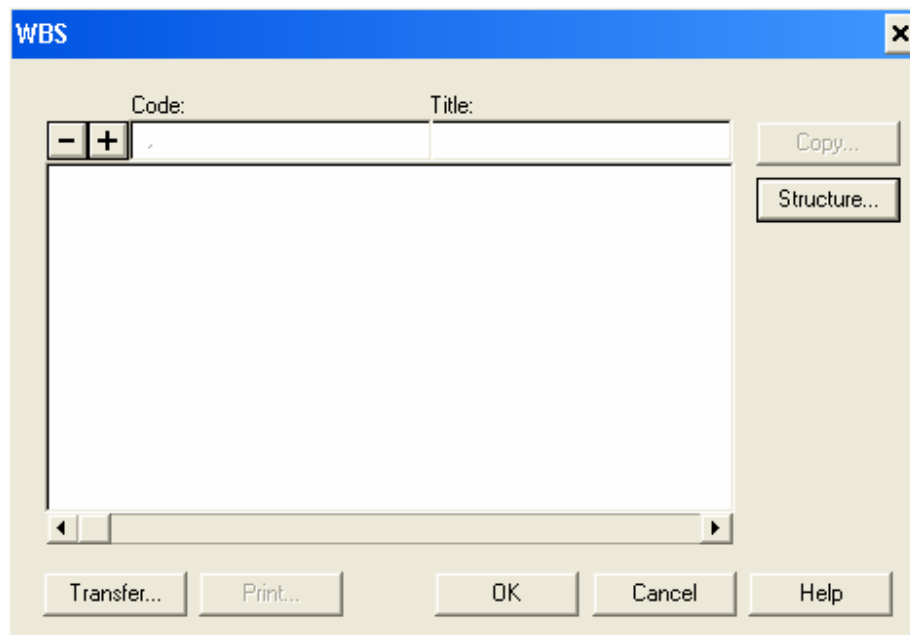
The easiest way to navigate this window is by clicking on the box where information is to be added with your mouse cursor and entering the information required.

The WBS box should now look like this:
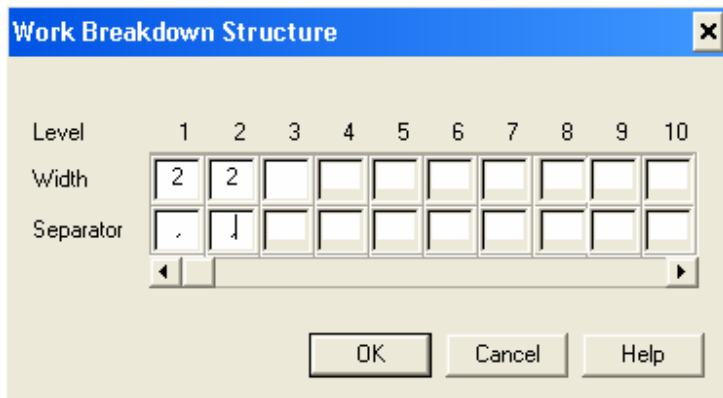
Click "OK" and we return to the main WBS Window.

It should now look like this:

Note that in the "Code:" box a comma is now visible. This indicates that we can now enter in two levels of information here.

Click on the "+" sign and the cursor appears in the code box, to the left of the comma. Type in "01" and press Tab. The cursor should move to the title box. This is the description of that WBS Heading. Type in "House" and press enter.
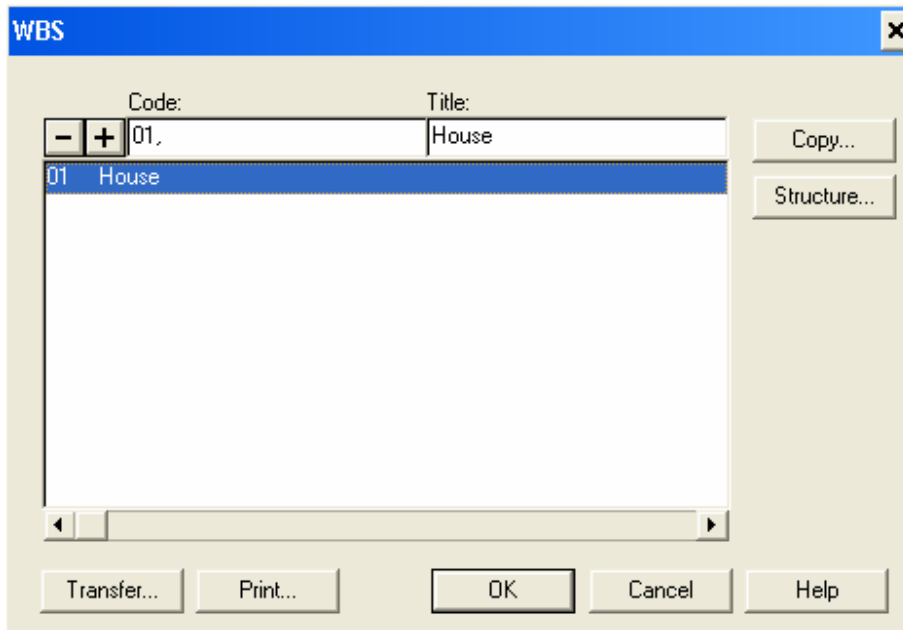
You have created the first level of your programme.

Click the "+" sign again and type in 0101. Note that as the cursor reaches the comma after the first "1" it automatically moves on to the second level of the WBS. Again press "Tab" and enter the description "Start Up" and enter.

Enter in the following descriptions as shown


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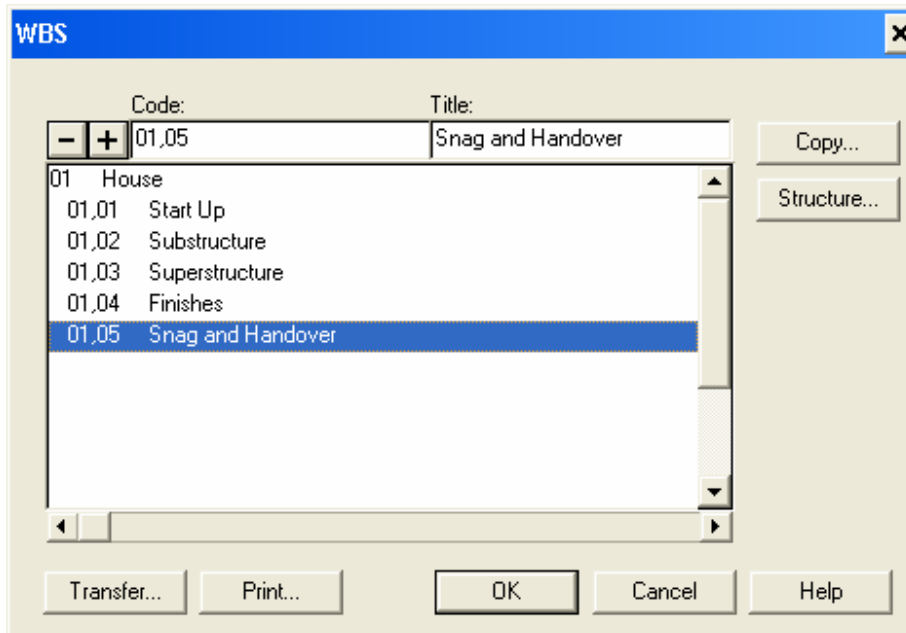
We now need to apply this WBS to our programme. Press "OK" and return to the programme.

There are two ways in which we can assign the WBS levels to the programme. The first is to create a column called "WBS" and enter the information there.

Press "F11" and highlight the space below "Early Finish" in the new window. Then highlight the down-facing triangle next to the "+" sign in the window and press the key "w". The menu should scroll straight down to "WBS". Press enter and it will appear in your column selection. Alter the alignment of this column to "Center" and alter the width to 8.

Your window should now look like this:
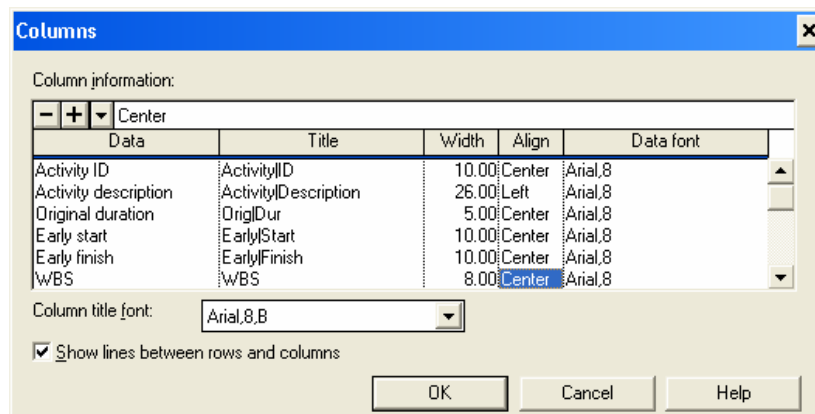
Click "OK" and drag your black line between the "Early Finish" column and the Gant chart to the right. The "WBS" column should appear.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	WBS		
						FEB	**MAR**
						,18 ,25	,4 ,11 ,18 ,25
A010	Start Project	1	01MAR02	01MAR02		01MAR02 ▯01MAR02 **1**	
A020	Clear Site	3	04MAR02	06MAR02		04MAR02 ▭ 06MAR02 **3**	
A030	Set Out	2	07MAR02	08MAR02		07MAR02 ▭08MAR02 **2**	
A040	Foundations	10	11MAR02	22MAR02		11MAR02 ▭━▭ 22MAR02	
A050	Floor Slabs	7	21MAR02	29MAR02		21MAR02 ▭━▭ 2	
A060	Superstructure	20	25MAR02	19APR02		25MAR02 ▭━	
A070	Roof	10	22APR02	03MAY02			
A080	Services and Finishes	20	29APR02	24MAY02			
A090	Snagging	5	27MAY02	31MAY02			
A100	Handover	1	03JUN02	03JUN02			

Now move the mouse pointer over the WBS cell of activity A010 and click.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	WBS		
						FEB	**MAR**
						,18 ,25	,4 ,11 ,18
A010	Start Project	1	01MAR02	01MAR02		01MAR02 ▯01MAR02 **1**	
A020	Clear Site	3	04MAR02	06MAR02		04MAR02 ▭ 06MAR02 **3**	
A030	Set Out	2	07MAR02	08MAR02		07MAR02 ▭08MAR02 **2**	

If you now click next to the "," in the input area the ⬜ should become ▾. This means that this "button" is now active. Click on it with your mouse cursor and the list of data items available to place there should appear. Highlight "01,01" and press enter: that value should now appear in the WBS column.

Next, highlight (by clicking it with your mouse) the WBS column for Activity A020. Simply type in the characters "0101" and press enter: they should appear in the box separated by the comma.

Enter the remaining WBS activity codes as follows.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	WBS
A010	Start Project	1	01MAR02	01MAR02	01,01,
A020	Clear Site	3	04MAR02	06MAR02	01,01,
A030	Set Out	2	07MAR02	08MAR02	01,01,
A040	Foundations	10	11MAR02	22MAR02	01,02,
A050	Floor Slabs	7	21MAR02	29MAR02	01,02,
A060	Superstructure	20	25MAR02	19APR02	01,03,
A070	Roof	10	22APR02	03MAY02	01,03,
A080	Services and Finishes	20	29APR02	24MAY02	01,04,
A090	Snagging	5	27MAY02	31MAY02	01,04,
A100	Handover	1	03JUN02	03JUN02	01,05,

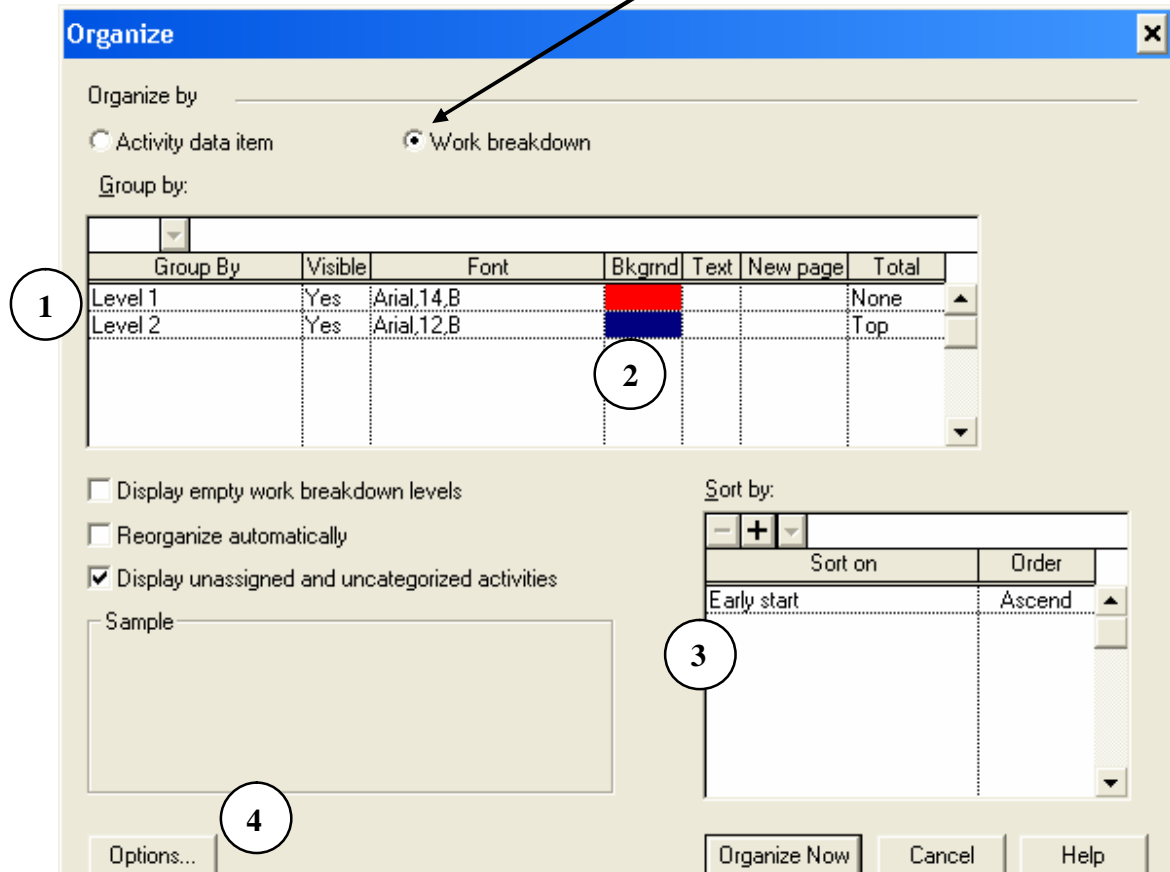We have now told Primavera HOW we want the programme organised: now we must tell it to organise it so.

Click the "Organise" icon on the toolbar.

This window will appear:
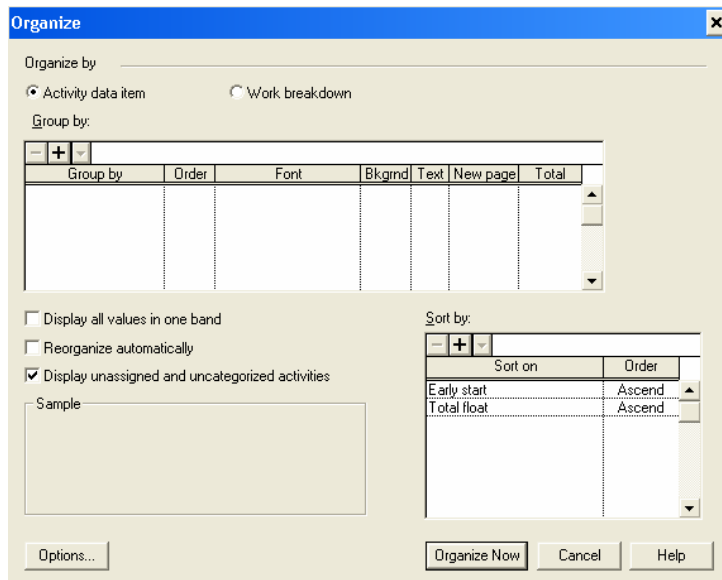
This opens, by default, on organising by "Activity Code".

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Press the button by the words "Work Breakdown Structure" and the window should change to this:

1. These are the two WBS Levels that have been defined in the WBS Structure. This states that both are visible, and the "Font" is the size of the heading displayed on the screen.
2. "Bkgrnd" and "Text" are the colours of the background and the text in these headings.
3. "Sort by:" defines how the activities are sorted within each band
4. "Options" takes you to the following window:
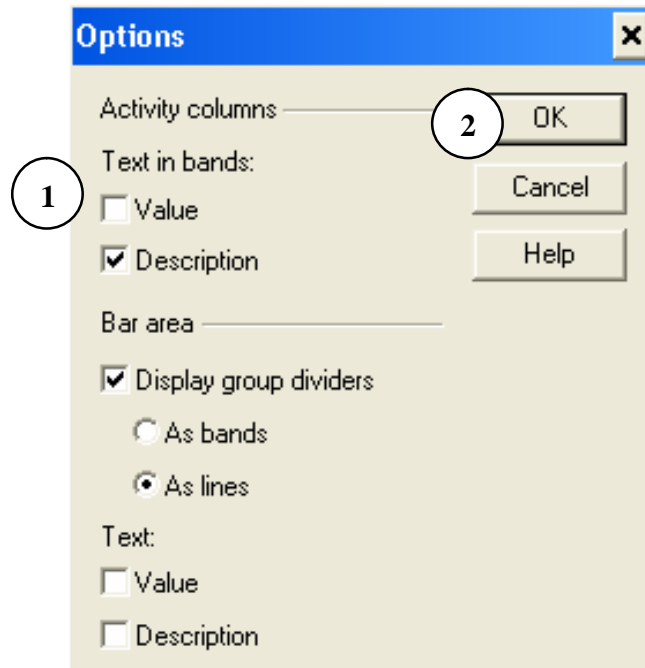
While we are here, we want to display the WBS number (its value) as well as the description in the header band. Tick the "Value" box beneath the text (**1**) "Text in bands:"

Now click "OK" (**2**) and we return to the "Organise" window.

We can change the settings here for colours, fonts, and whether each heading has a "Total" band at will. For now, merely highlight the Level 2 "Total Cell" and press "N" – "none" should appear in the box. Press enter and enter again.

You should return to his screen:
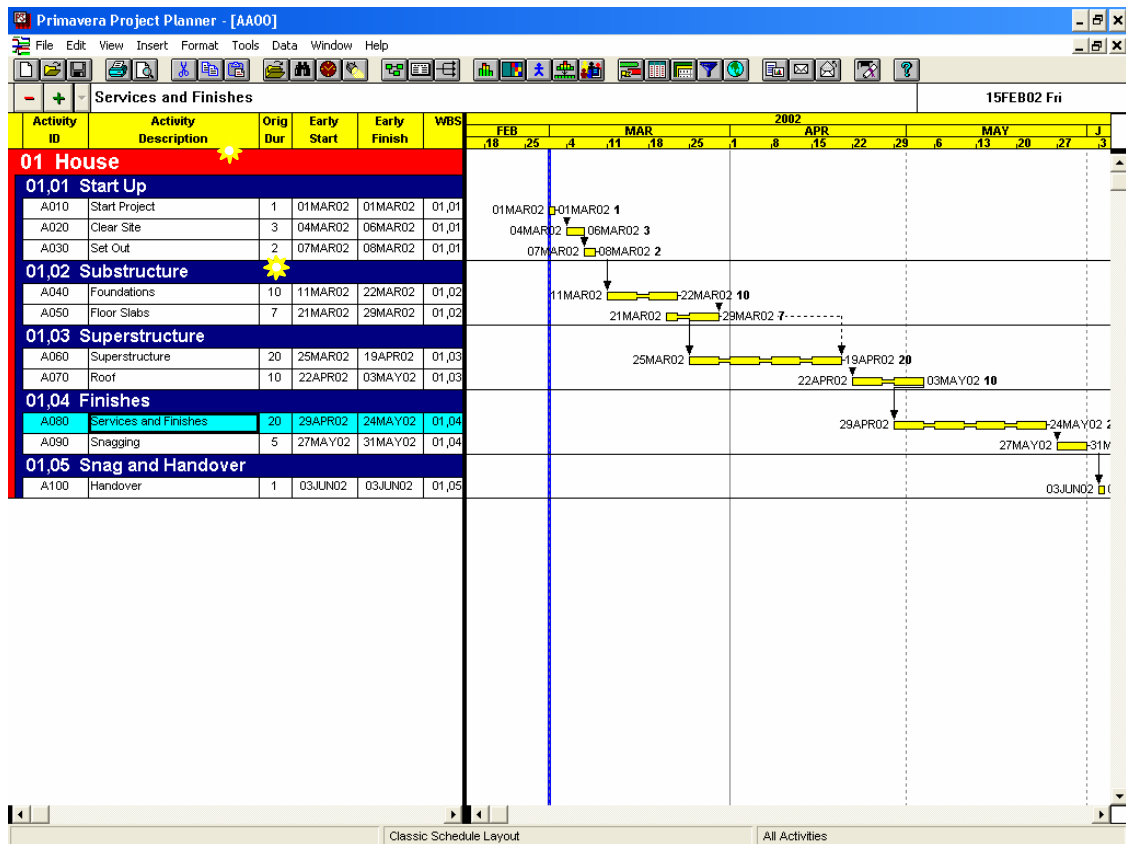
Here we see the headings we defined in our WBS layout assigned to the activities, in the layout we asked for.

Note that the WBS headings have the number we assigned them in the header bar.

You can summarise these bars under their respective heading by double mouse-clicking on the header lines (*).

6.2 Organising By Activity Code

The second method of organising activities in Primavera is by Activity Code. You can see the current activity codes at the Menu option Data – Activity Codes. This window will appear:
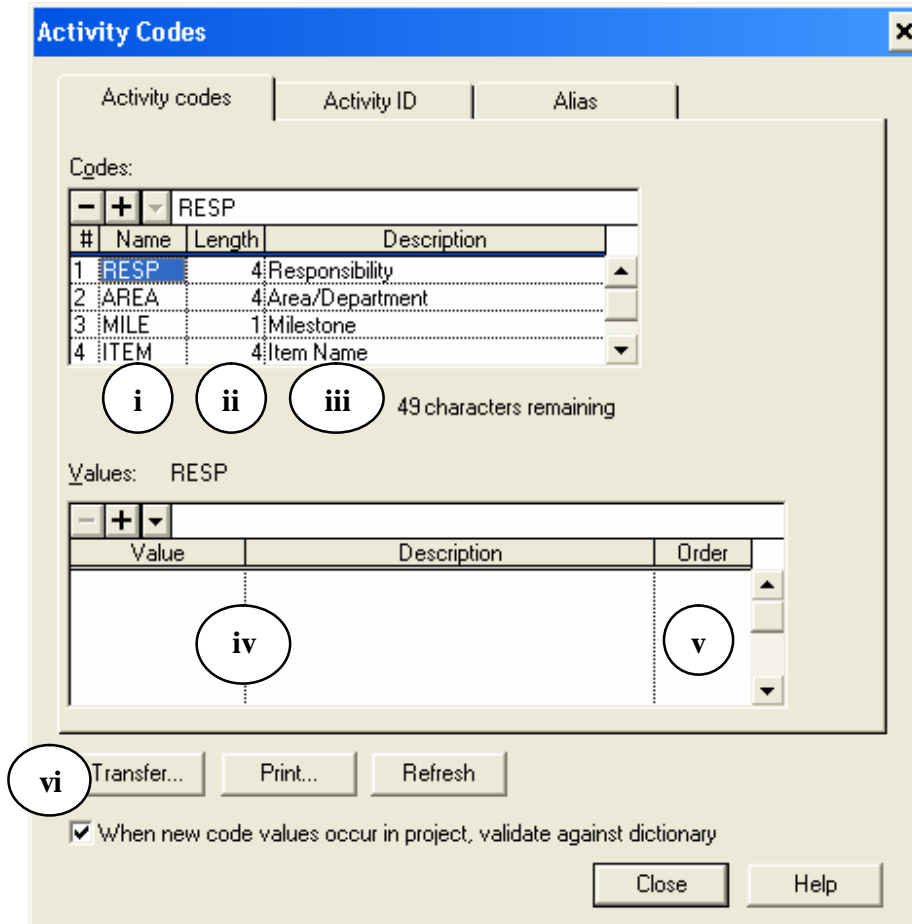
i.   This is the four letter character code assigned to this Activity code as its name

ii. This is the character length of the field

iii. This is the description of the field

iv. These are the "Value"s of the component parts of that activity code. For instance, if a Code field is called "Level" with a length of "1" the values could be G, 1, 2, 3, 4 and the descriptions "Ground Floor", "First Floor", etc.

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v.   This is the order in which those items should be sorted within the activity code. For instance, Primavera could assume that "G" comes after the numeric codes. In this instance we would place a "1" in the "order" column by G, a "2" by "1 – First Floor", etc.

vi.   "Transfer" allows us to transfer a coding structure from another programme.

This button will take you to a window in which you can identify the programme from where you would like the activity codes drawn.
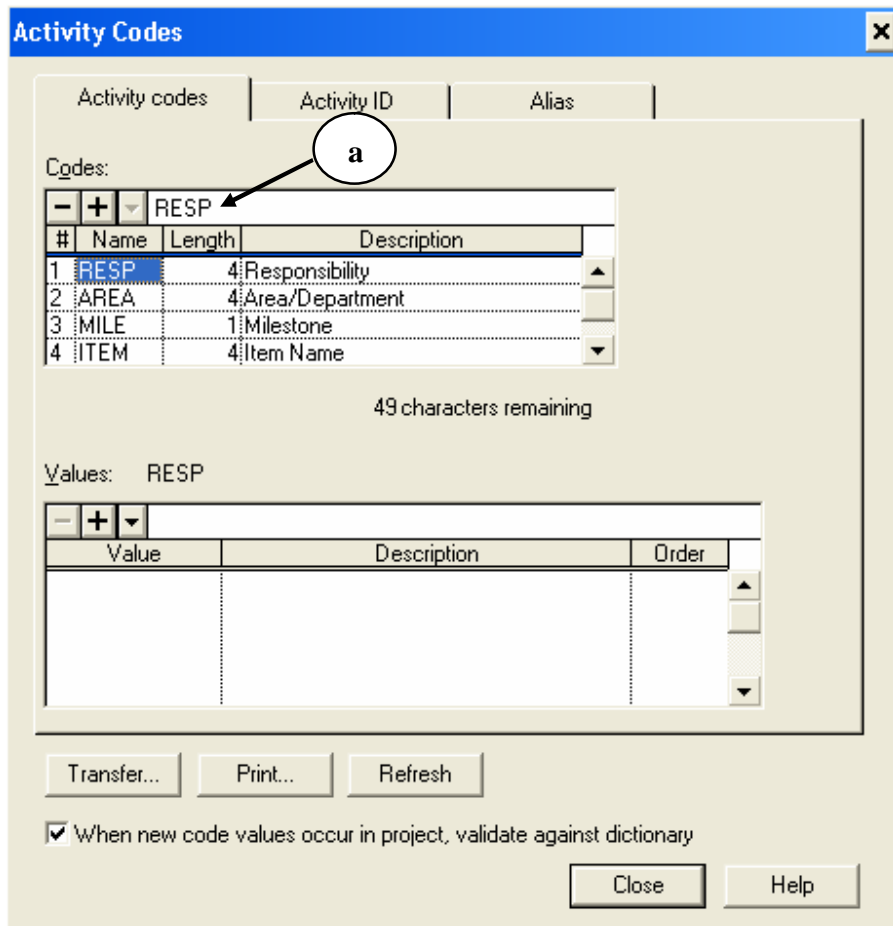

Highlight "RESP" in the name field and then click on "RESP" in the text edit box (**a**). Your cursor will appear in that field. Delete the characters RESP there and replace them with "BLDG" and press Enter.

Now click on the "Description" field of our new Activity Code "BLDG" and change the description to "Building". The length of the field can remain at 4.

Now change "AREA" to "PHSE" and enter "Construction Ph." as its description.

Delete the remaining codes by highlighting them and pressing the delete key.

The Activity Code box should now look like this:
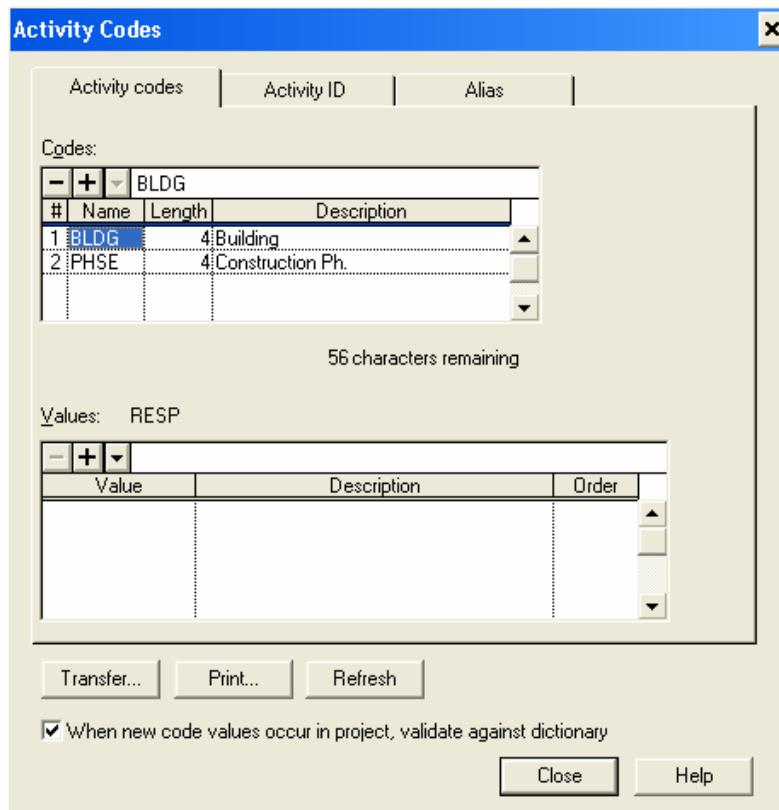
We now need to add values to each of the Activity Codes defined. While highlighting "BLDG" click in the Value area of the lower box. You will be asked if you wish to save your structure edits. Primavera is asking if you want to keep the new code structure that you have defined and delete the old structure. Click "Yes" and highlight the "Value" box again. Make your first Value "01" and press right arrow so

that your cursor now rests in the description field. Type "House" and press enter.

Highlight "PHSE" and repeat this process of entering values until you have the following codes entered:
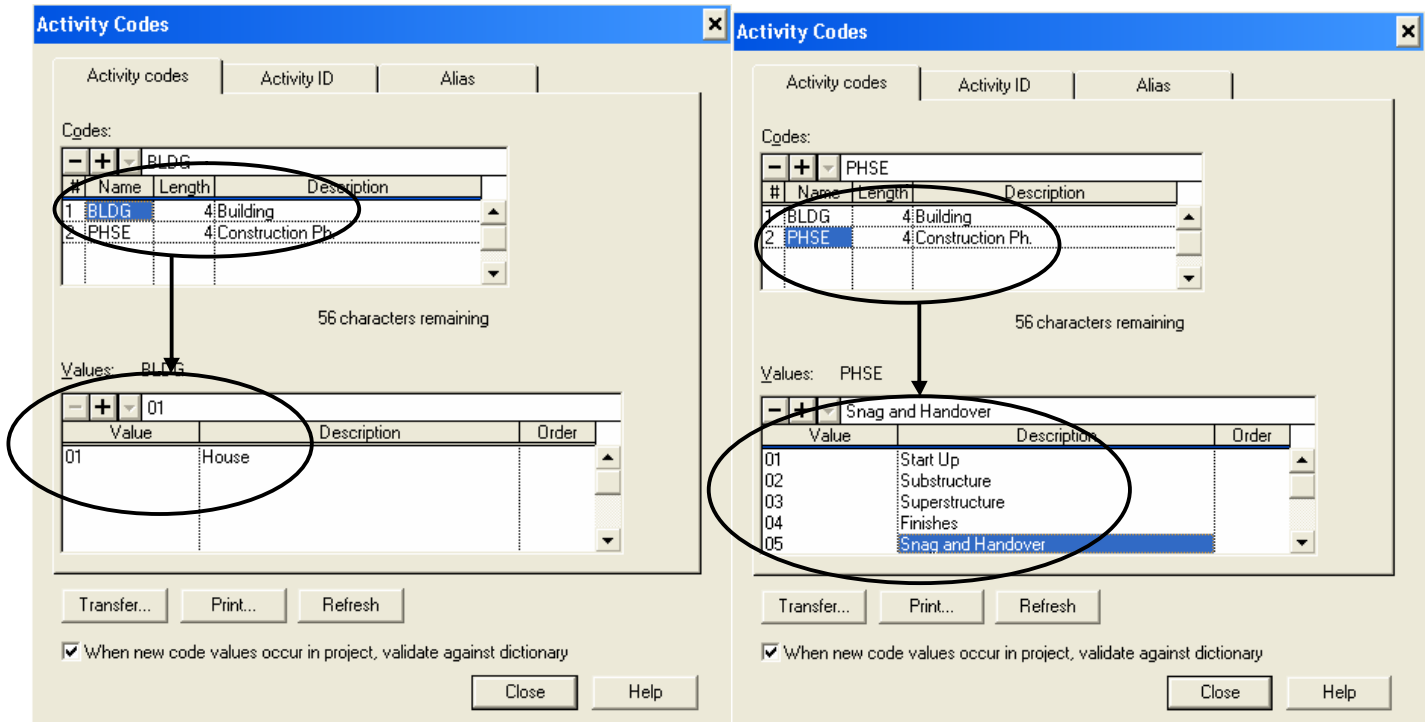
Then close this window.

We can apply these codes to our programme in the same way as we applied our WBS codes. In this instance, create two columns: one with the data item "BLDG" and the other with the data item "PHSE"
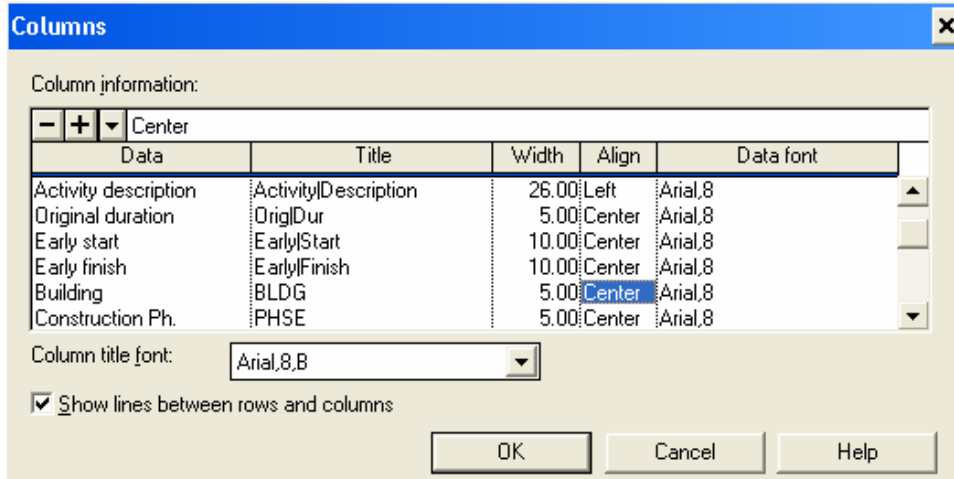
Our Gant Chart will now look like this:

Now it is the simple matter of entering our codes. The code "01" for "BLDG" applies to all activities, while we will encode "PHSE" to match our WBS.
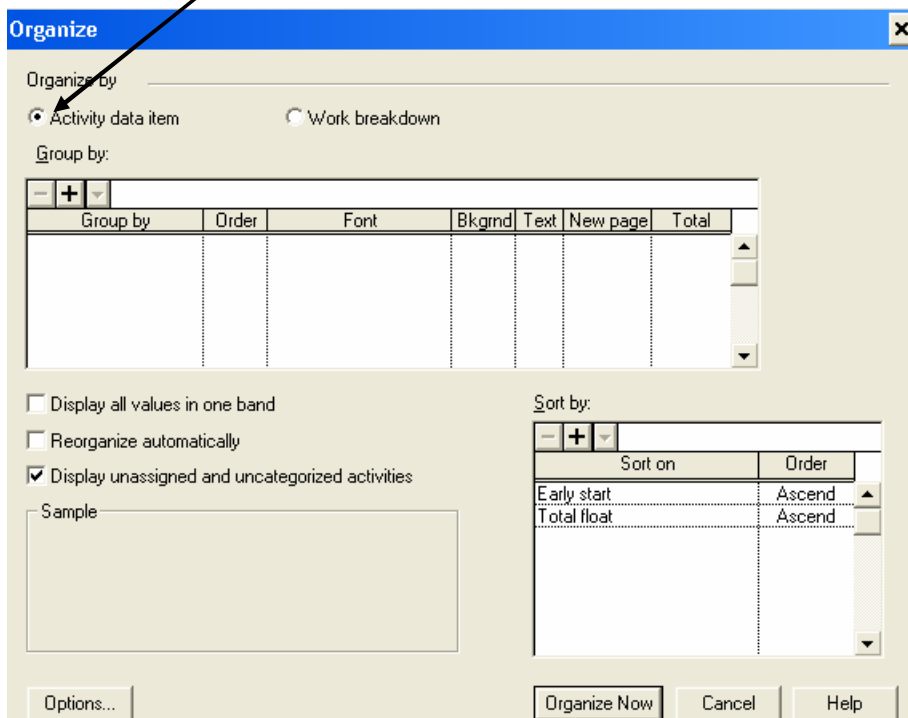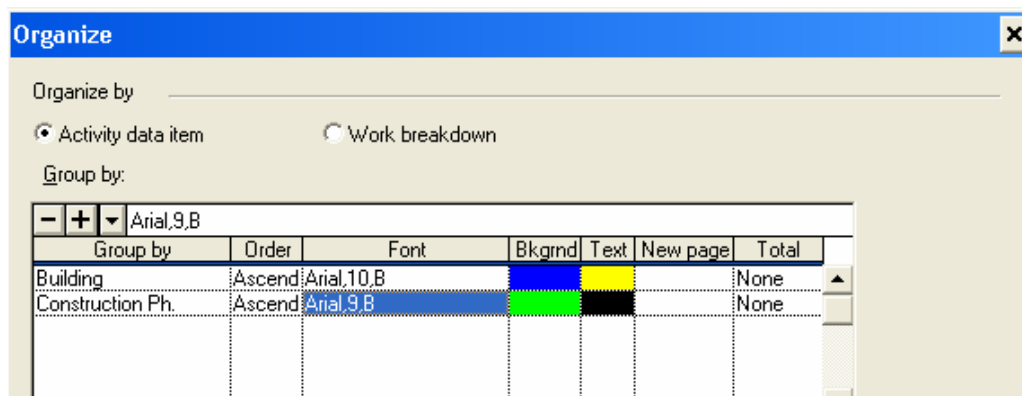

Note this change

We now need to tell the programme to organise by our Activity Codes rather than by the WBS. Press the "Organise" icon

And select "Activity Data Item" as your "Organize by" data. The window should change to this:

We want to Group our activities by the codes that we have defined. Click under "Group by" and enter our defined codes:

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Note in the example shown the "Font" has been altered. This can be changed by highlighting the font and selecting the required font in the Input area.

Press "Reorganise Now" and the schedule layout should change to this:
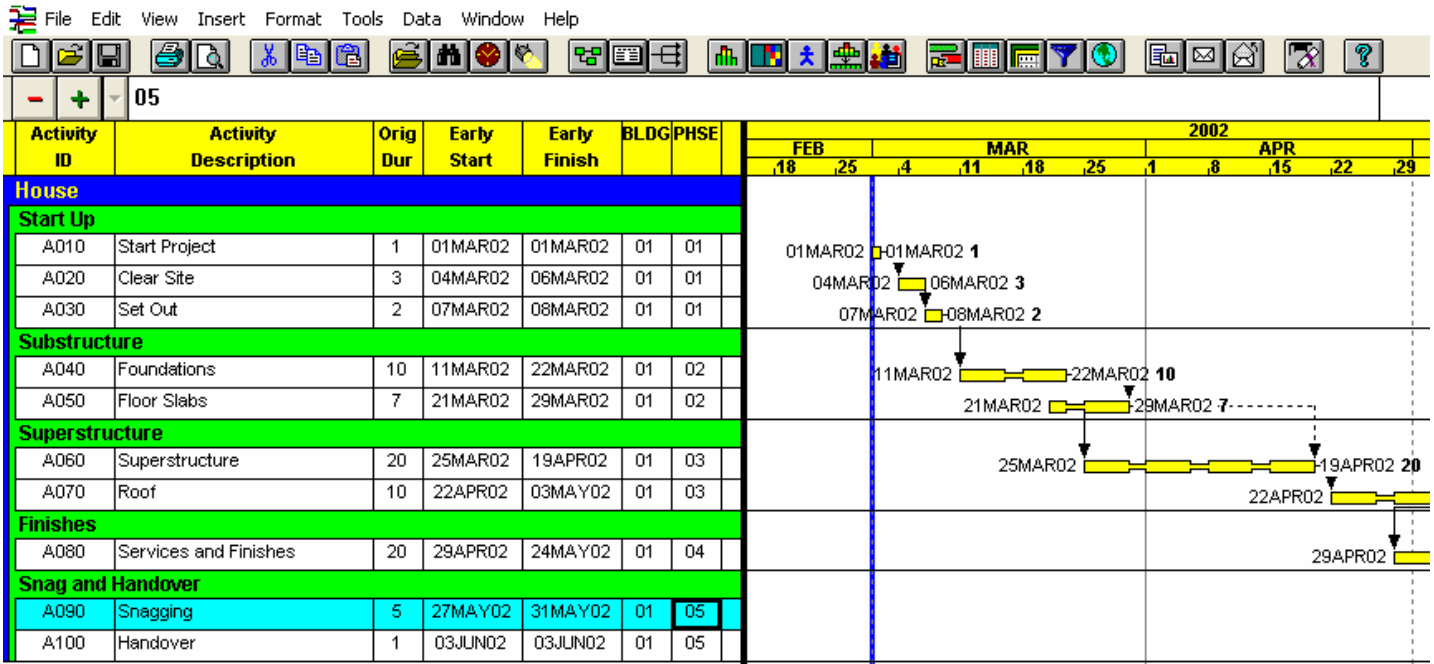
Our colour scheme has changed in line with our new layout and "Snagging" has moved from our previously defined heading of "Finishes" to "Snag and Handover".

The Activity Code form is useful in two main instances: where there is repetition and where different layouts might be required by different parties.

Imagine if our example had ten houses: our WBS would run for several pages, but the Activity Code will only have to be adjusted by adding in one code per house – a house number identifier.

Further, in that instance a reorganisation could tell our Services Foreman exactly what his programme will be for the ten houses. First we would organise it by "Construction Ph." and then by "Building".

The below example took just a few minutes to create, organise and sort. Note that in this example I used a "Filter" to show only the "Finishes" activities i.e. those activities with Building Ph. Code "04".
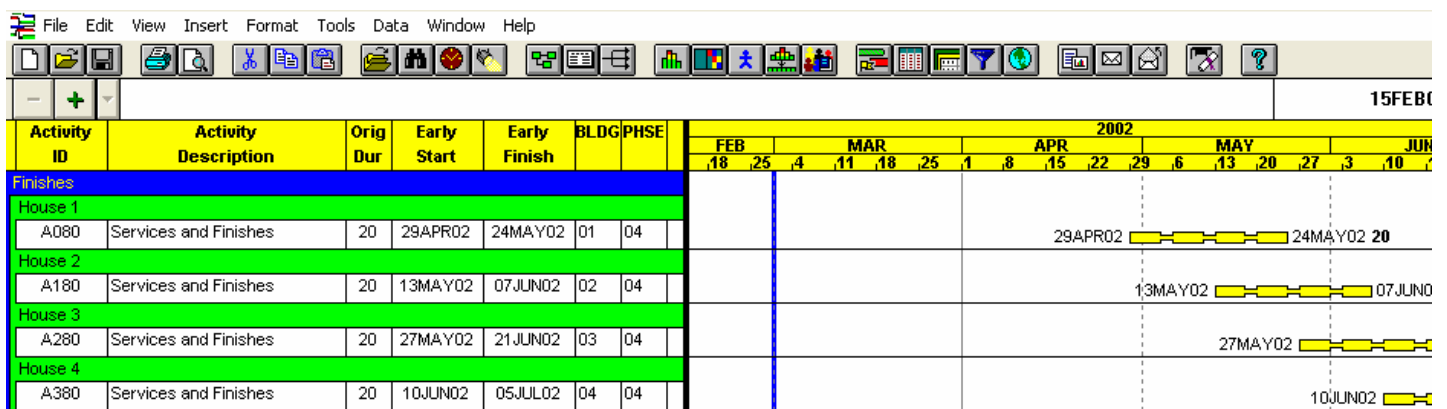
So how do we filter our programmes?

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7. Filtering the Programme

Our programme should currently look something like this:
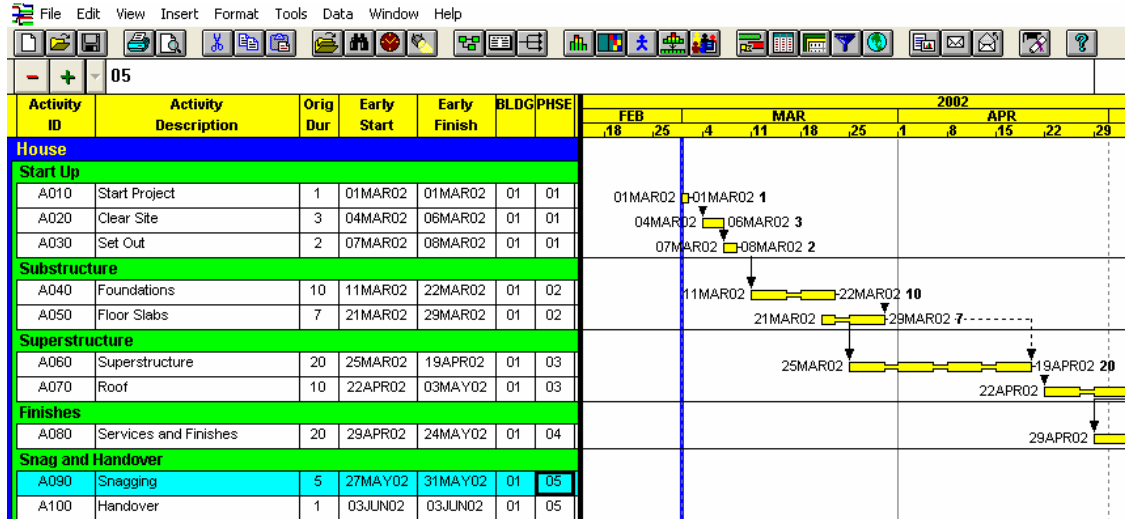
We need to create something to filter by: create an additional Activity code, with values, as follows:

Create a column for "FMAN" and distribute the three foremen as follows:

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	BLDG	PHSE	FMAN	
Start Up								
A010	Start Project	1	01MAR02	01MAR02	01	01	01	
A020	Clear Site	3	04MAR02	06MAR02	01	01	02	
A030	Set Out	2	07MAR02	08MAR02	01	01	02	
Substructure								
A040	Foundations	10	11MAR02	22MAR02	01	02	02	
A050	Floor Slabs	7	21MAR02	29MAR02	01	02	03	
Superstructure								
A060	Superstructure	20	25MAR02	19APR02	01	03	03	
A070	Roof	10	22APR02	03MAY02	01	03	03	
Finishes								
A080	Services and Finishes	20	29APR02	24MAY02	01	04	01	
Snag and Handover								
A090	Snagging	5	27MAY02	31MAY02	01	05	01	
A100	Handover	1	03JUN02	03JUN02	01	05	01	

We can now use our filters to sort by Construction Phase, Foreman or a combination of the two:

Click the filter icon: , and this window will appear
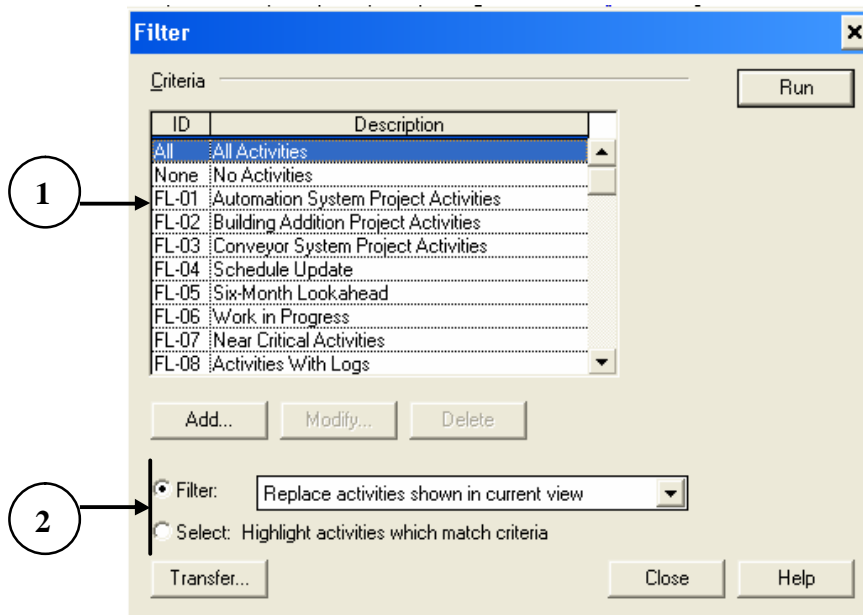
To remove confusion first delete the current filters from FL-01 onwards. Highlight FL-01 and press the "Delete" button. Confirm that you do wish to delete the filter when asked and the filter disappears. Repeat this process for the remaining filters until you are left with:
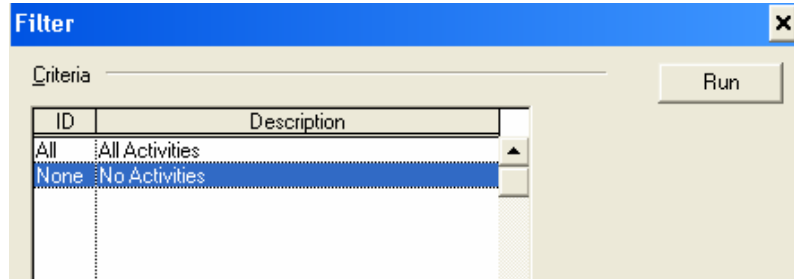
Now click the "Add" button. The following window appears:
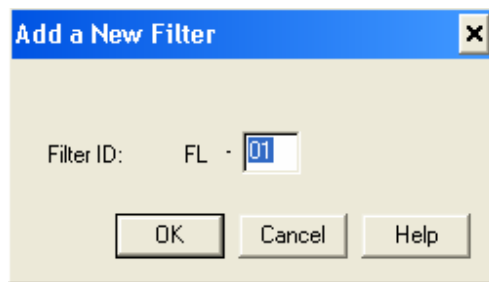
Click OK. You are then taken to:
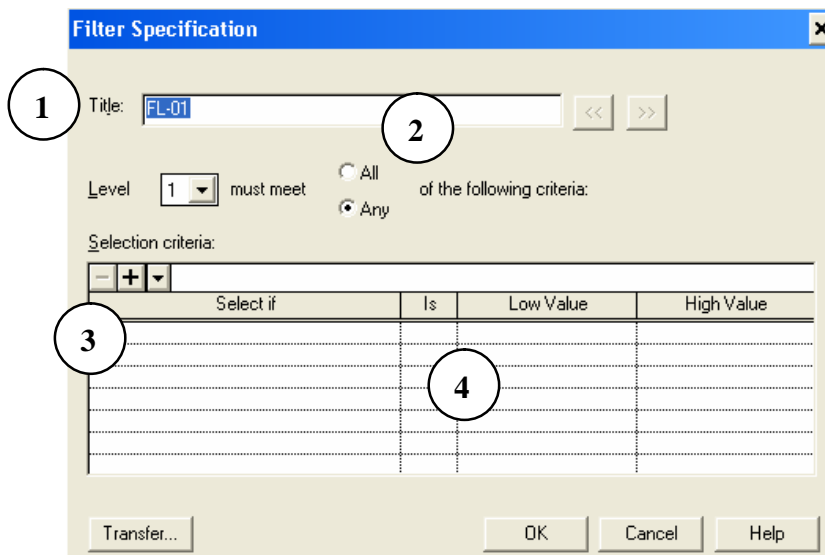
1. This is the name of the filter – it can be renamed as anything

2. This section defines whether, in the case that two conditions are imposed on the filter, activities are required to fulfil all conditions or only one of the conditions

3. In this section the filter conditions are defined. Any of the data items defined for an activity can be used in a filter, from dates to activity codes to resource data.

4. Here the "condition" for the filter to apply is defined. It can be any mathematical function (i.e. <,>, =, etc.) and any value, either of the data item mentioned in "**3.**", or any other data item.

An example would be:

Selection criteria:			
− + ▼	01		
Select if	Is	Low Value	High Value
Foreman	EQ	01	

Here we are telling the computer to apply the filter (i.e. select and display that activity) only if the Foreman is equal to 01 (Joe Bloggs).

A more complex filter would be:

This tells the computer to select an activity if

    (i)   the Foreman is 01 (Joe Bloggs) **AND**

    (ii)   the Construction Phase is "Within the Range" of (WR) 02-04 (i.e. is 02, 03 or 04 – Substructure, Superstructure and Finishes) **AND**

    (iii)   Has an early start date after the 1st April 2002.

In this case, only activity A080 will be selected.

Filters are often used in large projects for progress reporting: it is difficult to sort through hundreds of activities to find those that have started or finished. A filter can reduce the hundreds to a few dozen.

A useful filter for a "look ahead" view would look like this:

This states that the activity should be visible is any of the "early dates" – either "Early Start" or "Early Finish" occur within the window "DD" i.e. the Data Date (The date on which the programme was last scheduled) and "DD+1M" (Data Date +1 Month). Applying this filter to our programme results in:
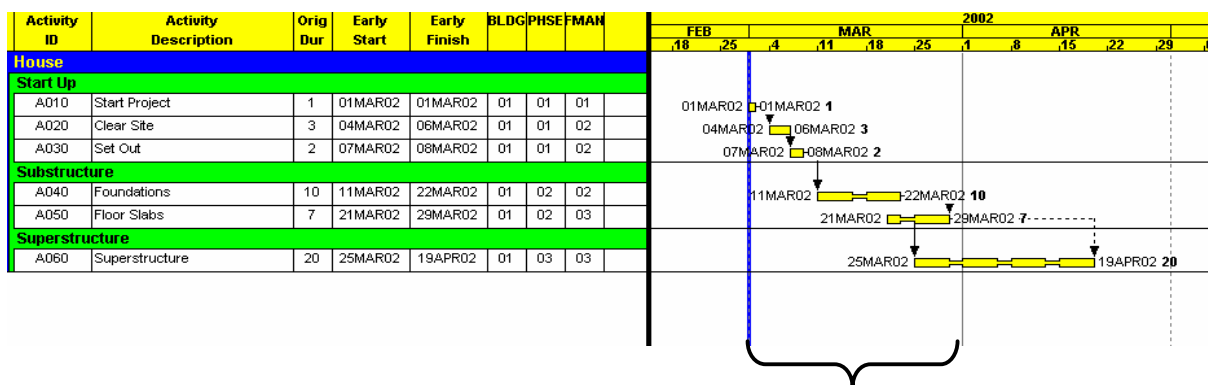
Only activities with a portion of their duration in the area indicated above have been selected (the Data Date is shown by the blue line, and is the 1 March 2002. The filter has selected activities that run between the 1 March and the 1 April 2002).

So we have a filter that we can use when reporting progress in our programme. Progress reporting will be covered in Chapter 9.

Until then, restore our layout to include all activities (i.e. run filter "All").

8. Resources

Primavera has the facility to receive resource data, apply costs to the resources, report these resources graphically, level the resources and apply actual expenditure against budgeted.

The first step is to establish a resource "dictionary" of the resources we wish to define for the project. Data > Resources opens the following window:

1. The resource "code"
2. The units that apply to this resource (e.g. m^3, Hours, litres)
3. Whether the unit is "Driving" or not (i.e. whether the duration is driven by the resource quantity divided by the resource output)
4. The calendar to be used when this resource is applied.
5. A description of the resource

6. Resource limits (used in resource levelling)

7. The cost, if required, per unit of the resource. The cost can reflect the monetary cost (if desired) or another aspect, such as the number of man hours required to place a unit of the resource. However, there are other ways to show this and this will be discussed later.

Enter the data shown above. Each person has a normal limit of 1 and a maximum limit of 2. The Price per unit (i.e. Cost per Day) of Bob is 50, Mr Dixon is 35 and Wendy is 25. Nuts and Bolts are a material resource (versus a manpower resource) and have no limits or, in this example, a price per unit.

After entering the Price/unit you will be asked if you would like to calculate costs now. Select "Yes" in each instance.

Once the resource data has been entered, close the window. Our next step is to apply these resources to our activities. Highlight the first activity – A010: Start Project – and press Ctrl+R (or from the drop-down menu, View > Resource Detail). The following window will appear:

Now click the "+" sign and the down-triangle and your will be presented with a list of resources which you can apply to this activity. Let us assume that Bob is required to start the project – to sign the papers and set out the works. Select "Bob" as the resource and enter 1 unit per day. The budgeted quantity should immediately become "1" (i.e. 1 unit/day * 1 day).

Now, with the cursor in the "Resource" box of this window (i.e. highlighting BOB), press the right arrow to create another resource.

This time use the resource "Nuts and Bolts" and enter an amount in the Budgeted Quantity of "10". The number 10 should also appear in the "Units per Day" column.

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Highlight the next activity add resources as per this table:

Act. ID	Resource 1	Units/day	Resource 2	Budg.Quant.
A010	BOB	1	BOLT	10
A020	DIX	1	BOLT	5
A030	WEN	1	BOLT	20
A040	WEN	1	BOLT	25
A050	BOB	1	BOLT	20
A060	DIX	1	BOLT	15
A070	DIX	1	BOLT	15
A080	DIX	1	BOLT	20
A090	WEN	1	BOLT	10
A100	BOB	1	BOLT	5

Close the Resource window and change two of the columns to show the resource assignments... the column titles will be "Resource" and "Budgeted Quantity":

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Resource ID	Budgeted Quantity
House						
Start Up						
A010	Start Project	1	01MAR02	01MAR02	BOB, BOLT	11.00
A020	Clear Site	3	04MAR02	06MAR02	DIX, BOLT	8.00
A030	Set Out	2	07MAR02	08MAR02	WEN, BOLT	22.00
Substructure						
A040	Foundations	10	11MAR02	22MAR02	WEN, BOLT	35.00
A050	Floor Slabs	7	21MAR02	29MAR02	BOB, BOLT	27.00
Superstructure						
A060	Superstructure	20	25MAR02	19APR02	DIX, BOLT	35.00
A070	Roof	10	22APR02	03MAY02	DIX, BOLT	25.00
Finishes						
A080	Services and Finishes	20	29APR02	24MAY02	DIX, BOLT	40.00
Snag and Handover						
A090	Snagging	5	27MAY02	31MAY02	WEN, BOLT	15.00
A100	Handover	1	03JUN02	03JUN02	BOB, BOLT	6.00

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Primavera cannot, unfortunately, show more than one resource in this view: it "lumps together" the resources so that the total Budgeted Quantity is shown for all resources applied to that activity.

We can see how these resources are distributed across time in a resource profile. Press the button (alternatively, from the drop-down menu, View > Resource Profile or Ctrl+F7).

This should appear at the bottom of the screen:
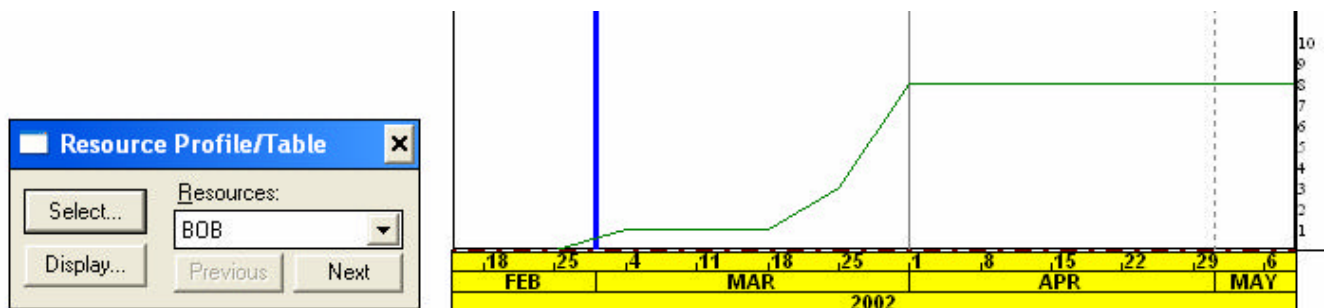
This is the resource profile for the resource (or person) "BOB" – Bob The Builder. We can see he spends a total of 8 days on site, the majority towards the end of March.

We need to modify this to tell us exactly what we want.

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Press the "Display" button (under the "Select" button in the Resource Profile/Table window) and this window will appear:

1. Would you like to see the Units or the Cost (as entered) of those units? i.e. Units or (Cost/Unit) x Units.

2. Would you like the graphs to show their data based on "Early Start" dates or "Late Start" dates.

3. Should the graphs show data collected from all activities or only the currently selected activities.

4. Gives the time interval for the graph data (i.e. a new bar in a histogram chart or a new plot-point in a line ("curves") graph.

5. Allows you to choose the type of graph to be displayed — histogram or curves (line graph).

The following (6 to 10) apply to histograms only:

6. Do you want the graph to display totals per defined time interval (4.), average or peak usage.

7. Histogram format: Area ( )

or Bar ( )
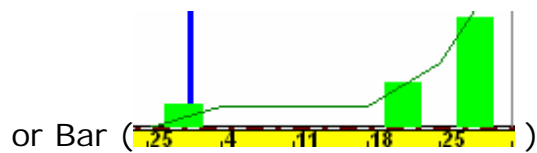
8. Values – these are used once progress has been entered and the requirement is to compare planned and actual

9. Allows you to define the calendar to be used when calculating average resource usage (i.e. may cause a difference if a resource is only used on a four day week when the activity runs through a five day week)

10. Drawing of Limits and Overloads refers to resource peak usage and levelling.

11. Refers to the resource usage curves: allows you to define different lines for the various curves being shown. Alternatively Primavera will use different colours to highlight the different data lines.

More information on these can be found by pressing the "Help" button.

Change the contents of the window to this:
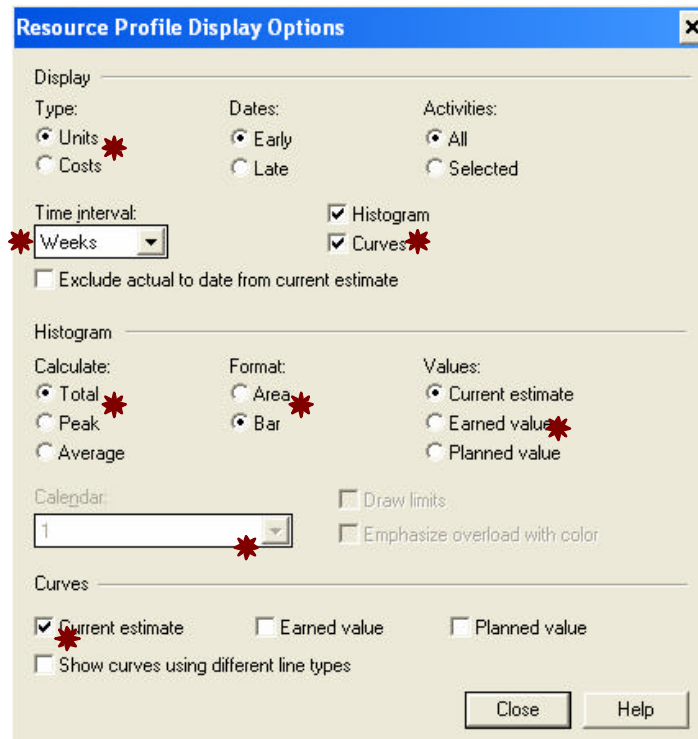
Press "Close" and select the resource "BOLT" from the window in the drop-down menu in the Resource Profile/Table area. Your histogram display should look like this:
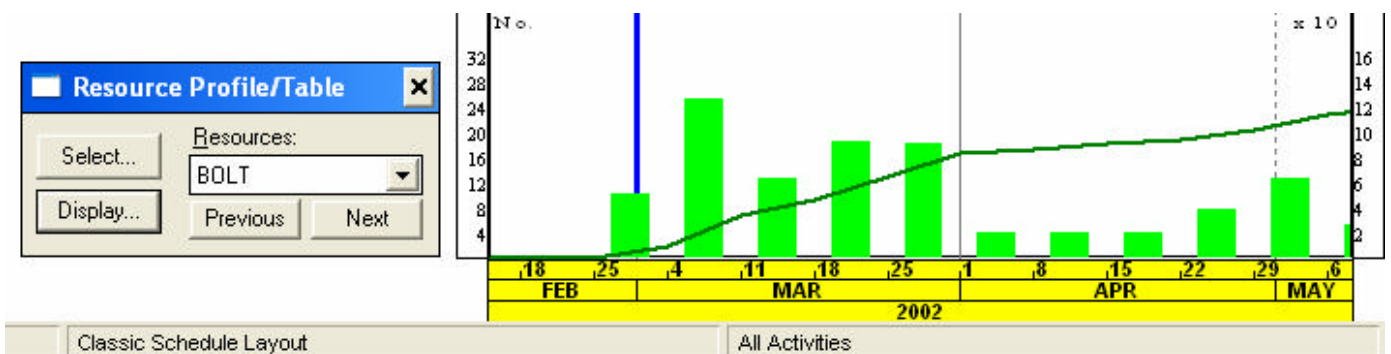
This tells us that we will be using a total of about 120 bolts and their distribution across the project. If we want to see the precise number we should select the resource table, rather than the graph.

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Press the button button (Or View > Resource Table or Shift+F7) and select "BOB" from the drop-down resource list. Your display should change to:

Row	Group Name			1			2	5											1
1	Bob the Builder			1			2	5										1
2	Nuts and Bolts			10	25	13	18	18	4	4	4	8	13	5	5	5	10	5
3	Mr Dixon			3			5	5	5	5	5	10	5	5	5		
4	Wendy			2	5	5										5	

18	25	4	11	18	25	1	8	15	22	29	6	13	20	27	3	1
FEB		MAR				APR					MAY				JUN	
						2002										

Here we now see the weekly total number of days that each person will be required to spend on the job, as well as the weekly total numbers of bolts used.

Exporting this data out of Primavera is tricky… it is a case of finding the correct report type and modifying it to your requirements.

To export this report we need to run report RL-01. It can be found here:

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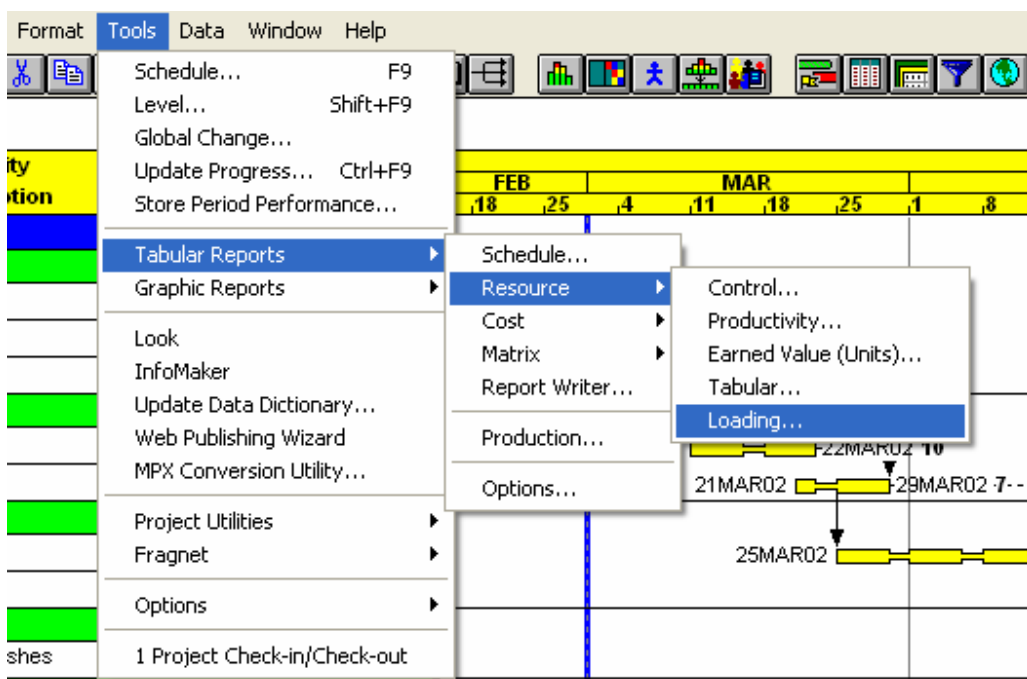
We are then faced with this menu:
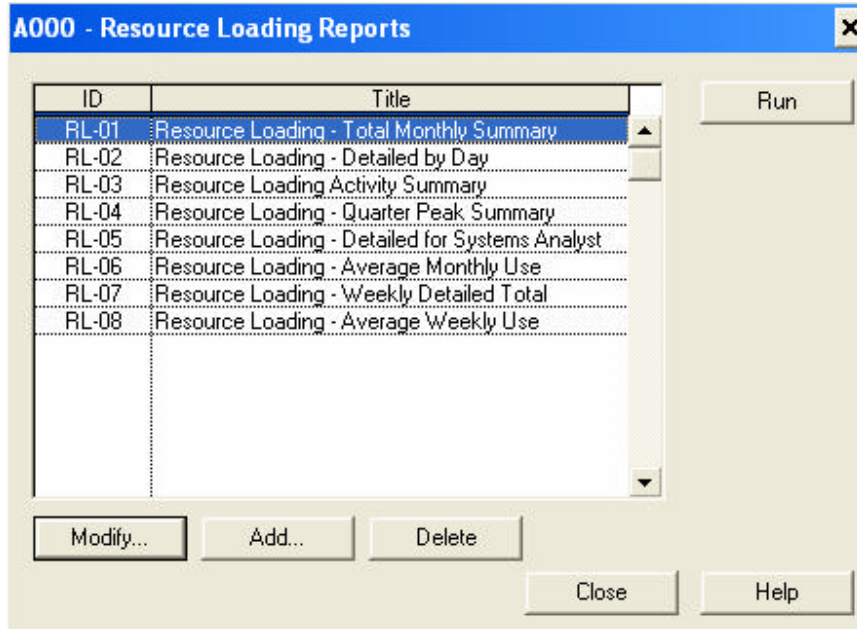
Report RL-01 is already selected. Click the "Modify…" button and these windows will appear. Make the modifications highlighted to create the report we require. The various screens can be accessed by clicking the "Tabs" under the Title.
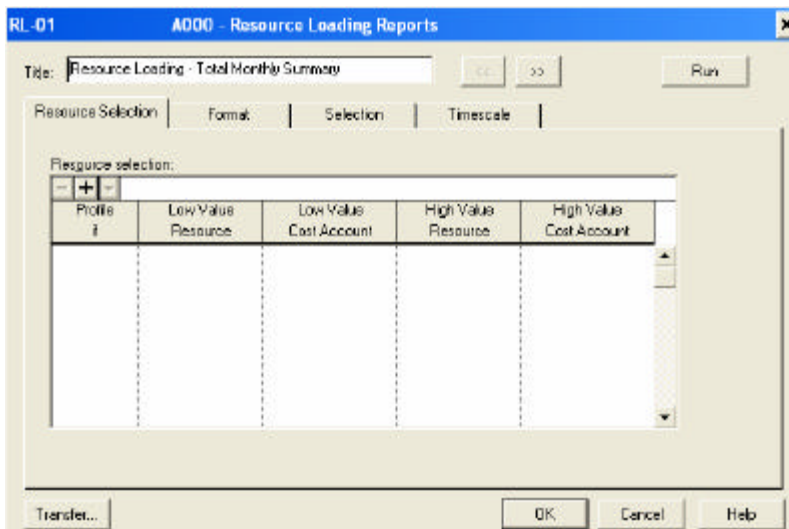
Leave this selection blank to select all resources. If we wanted to omit a resource (e.g. Nuts and Bolts) we could put the condition "NE" (not equal to) under profile and the resource "NUTS" under "Low Value Resource"

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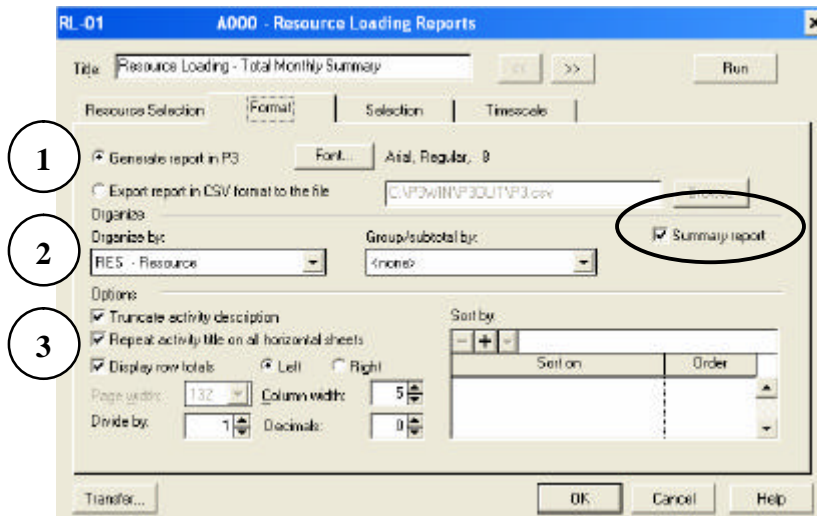
Important points to note here are to Generate the report in P3 (**1**), to organise by Resource and produce a summary report (**2**) and to display row totals on the left (**3**).
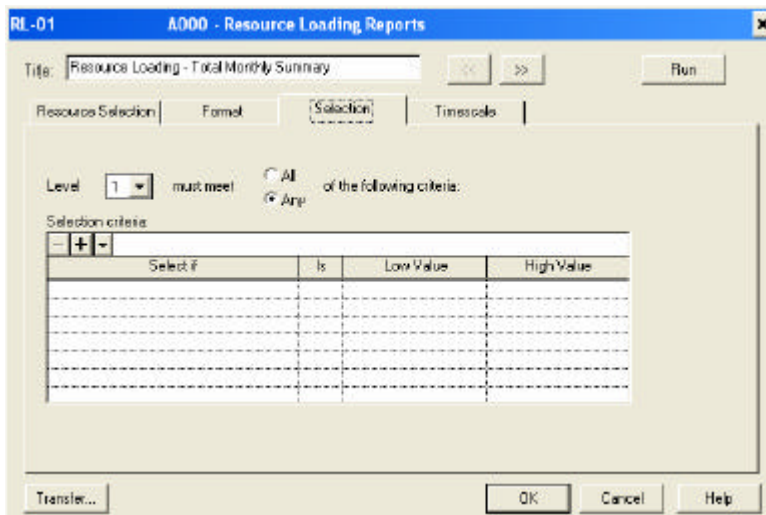
The selection is irrelevant to us – we want a report for the whole project. However we could filter for any of the codes that we have established, in the same way that we filtered the project in Chapter 7
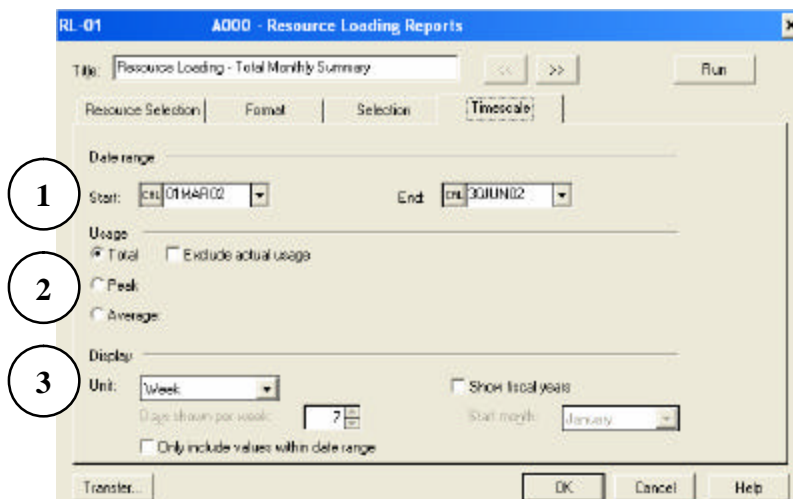
Finally we set the time we require our report to span (**1**) and the time unit we require the report (**3**). We can also specify whether we want the report to show Total, Peak or Average resource usage (**2**).

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With this information set we can run the report. Click the "Run" button in the top right hand corner of the window.

This window will appear:
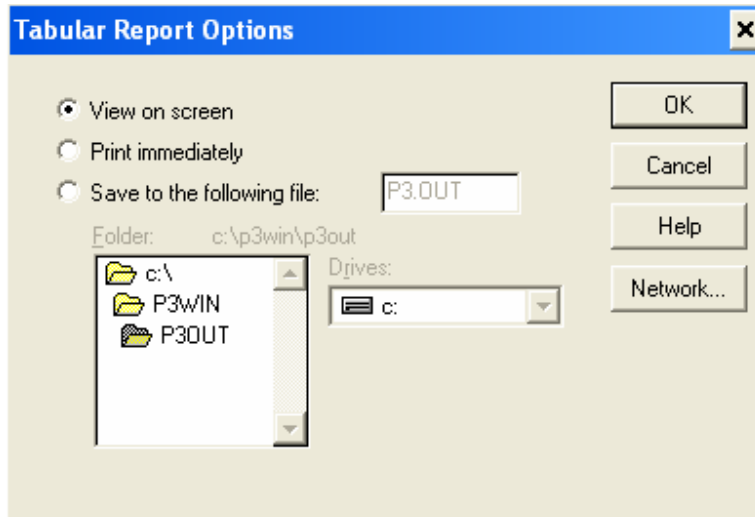
We want to see this report on screen so click "OK" and the Primavera report writer will produce the required report:

Joe Bloggs Builders		PRIMAVERA PROJECT PLANNER		House Building Programme		
REPORT DATE 19MAR02 RUN NO. 14 10:19		RESOURCE LOADING REPORT		START DATE 01MAR02 FIN DATE 31JUL02*		
Resource Loading - Total Monthly Summary		TOTAL USAGE FOR WEEK		DATA DATE 01MAR02 PAGE NO. 1-1		

RESOURCE	RESOURCE DESCRIPTION	TOTAL	25FEB 2002	4MAR 2002	11MAR 2002	18MAR 2002	25MAR 2002	1APR 2002	8APR 2002	15APR 2002
BOB	Bob the Builder	9	1			2	5			
BOLT	Nuts and Bolts	145	10	25	13	18	18	4	4	4
DIX	Mr Dixon	53		3			5	5	5	5
WEN	Wendy	17		2	5	5				
	REPORT TOTAL	224	11	30	18	25	28	9	9	9

To get this report into Excel format, where the data could be manipulate and the report format modified, we can first copy and paste this data into Microsoft Word, then copy and paste it again onto an Excel spreadsheet.

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For instance, you will notice that due to the width of the report, it spans two pages. We can copy and paste both pages into Excel and reformat them to a single page.

Note that the export copies only the values of the data and formulae will have to be replaced (e.g. the weekly totals).

A direct copy from Primavera Look to Excel WILL NOT WORK.

9. Reporting Progress

The first thing that we should do though, is save our original programme as a "baseline" programme against which future revisions and progress updates can be measured.

So open and run the filter for "All Activities" (FL-01) to restore all activities to our layout. Then save our current layout either through the drop-down menu or by pressing Ctrl+S.
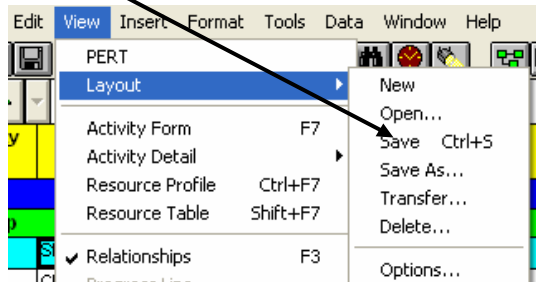
We now need to copy this programme. Again, from the drop down menus highlight "Copy...":

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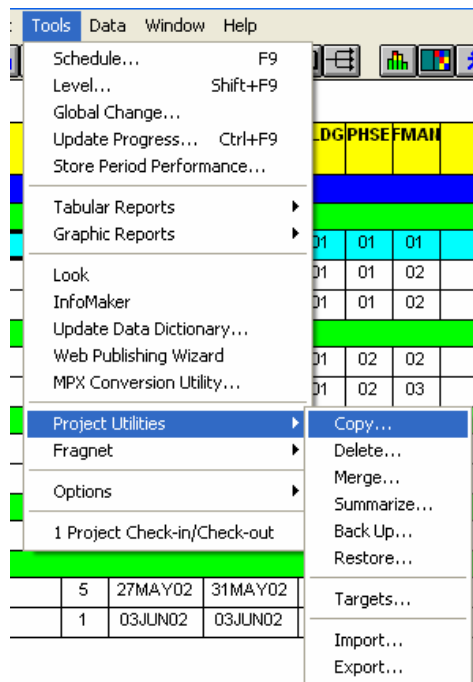
That will open this window:
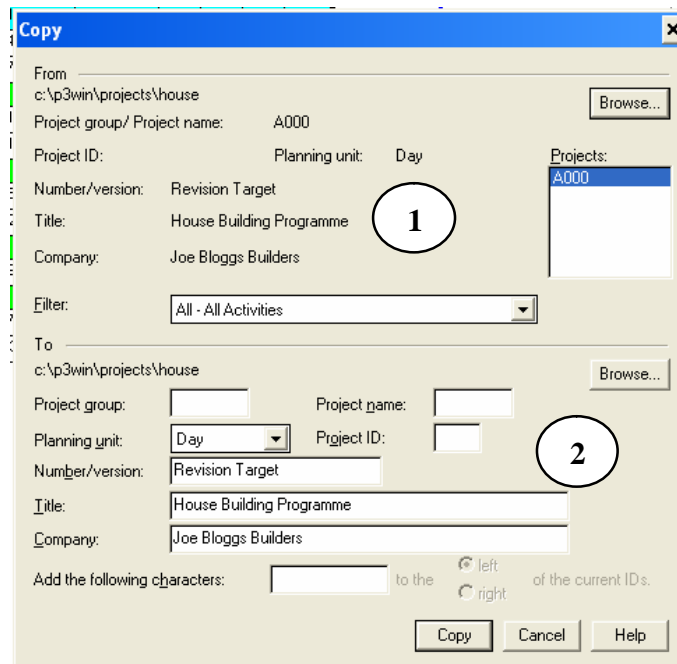
1. Represents the programme being copied – A000 should be highlighted under the "Projects:" heading.

2. This section shows what you want to copy the programme to. Ensure that the directory is correct (C:\p3win\projects\house). The first field required to be filled in is "Project group:" – enter in P101 (i.e. **P**rogress Report **1** of programme **A**00**1**). The second field will be our Revision – to indicate that this is a progress update
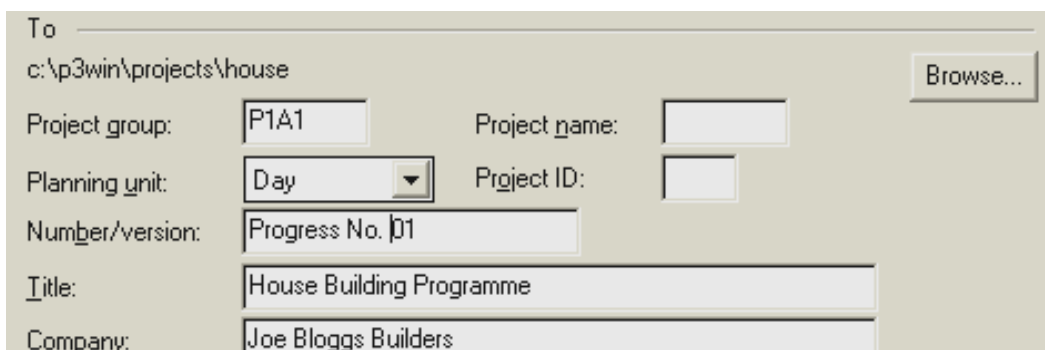
Press the "Copy" button and the programme is copied.

Open up our newly created programme A101 through the File-Open drop-down menu and it will open over your original programme.

We now always need to be able to compare our progressed programme to our original or "baseline" programme. We therefore need to call our original programme the "Target Programme". We can identify it as such here:
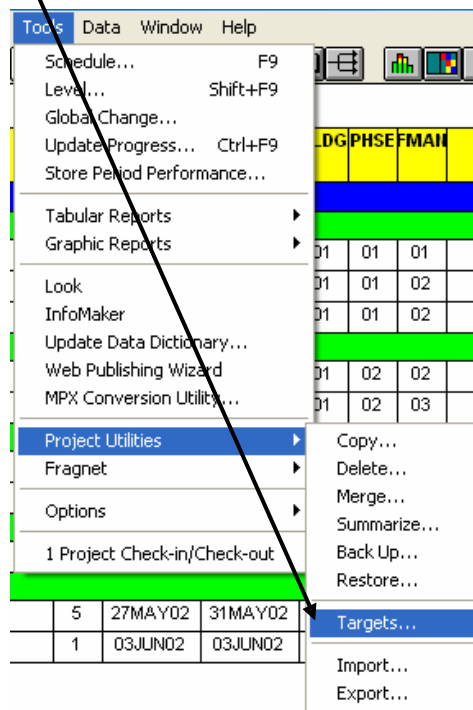
... This opens the following window:

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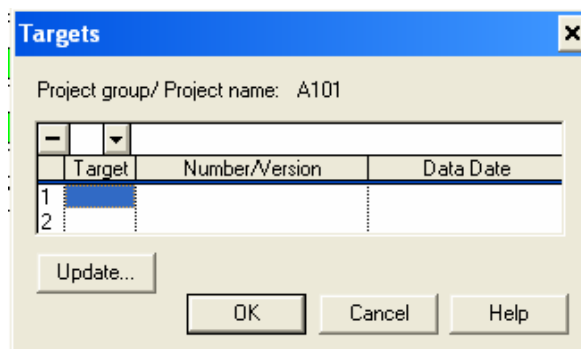
With the Target space beside "1" highlighted press the down arrow in the input area and select "A000", our original programme. Click OK and programme "A000" is set as the Target programme of A101.

Now we need to show this target programme in order that, when progressed, we can see the variation in the bars.

Press Ctrl+F11 to bring up our Bar editing window. Create a new bar under the current "Early Bar" and use these settings (changes indicated with a ✷):
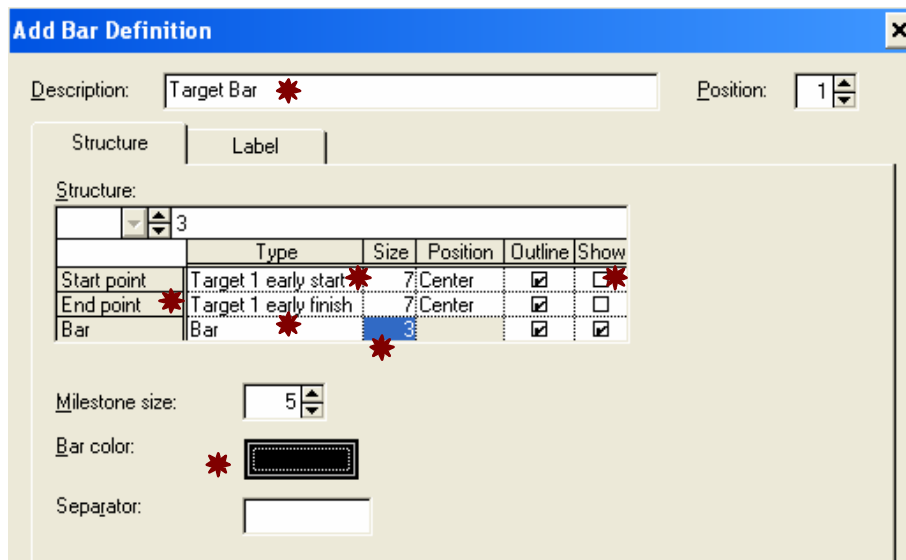
Click on "OK" and "Close".

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Your display should adjust to this:
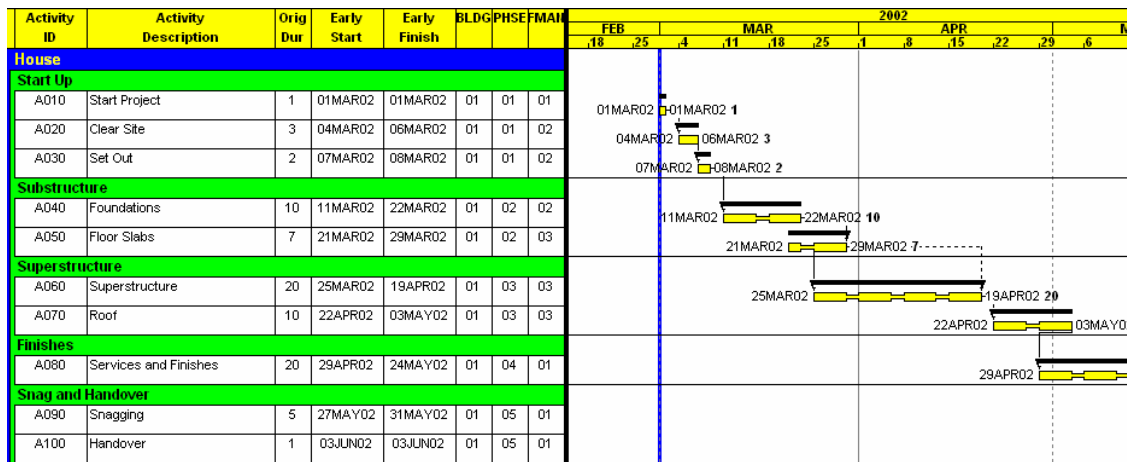
The black line indicates the "target" or baseline programme; the yellow indicates the currently open programme. If adjustments are made to the programme, the yellow lines will move but the black lines will remain in their current positions.

The next step is to organise our columns for easy data entry. Press F11 and arrange the columns like this:
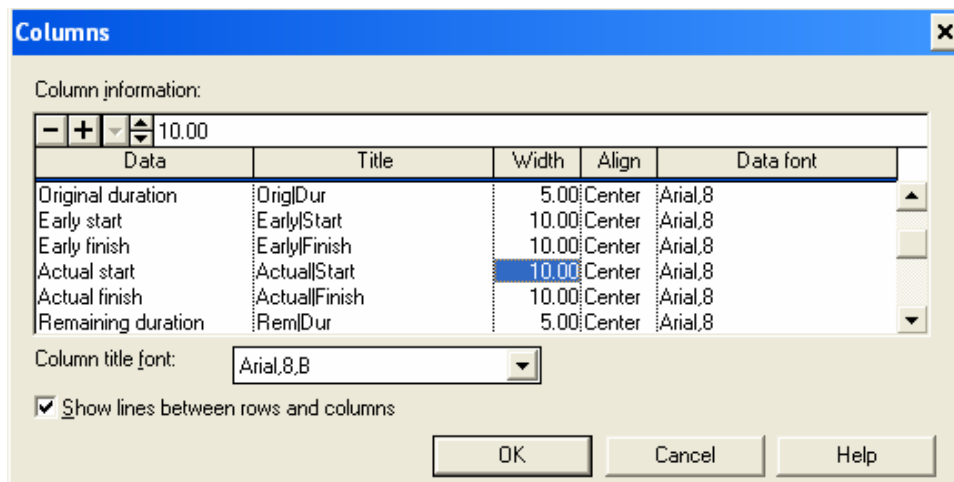
That is, replace the columns created for the Activity Codes with "Actual Start", "Actual Finish" and "Remaining Duration".

Click "OK" and your display should adjust to:

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Actual Start	Actual Finish	Rem Dur	
House								
Start Up								
A010	Start Project	1	01MAR02	01MAR02			1	01MAR02 ▯01MAR02 1
A020	Clear Site	3	04MAR02	06MAR02			3	04MAR02 ▭06MAR02 3
A030	Set Out	2	07MAR02	08MAR02			2	07MAR02 ▭08MAR02 2
Substructure								
A040	Foundations	10	11MAR02	22MAR02			10	11MAR02 ▭22MAR02 10
A050	Floor Slabs	7	21MAR02	29MAR02			7	21MAR02 ▭29MAR02 7
Superstructure								

We are going to report progress up to the 23 March 2002. Primavera has a facility whereby you can highlight the activities that could be affected by progress up to a particular date. Press the Progress Spotlight - ⬚ - button and the display will adjust to this:

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Actual Start	Actual Finish	Rem Dur	
House								
Start Up								
A010	Start Project	1	01MAR02	01MAR02			1	01MAR02 ▯01MAR02 1
A020	Clear Site	3	04MAR02	06MAR02			3	04MAR02 ▭06MAR02 3
A030	Set Out	2	07MAR02	08MAR02			2	07MAR02 ▭08MAR02 2
Substructure								
A040	Foundations	10	11MAR02	22MAR02			10	11MAR02 ▭22MAR02 10
A050	Floor Slabs	7	21MAR02	29MAR02			7	21MAR02 ▭29MAR02 7

The progress spotlight, by default, highlights one week after the current Data Date. We need to adjust it to highlight the area we wish to progress. Move your cursor over the rightmost vertical blue line and the cursor will change to ⬚ . Drag the vertical blue line to the 23 March 2002 and release. Your display should now look like this:

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Actual Start	Actual Finish	Rem Dur	
House								
Start Up								
A010	Start Project	1	01MAR02	01MAR02			1	01MAR02 ▯01MAR02 1
A020	Clear Site	3	04MAR02	06MAR02			3	04MAR02 ▭06MAR02 3
A030	Set Out	2	07MAR02	08MAR02			2	07MAR02 ▭08MAR02 2
Substructure								
A040	Foundations	10	11MAR02	22MAR02			10	11MAR02 ▭22MAR02 10
A050	Floor Slabs	7	21MAR02	29MAR02			7	21MAR02 ▭29MAR02 7 ----
Superstructure								
A060	Superstructure	20	25MAR02	19APR02			20	25MAR02
A070	Roof	10	22APR02	03MAY02			10	22

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The five activities affected by the progress "spotlight" are highlighted in yellow. We can now enter our progress. This is done by entering Actual Start and Actual Finish dates in the relevant columns. Note that once an "Actual Finish" date is entered, the "Remaining Duration" automatically reverts to 0.

Enter the following:

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Actual Start	Actual Finish	Rem Dur	
House								
Start Up								
A010	Start Project	1	04MAR02A	04MAR02A	04MAR02	04MAR02	0	
A020	Clear Site	3	06MAR02A	08MAR02A	06MAR02	08MAR02	0	
A030	Set Out	2	11MAR02A	11MAR02A	11MAR02	11MAR02	0	
Substructure								
A040	Foundations	10	13MAR02A	02APR02	13MAR02		7	
A050	Floor Slabs	7	18MAR02A	29MAR02	18MAR02		5	
Superstructure								
A060	Superstructure	20	22MAR02A	18APR02	22MAR02		19	
A070	Roof	10	22APR02	03MAY02			10	

In addition to the spotlighted activities, progress has also been entered for Activity A060: that activity has immediately become part of the "spotlight".

Once progress has been entered press F9 and schedule the programme to our new date, the 23 March 2002.

The display should look like this:

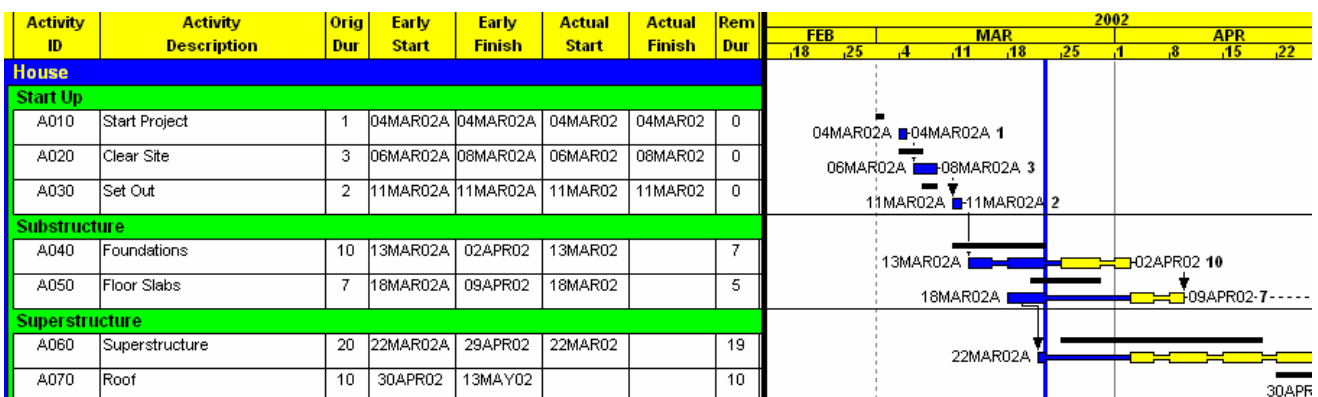| Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Actual Start	Actual Finish	Rem Dur	
House								
Start Up								
A010	Start Project	1	04MAR02A	04MAR02A	04MAR02	04MAR02	0	
A020	Clear Site	3	06MAR02A	08MAR02A	06MAR02	08MAR02	0	
A030	Set Out	2	11MAR02A	11MAR02A	11MAR02	11MAR02	0	
Substructure								
A040	Foundations	10	13MAR02A	02APR02	13MAR02		7	
A050	Floor Slabs	7	18MAR02A	09APR02	18MAR02		5	
Superstructure								
A060	Superstructure	20	22MAR02A	29APR02	22MAR02		19	
A070	Roof	10	30APR02	13MAY02			10	

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A few things to note about the progress reflected:

The projected time to completion now takes into account any links active on that Activity. For instance, A050 only has five days remaining duration, yet is pushed out to 9 April. The programme reflects the FF+5 day link from A040, which is due to finish on the 2 April, 1 week earlier.

Other necks are reflections of weekends and non-work periods. For instance, the period of time immediately after the new Data Date is a weekend: there is no activity over a weekend so the bar is necked.

Finally we can see the slippage suffered as a result of lack of progress in a column called "Variance Target 1 Early Finish" – this column measures the difference, in days, between the Early Finish of this programme and the Early Finish of the Target Programme.

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	Actual Start	Actual Finish	Rem Dur	Variance 1 Early Finish
House								
Start Up								
A010	Start Project	1	04MAR02A	04MAR02A	04MAR02	04MAR02	0	-1
A020	Clear Site	3	06MAR02A	08MAR02A	06MAR02	08MAR02	0	-2
A030	Set Out	2	11MAR02A	11MAR02A	11MAR02	11MAR02	0	-1
Substructure								
A040	Foundations	10	13MAR02A	02APR02	13MAR02		7	-7
A050	Floor Slabs	7	18MAR02A	09APR02	18MAR02		5	-7
Superstructure								
A060	Superstructure	20	22MAR02A	29APR02	22MAR02		19	-6
A070	Roof	10	30APR02	13MAY02			10	-6
Finishes								
A080	Services and Finishes	20	07MAY02	03JUN02			20	-6
Snag and Handover								
A090	Snagging	5	04JUN02	10JUN02			5	-6
A100	Handover	1	11JUN02	11JUN02			1	-6

Here we can see that the late start of the project pushed back the initial activities by 1 day: later delays in foundations resulted in 7 days

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being lost. Some early work on the superstructure has allowed us to recapture 1 day: the overall loss currently is 6 days behind programme.

For the next progress update, copy the previous progress update into a new programme and report progress there. Primavera allows two targets to be nominated – slippage (or gains) on the end date can then be measured against the previous update and the baseline programme.

So we've measured time, but how can we compare budgeted resource usage with actual?

Highlight activity A010 and press Ctrl +R. Your resource window should open.

We can enter actual resource usage in the "Actual this period" and "Actual to date" slots. If we imagine a situation where BOB lost his bolts and had to buy more, and as a result had to work overtime to get the job done, we could enter "1.5" as BOB's Actual to date and

"20" as the Actual to date BOLT usage. The Variance should automatically update to "-0.5" and "-10", indicating that there was overuse of resources by BOB (0.5 days) and BOLTS (10 No.).

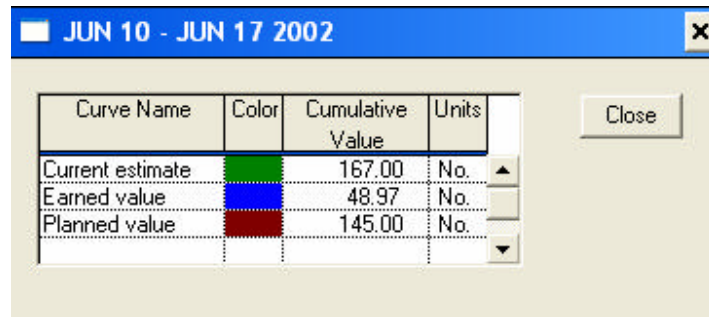| Act. ID	Resource 1	Actual to Date	To Complete	Resource 2	Actual to Date	To Complete
A010	BOB	1.5	0	BOLT	20	0
A020	DIX	3	0	BOLT	10	0
A030	WEN	1.5	0	BOLT	15	0
A040	WEN	5	7	BOLT	10	20
A050	BOB	5	2	BOLT	10	15
A060	DIX	2	19	BOLT	2	15

After entering these, display the resource histogram and select, from your Display options, all three curves (however do not select "Show curves using different line types"). Select "BOLT" as the resource you would like to see the display of.
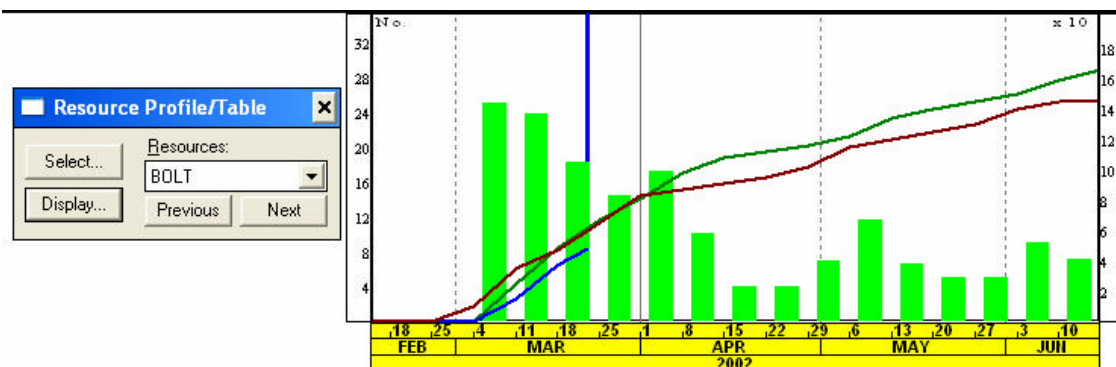
Your display should look like this: notice how the higher bolt usage has peaked the histogram early, and the overall increase has pushed the totals up from around 140 No. to over 160 No.

The precise numbers can be gained by moving the mouse over the part of the line for where you would like the values and right-clicking with your mouse button.

This window will appear:

If the report we generated previously is run again it will accommodate the increased resources expended to date, and increase the projected totals. Thus the data can be exported to Excel and a comparative graph created.

10. Conclusion

This guide has taken you through the basic functions of Primavera. It has also given a firm grounding in navigating the menu options in Primavera and entering data.

Armed with this information, and using Primavera's extensive help function, it is recommended that you further look into using multiple calendars, constraints and the powerful "Global Change" function.

For further general practice it is recommended that you access Primavera's tutorial functions (the button in the top toolbar will access these lessons.

Appendix A

Exercise 1

1. Take your original programme and organise it by activity code. Now copy the entire programme (highlight all activities, copy, paste under the last activity – you will be asked how you would like the activities renumbered: select Rename all Activities: Auto-increment. For more information use the help function in this window)

2. Assign your new activities to a new "Building" activity code – House and assign the correct construction phase activity codes to the activities.

3. Try reorganising your activities now on construction phase, then building. Link your activities so that each construction phase does not overlap

4. Rerun your resource histograms.

5. Repeat this process and add houses 3 and 4. Try filtering by foreman and work phase.

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