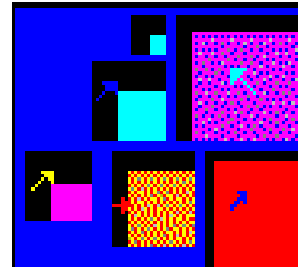# Primavera Lab Manual

PROJECT PLANNER®
FOR WINDOWS ™

Primavera Project Planner (P3) is a Copyrighted product of Primavera Systems, Bala Cynwyd, PA
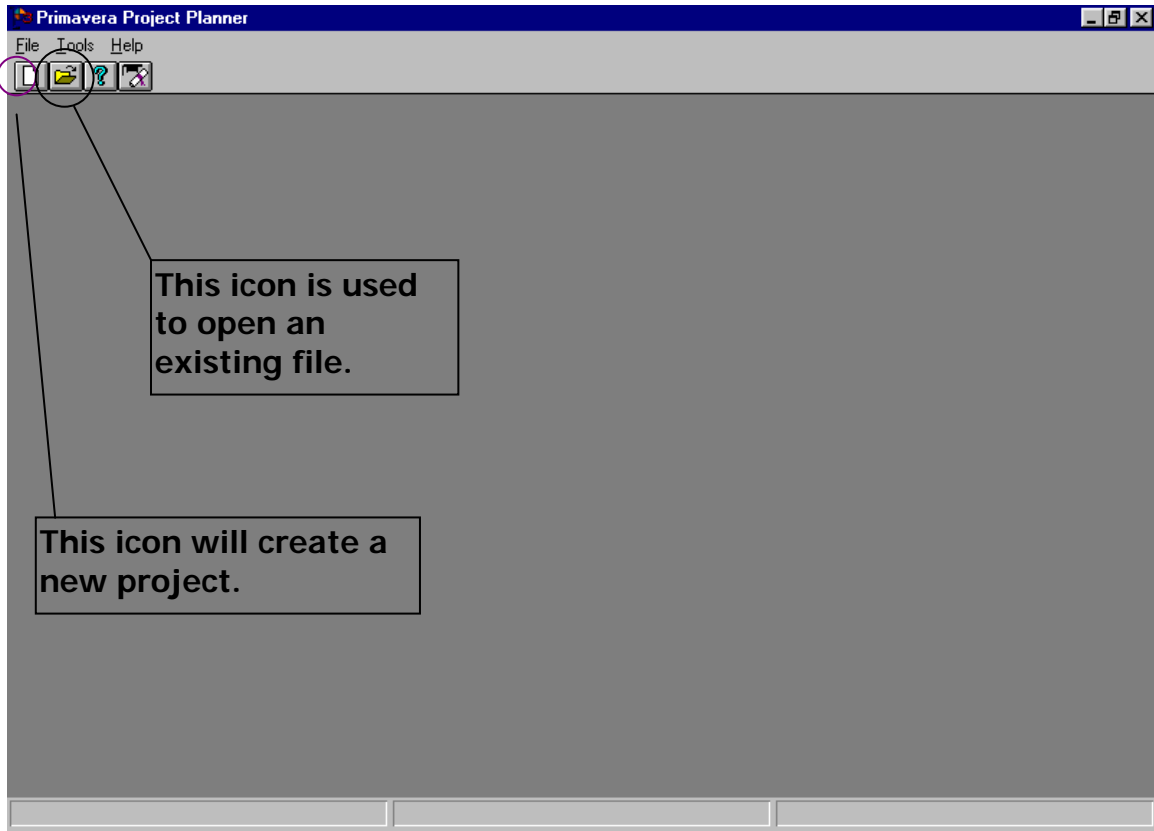
Version 3– Fall 1998
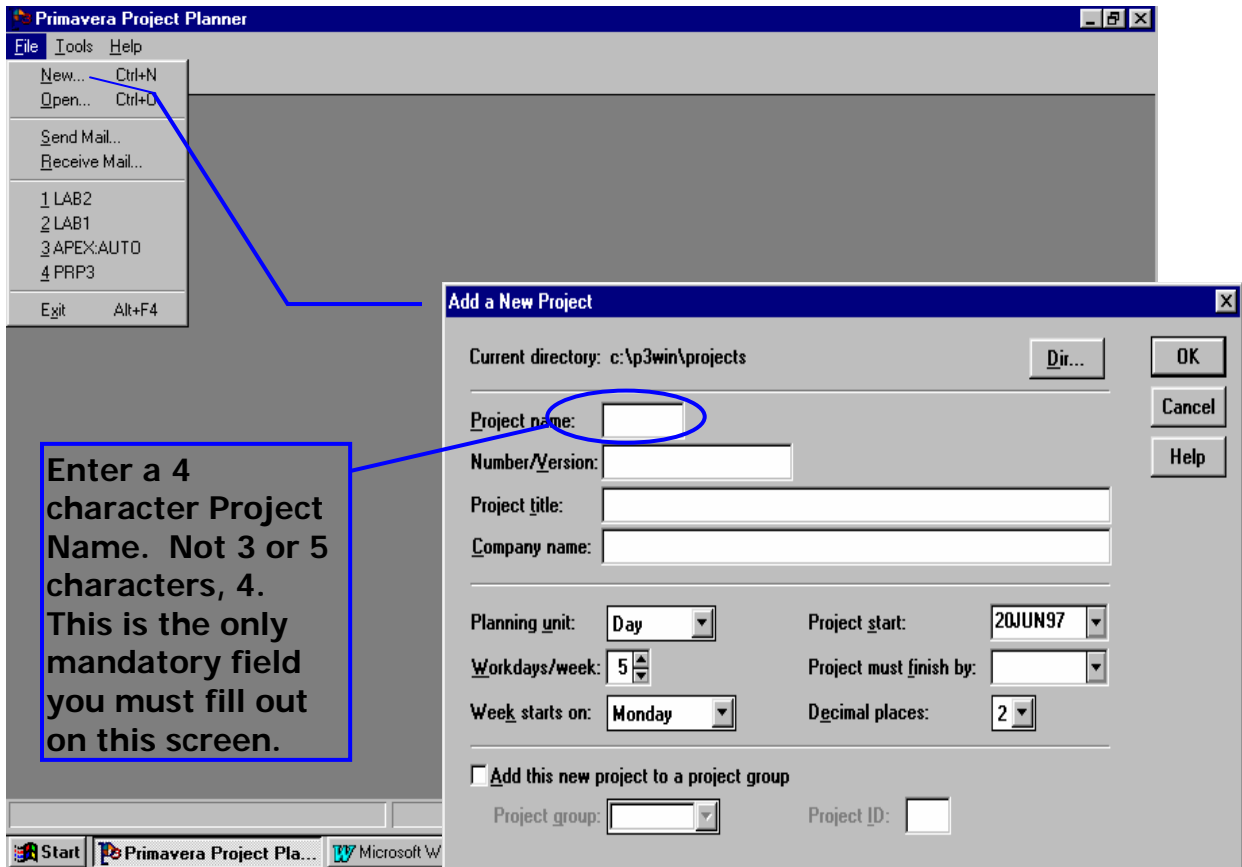
Table of Contents

Lab 1 – Creating a Project

1.1 Starting a Project

Once the Primavera icon has been selected and the appropriate password entered, this screen will appear.


The Menu at the top of the screen may also be used to setup a new project or open an existing project.

Primavera Project Planner

File Tools Help

New...	Ctrl+N
Open...	Ctrl+O
Send Mail...	
Receive Mail...	
1 LAB2	
2 LAB1	
3 APEX:AUTO	
4 PRP3	
Exit	Alt+F4

Enter a 4 character Project Name. Not 3 or 5 characters, 4. This is the only mandatory field you must fill out on this screen.

Add a New Project

Current directory: c:\p3win\projects   Dir...   OK

Project name: Cancel

Number/Version: Help

Project title:

Company name:

Planning unit: Day   Project start: 20JUN97

Workdays/week: 5   Project must finish by:

Week starts on: Monday   Decimal places: 2

☐ Add this new project to a project group

Project group: Project ID:

Start | Primavera Project Pla... | Microsoft W

When entering a new project, enter the Project Name and then fill in the Project Title and Company Name fields. Most projects work a five-day week and begin the week on Monday, but if a different workweek is required use the appropriate fields.

Do NOT enter a date in the Project Must Finish By field. This will artificially constrain the project and potential eliminate a zero total float critical path.

If you have already created a project, use the Open command to enter an existing project or the list of most currently used projects at the bottom of the File menu.
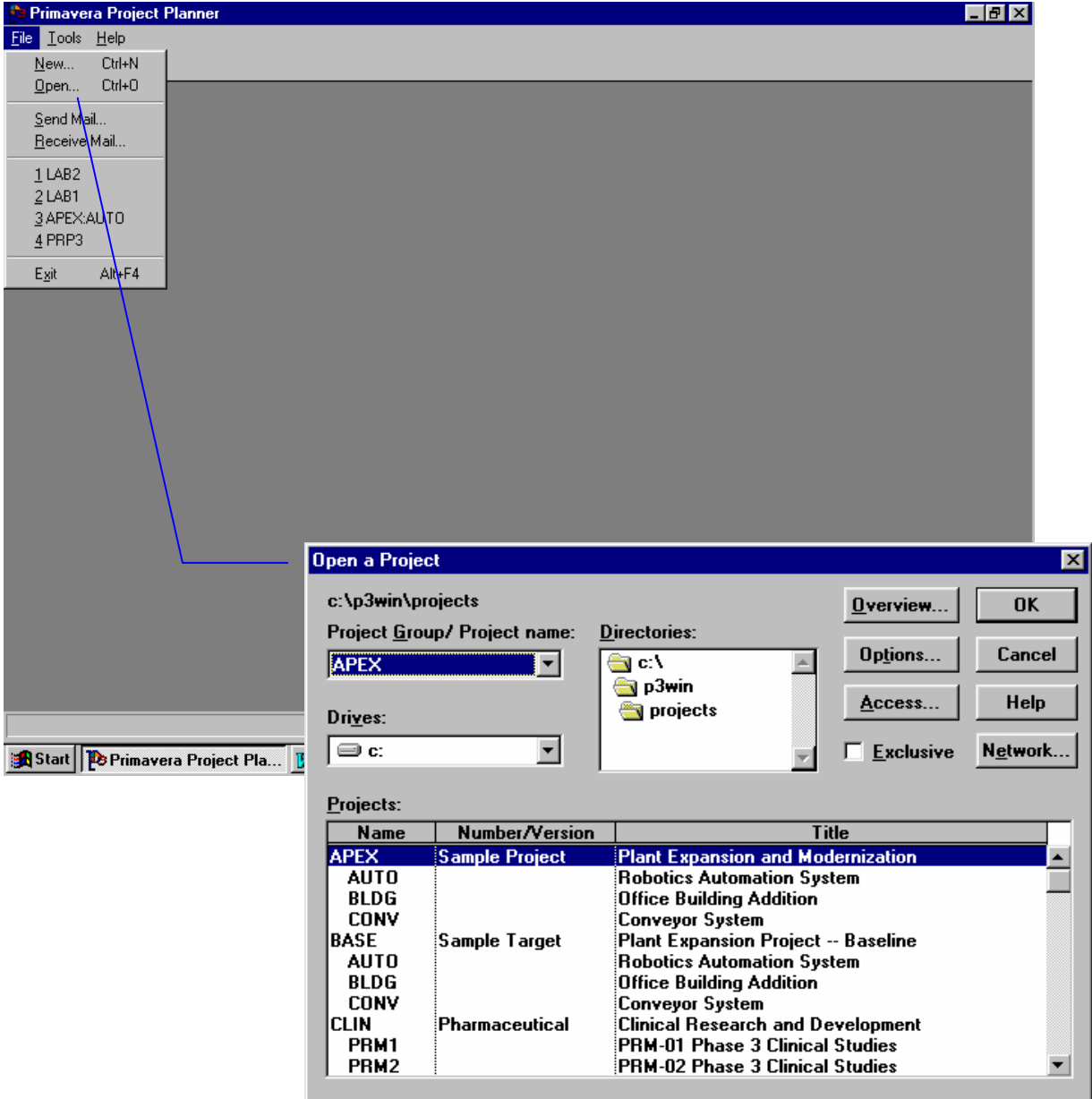
This is a scrollable index of projects in the default directory. If a project is located on the A Drive, change the directory to see a list of projects located there.

Practice 1.1

1.   Create a new project with a unique 4 letter identifier.
2.   Create a project title that suggests when and where the lab is taking place.
3.   Put your name in the company name field.

1.2 Entering Activities and Durations

Once a new project has been entered or an existing project opened the screen below appears. For a new project, the data entry screen defaults to the ADD mode.

The cursor will be blinking here. Enter an activity ID like 10, 20, or 30. Remember the KISS principle.

This blue area indicates you are adding an activity.

When you completed adding the activity, click on OK.

OD = Original Duration

RD = Remaining Duration

An activity description goes here. Remember the action verb.

Note: KISS = Keep It Simple, "Stupid"

Once OK has been selected, the activity will be entered and appear not only in the blue area, but also as a bar. All of the information will remain at the bottom of the screen along with a set of menus directly

related to the activity that is currently selected. If the menu should disappear, F7 will bring it back.
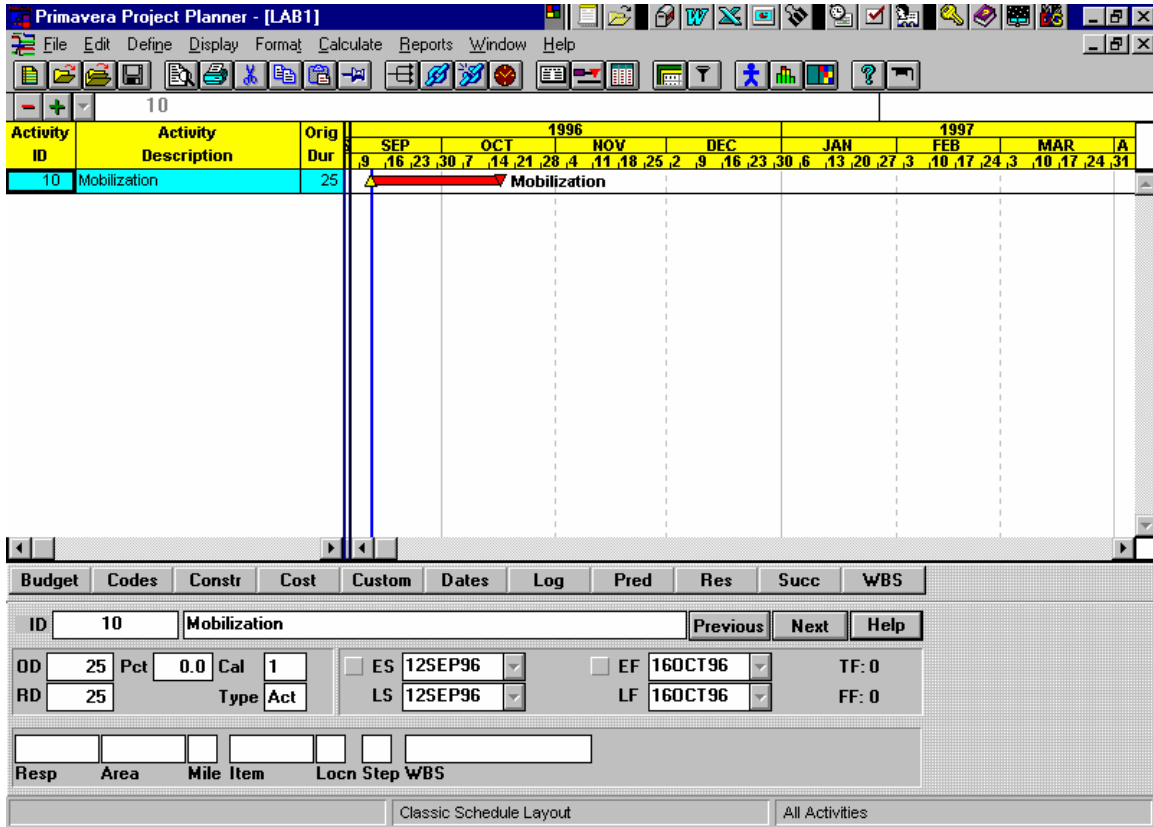

To add additional activities, click on the plus sign "+" above the Activity ID column, use the down arrow, or select EDIT and then ADD. Doing any of these will give you a new blue line and a blinking cursor in the activity ID box toward the bottom of the screen.

Practice 1.2

1. *Using the list of activities on the next page, enter each activity ID, Description, and Original Duration.*
2. *As you finish entering each activity's data, click on OK.*
3. *When you have entered ½ of the activities, turn the keyboard over to your partner, if you have one.*
4. *You can also enter the activities by selecting the VIEW button from the upper menu followed by the PERT.*
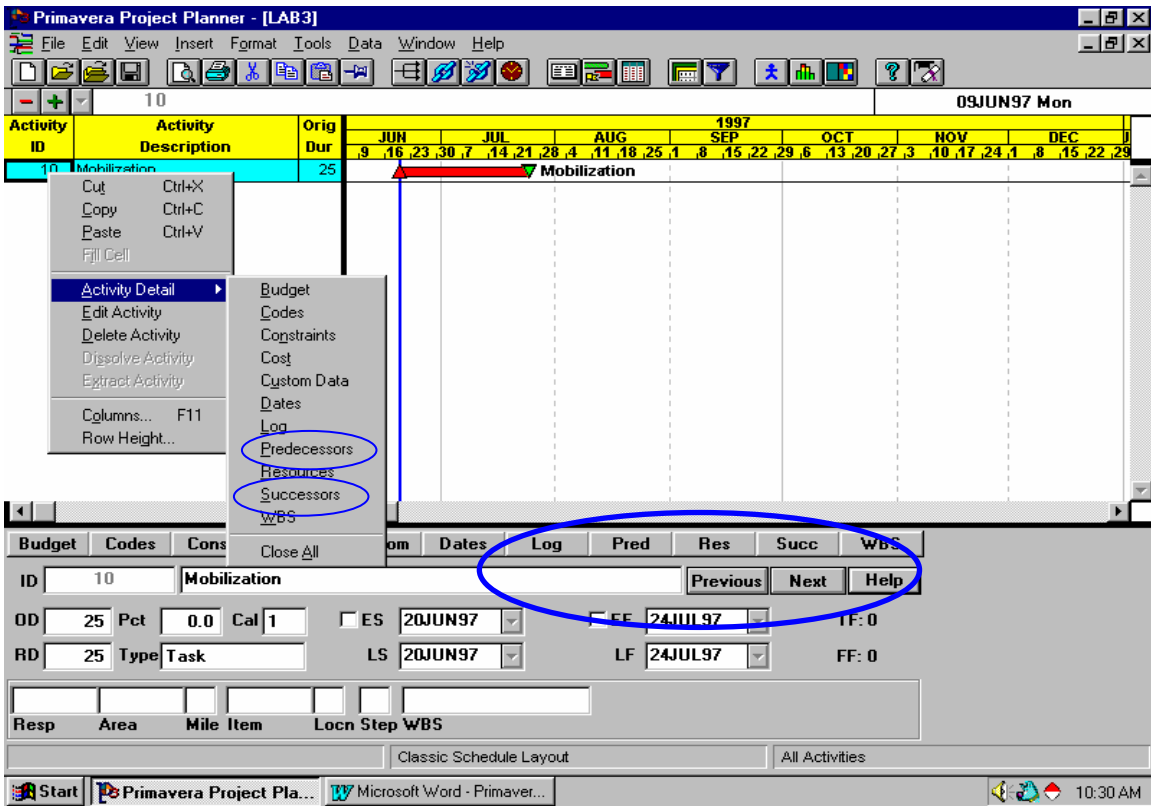
Primavera Lab Class #1: P3 Basics
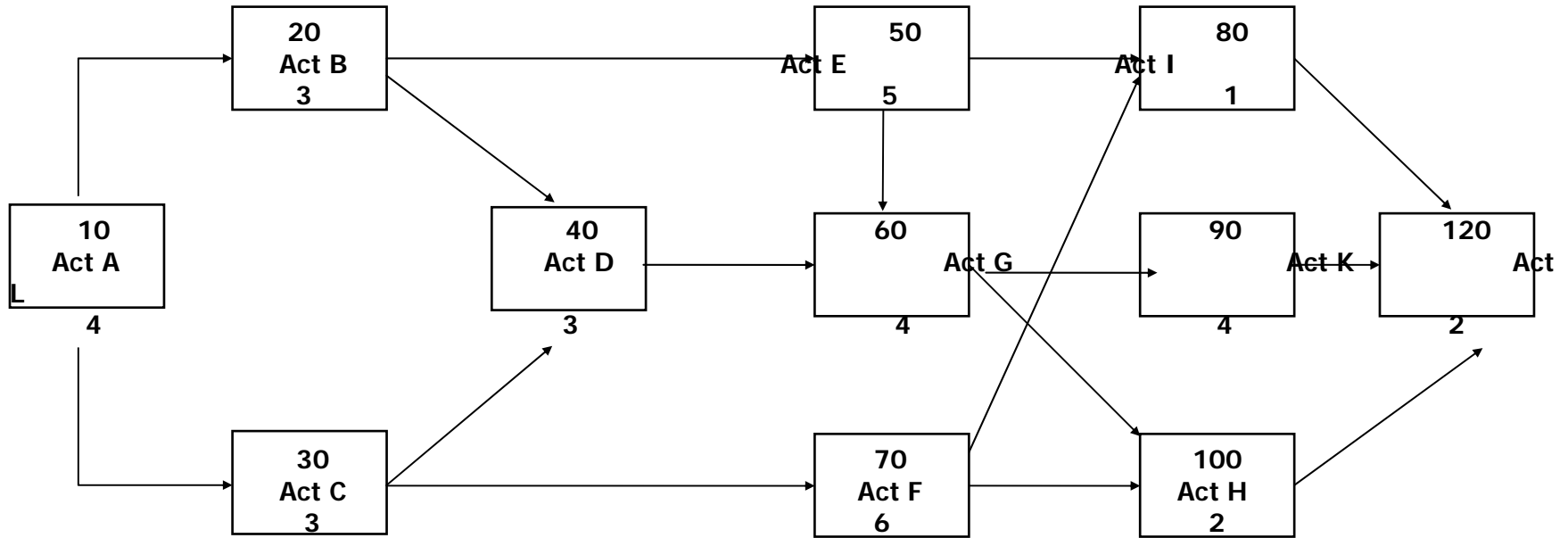
The total budgeted resource use (mh) for each activity is listed as follows:

Activity Name	Man-hours (MH)	Activity Name	Man-hours (MH)	Activity Name	Man-hours (MH)
A	32	E	20	I	4
B	12	F	18	K	16
C	15	G	16	L	8
D	18	H	8		

1.3 Predecessor and Successor Relationships

The row of menu buttons on the bottom half of the screen above provides a means of entering relationships (Succ = successors or Pred = predecessors), resources (Res), and many other valuable attributes of the activities in your network. Remember, that for today's class only, activities will be related Finish-to-Start (FS) only. So when you see two activities like this:
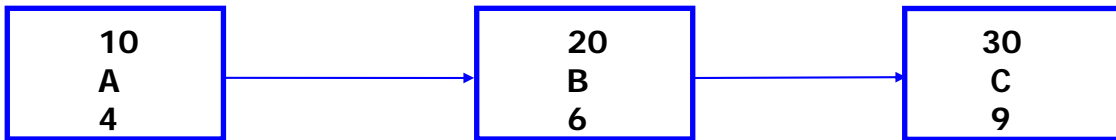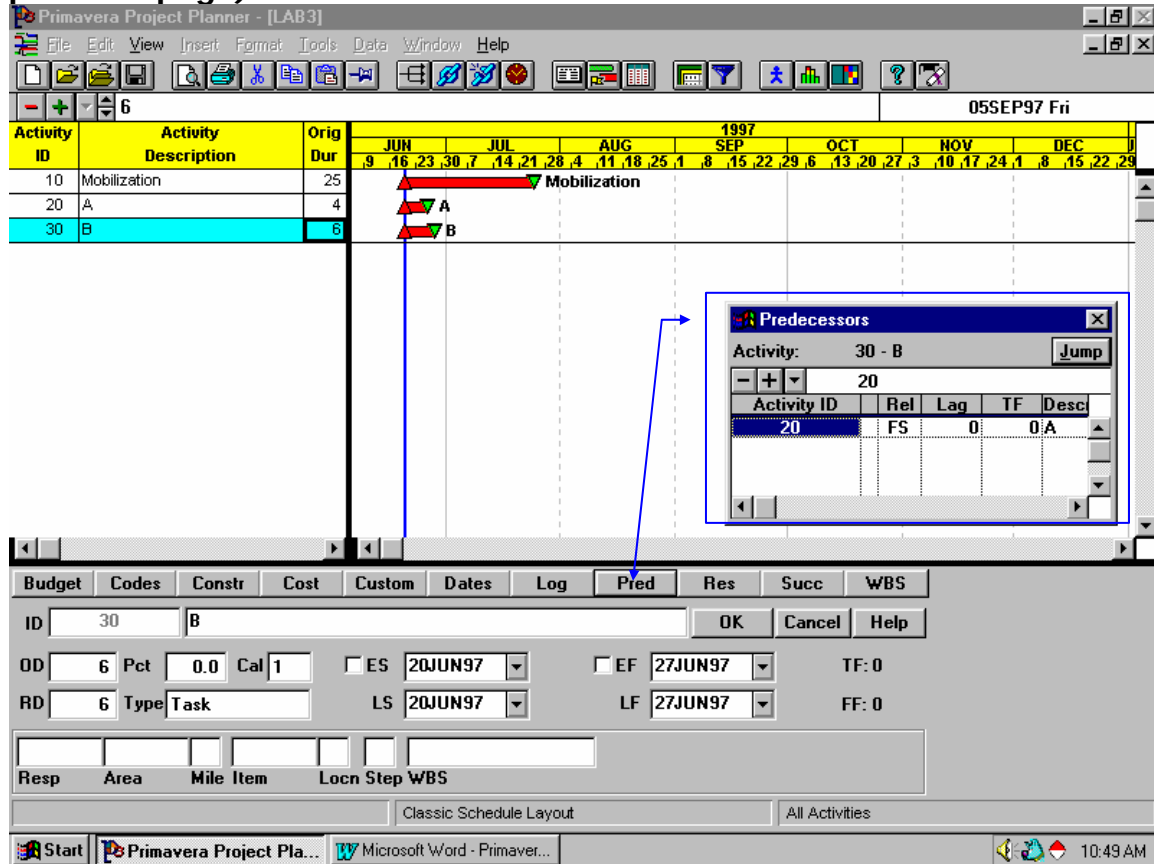

Predecessor   Successor,

you have a choice. You may go to activity B, by highlighting it with the mouse. Then to enter this relationship, select the Succ menu button and enter activity C as the follower or successor of B. You can also use

the right button of the mouse to insert relationships. The FS relationship will be put in automatically when you click on OK, as it is the default relationship. Your other choice is to select Pred. Then enter activity A as the predecessor of B (see the diagram on the previous page).

Because most people read from left to right (in this country), it is often easier to use Succ than Pred. However the figure above shows activity B being selected and its Predecessor, activity A, being entered.

Practice 1.3

1. *Using the diagram on page 6 enter the relationships for each of the activities.*
2. *Use either the Pred or Succ window to add the relationships.*

1.4 Schedule Reports and Calculation Run

Now that the activities have all been entered and their relationships to other activities, it's time to see how long this project will take.

Use the Tools Button on the Menu and Select Schedule. Don't use F9.

The calculate button and schedule command will give a new screen.

This should be the start date of your project – likely TODAY'S DATE

Notice that all of the options are defaults. Leave these as defaults. Click on OK to see what happens next.

Output Options

- ◆ <u>V</u>iew on screen
- ◇ <u>P</u>rint immediately
- ◇ <u>S</u>ave to the following Look file: `P3.OUT`

<u>D</u>irectory: c:\p3

📁 c:\
📁 p3

D<u>r</u>ives:
💾 c:

[OK] [Cancel] [Help] [<u>N</u>etwork...]
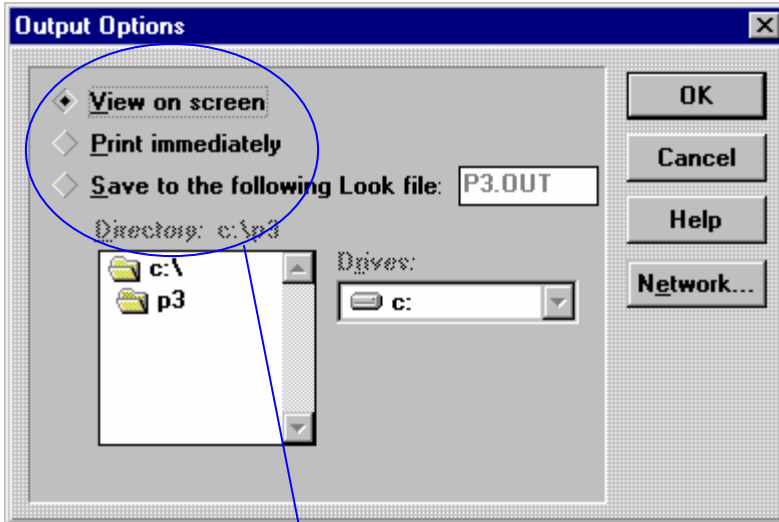
Here, although there are 3 choices, it is usually wise to see the output before you decide to print. This will reduce the number of trees used for paper and reduce your cost. Click on OK or hit Enter to see the report you will create.

```
Primavera Scheduling and Leveling Calculations -- Scheduling Report Page: 1

This Primavera software is registered to Weber & Associates.
Start of schedule for project LAB1.
Serial number...19380329

User name SANDIW  .

Open end listing -- Scheduling Report Page: 2
----------------
Activity         10  has no predecessors
                             Activity          120 has no successors

Scheduling Statistics for Project LAB1:
Schedule calculation mode - Retained logic
Schedule calculation mode - Contiguous activities
Float calculation mode    - Use finish dates
SS relationships          - Use early start of predecessor

        Schedule run on Fri Sep 13 17:45:39 1996
                Run Number  1.

        Number of activities..................      11
        Number of activities in longest path..       6
        Started activities....................       0
        Completed activities..................       0
        Number of relationships...............      16
        Percent complete......................     0.0

        Data date.............................  12SEP96
        Start date............................  12SEP96
        Imposed finish date...................
        Latest calculated early finish........  11OCT96
```

This is an open end listing. You should find only one activity without a predecessor and one without a successor. Here it is activities A and L, which start and end the project. If there are more, you must add relationships. Remember, only one start and one finish.

As long as there is only one start and one finish and NO LOOPS, your project has been successfully calculated.

Practice 1.4

1. *When your project has successfully calculated, place your name at the top of printout page 2 using the computer in Primavera Look.*
2. *Printout pages 2 and 3 only of the calculation report and submit it to the TA.*
3. *If your network has problems and you are unable to correct them, request help from the instructor or TA.*

1.5   Resources
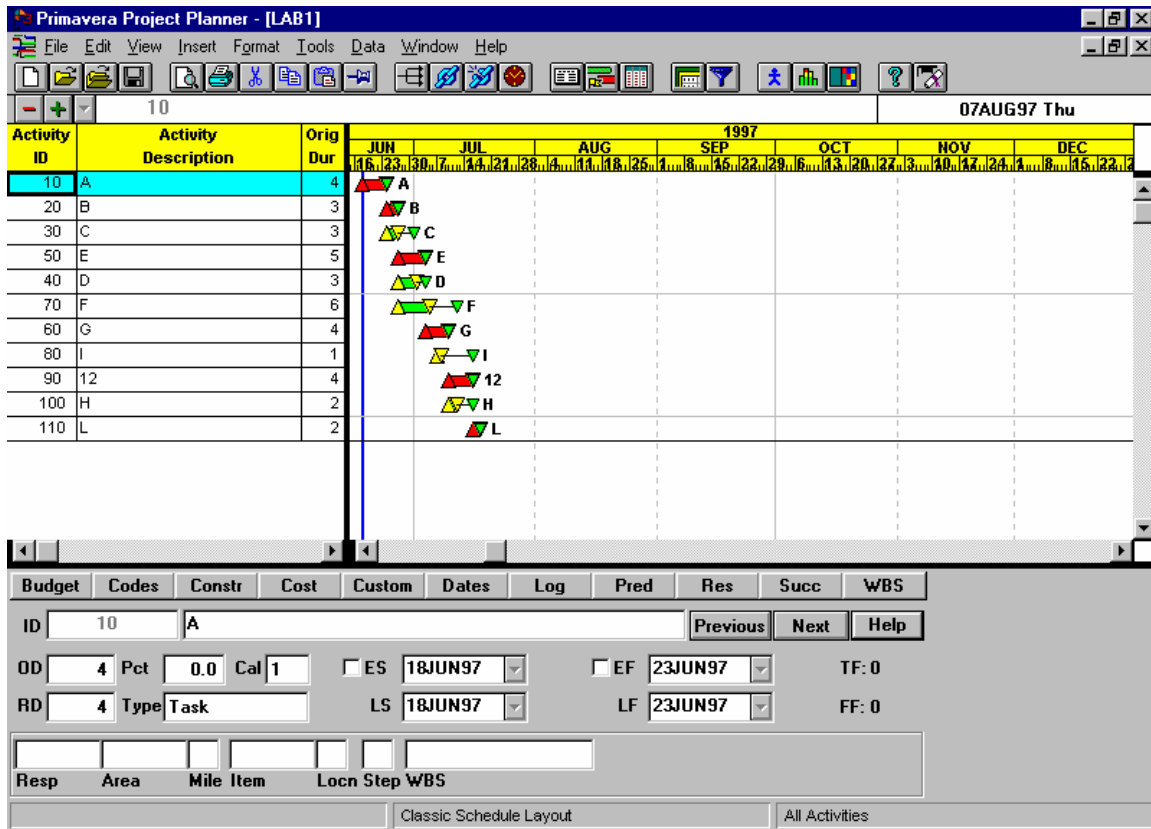
Your network now looks like the one above with some activities in red and some in green.   The red ones are on the critical path. Can you tell how the activities are related from this bar chart?

Select the Res button at the bottom of the screen. This will allow us to enter the resources assigned to each activity. For the example project on Page 6, the resource is man-hours or workhours. Use the abbreviation MH to indicate that the resource is man-hours. The data entry screen will look like the one on the next page.

Initially there was a + in this area of the Resource box. Click on the plus and enter MH. Then move the cursor to the Budget Quantity and enter the Total number of man-hours assigned to activity A. Here it is 20.

When you enter the number of total resources and click on OK for the first time with a new resource, here's what happens.

You are given an opportunity to more fully describe the resource. Enter the words, Work Hours and click on OK. This is the result you will see.

The program automatically calculates the resource units per day assigned to this activity by dividing the total quantity by the duration.

You can enter either the Budgeted quantity (total number of resources) or the Units per day and the program will calculate the other quantity and the quantity to complete and at completion.

Practice 1.5

1. *Enter the resources for all of the activities in the network shown on page 6.*
2. *If you are working in pairs, switch so that the one doing the data entry is different than the one of you that calculated the network.*

The term Histogram has been used frequently in class. Let's create the first histogram in Primavera.

Select the View button from the upper menu followed by Resource Profile. Note that the same task can be accomplished with the function keys.
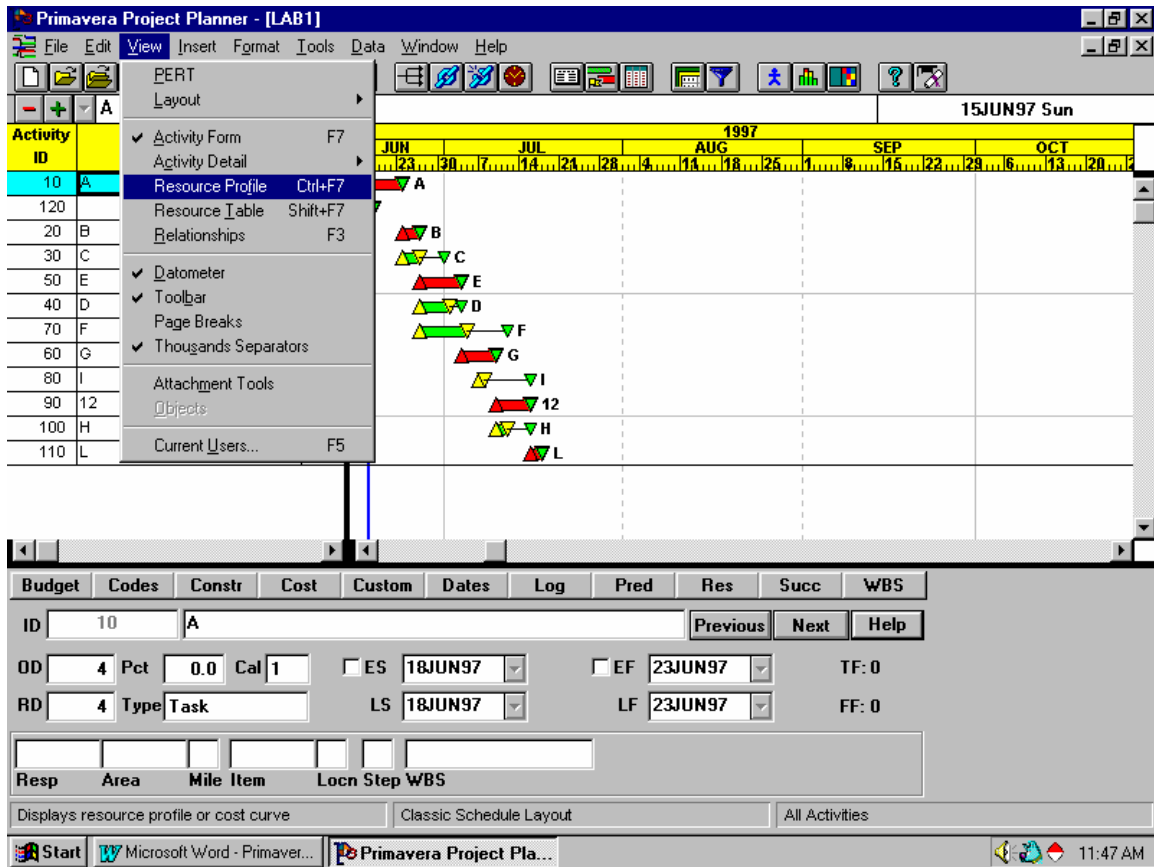
The resulting profile should appear at the bottom of your screen covering the Activity Data Table.

You may have to change your profile slightly. The one shown below is shown in days, not weeks or months. (These diagrams do not represent the page 6 project.)
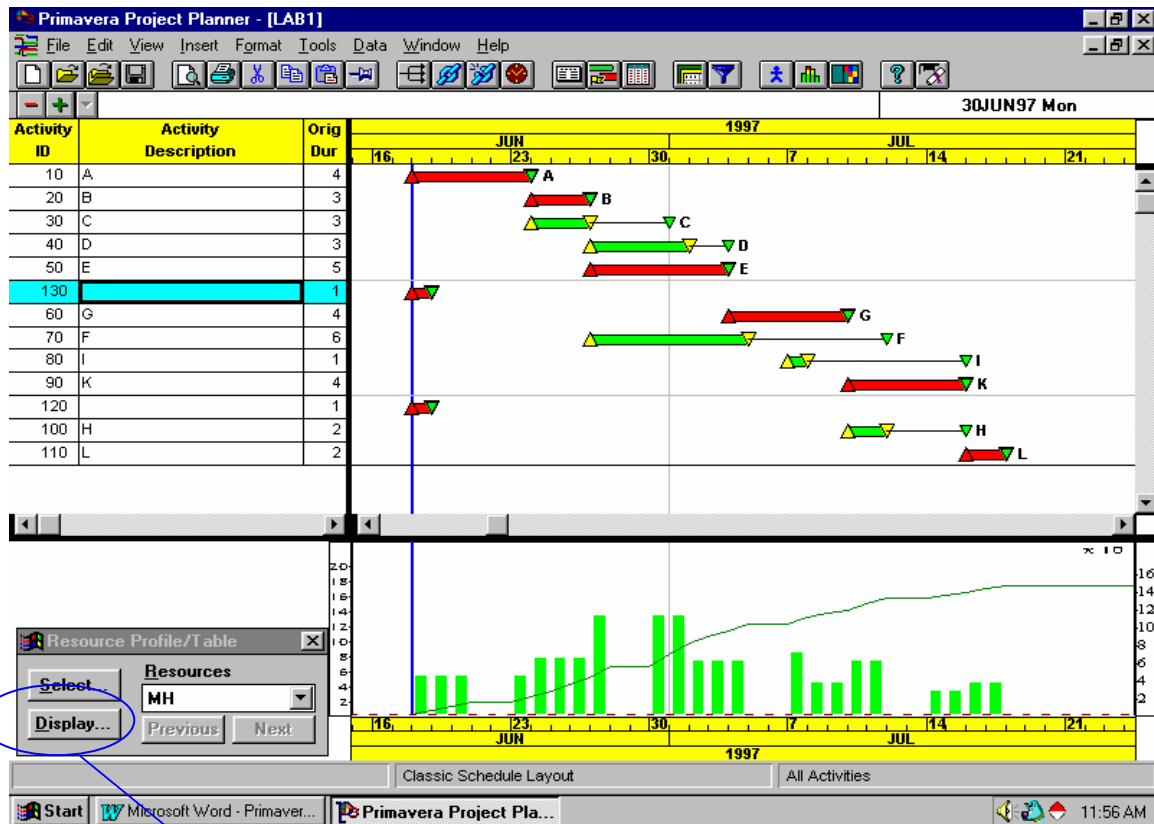

Use the Display button to change from weeks to days. What is the largest work hour use in the example project? What activities contribute to that use?

In the next lab session we will input another network, calculate it, and learn how to prepare many reports. The remainder of the session today will focus on the Calendar and Backing Up and Restoring Projects.

1.6 Calendar Adjustments

Before you continue, double click the mouse when the cursor is on the time scale at the top of the bar chart area (yellow usually). The box below will appear with the Density button in the middle of the slide area. Drag it to the right and see the time scale spread out and the bars get longer in the display.
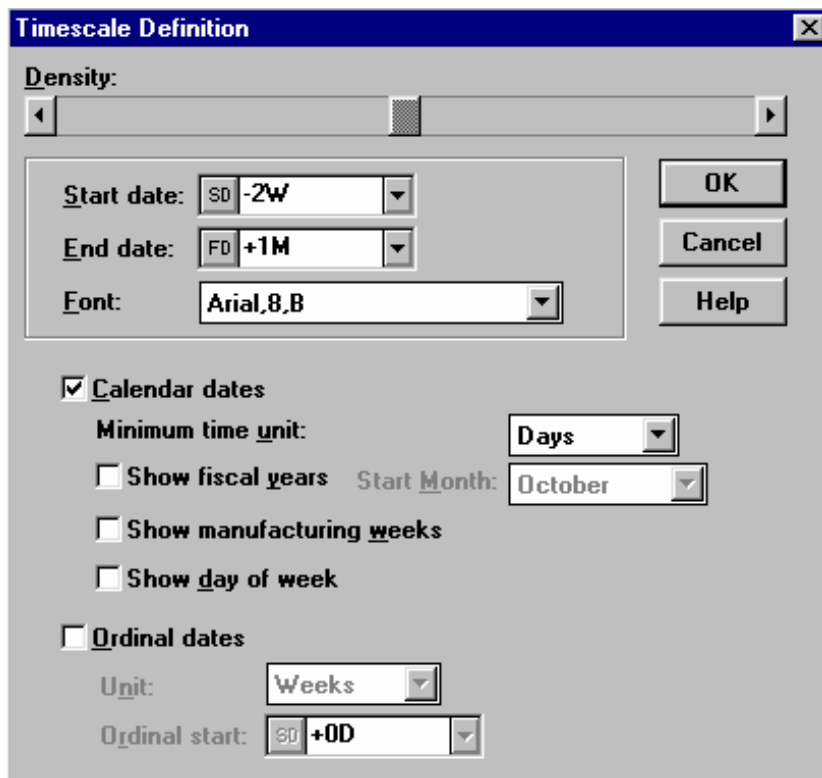

Click on OK when the bars are all still on the present screen but spread out from there original display.

The calendar is important because we normally have holidays and other non-work periods that need to be subtracted from the number of available work days in a project. Many projects have a need for more than one calendar. For example if you have an activity for concrete only, you may want it on a 7 working day calendar so that curing can take place over the weekend. At the same time perhaps all of the

other activities are working on a 5-day per week basis. To access the calendar, click on DATA in the upper menu.
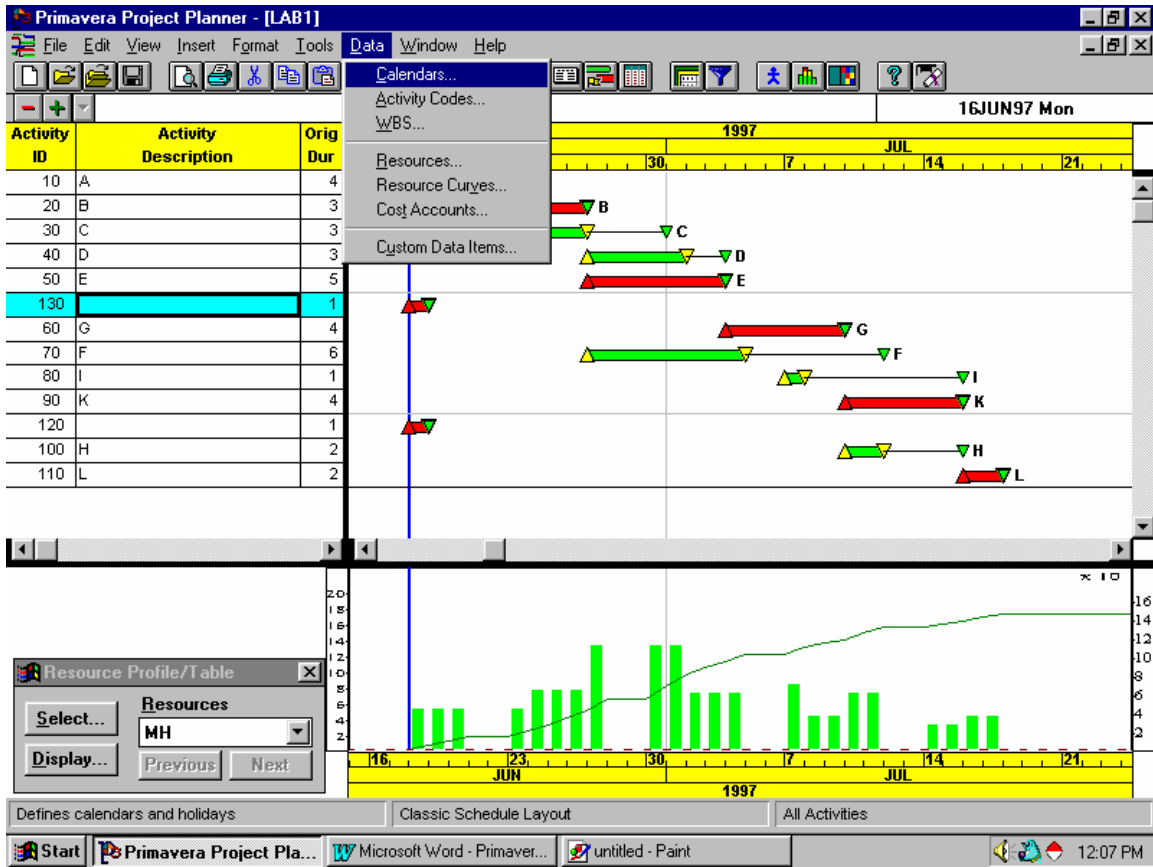
Choose Calendars and you will see the following.
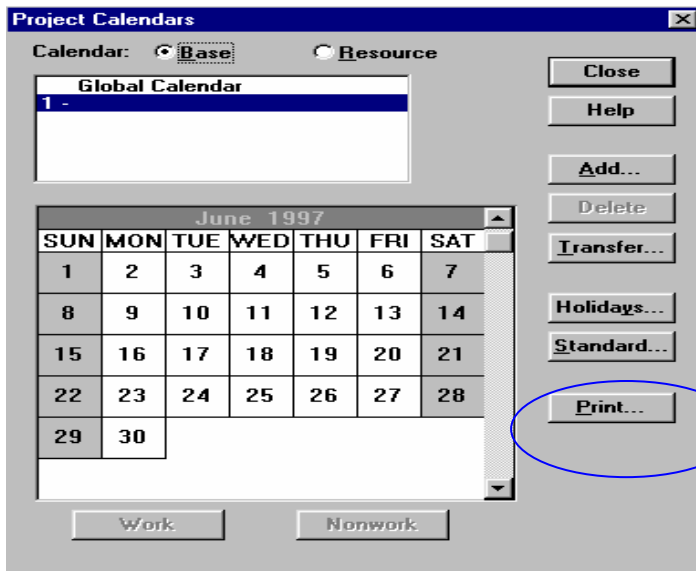
You can print a detailed calendar using this button.

This is calendar 1, the default calendar which is set up, if you didn't change the introductory screen, to work 5 days per week with weeks beginning on Monday. To set up non-work days like Christmas, New Years, and the 4th of July, click on Holidays.

Holidays List

Put the holidays in here. For those holidays that occur on the same date every year, the year is omitted. If holidays span more than one day like Thanksgiving, enter and Start and End date for the period.
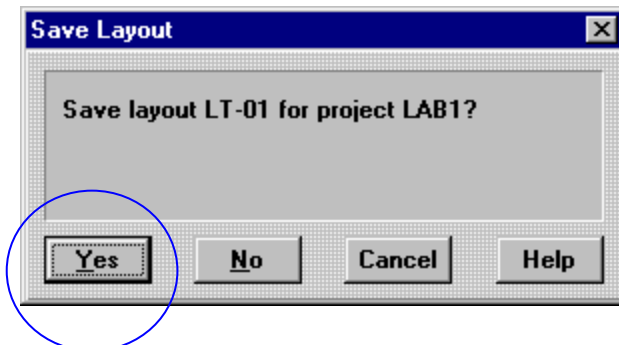
Practice 1.6

1.   _Enter the 4th of July, Christmas Day, and New Years day as holidays._
2.   _Enter Thanksgiving for this year as a holiday._
3.   _Print a copy of your calendar 1 for four months beginning this month._
4.   _Submit the calendar to the TA when you have printed it and put your name on it in Primavera._

1.7 Backing Up the Project
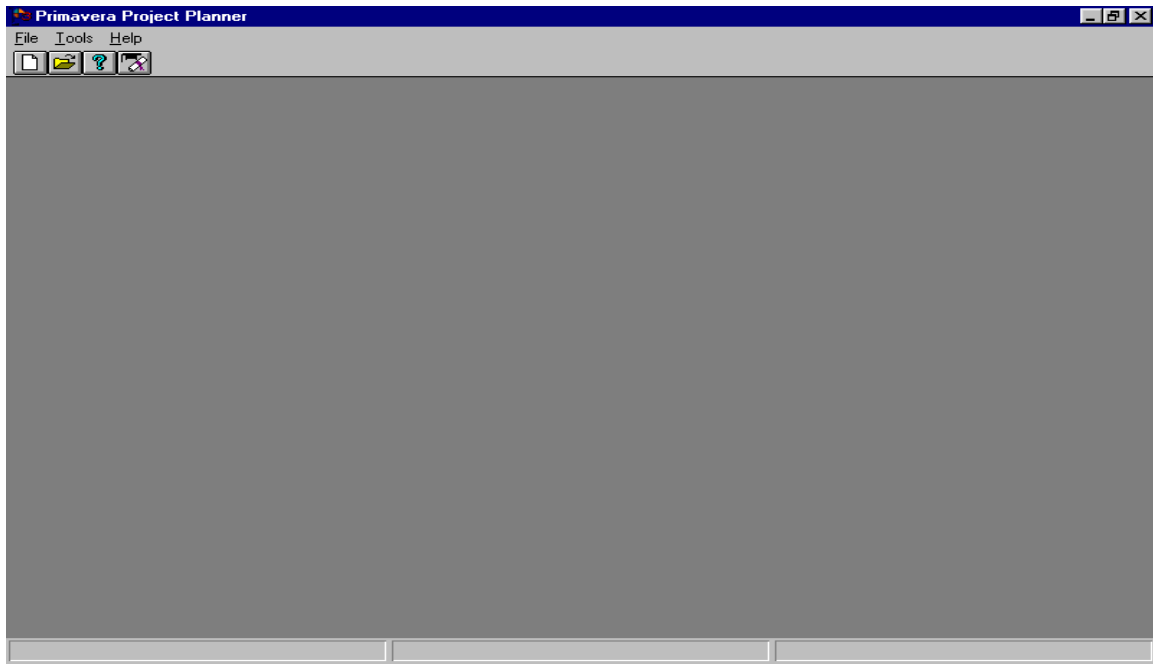
Although we will not need to retrieve today's project in the future, we will practice backing the project up and restoring it.

In order to backup a project you must exit the project. Everything has been saved as you have progressed on the local computer drive. To exit the project but not the program go to the Upper menu File and choose Close. You will see the screen below.
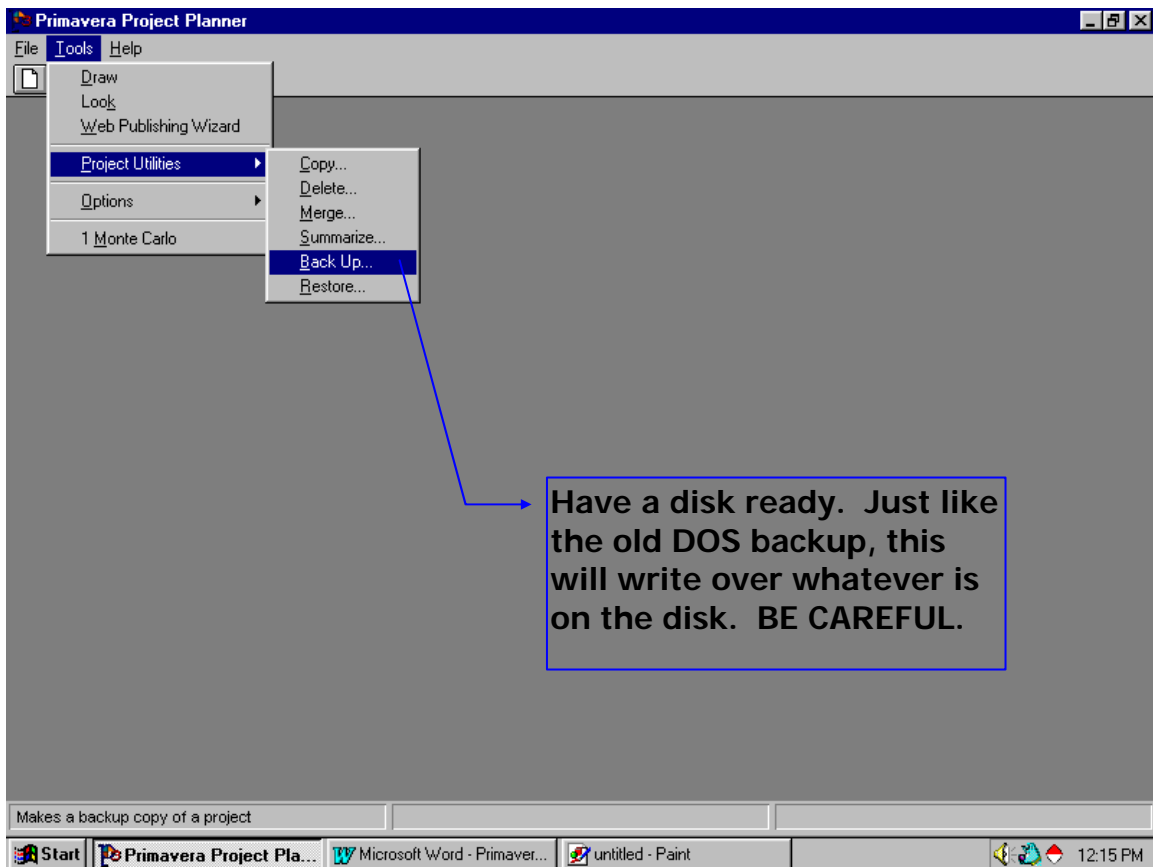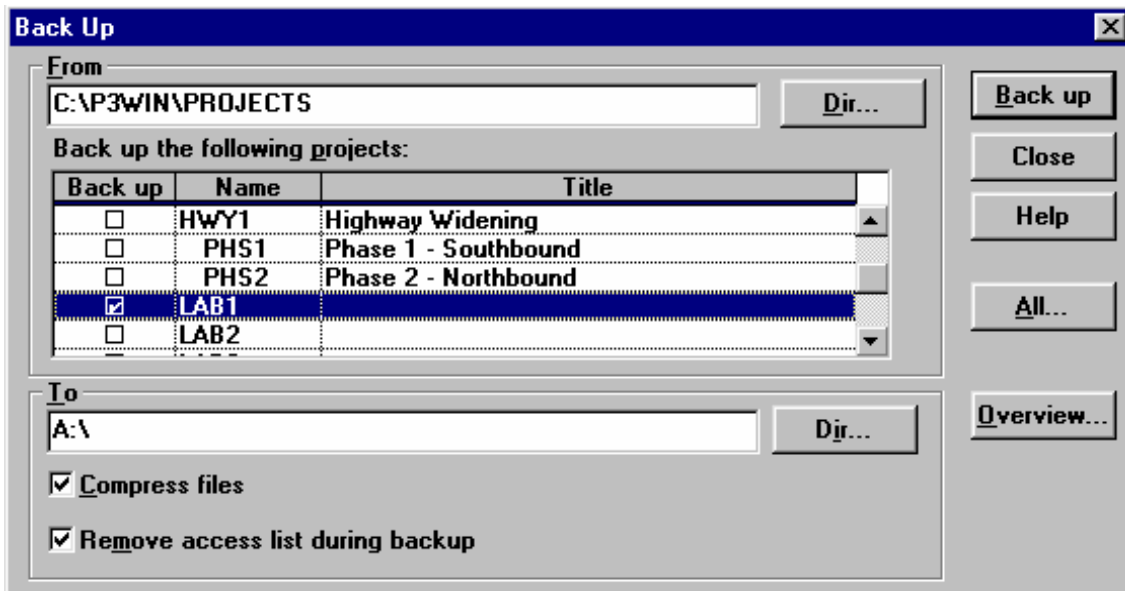

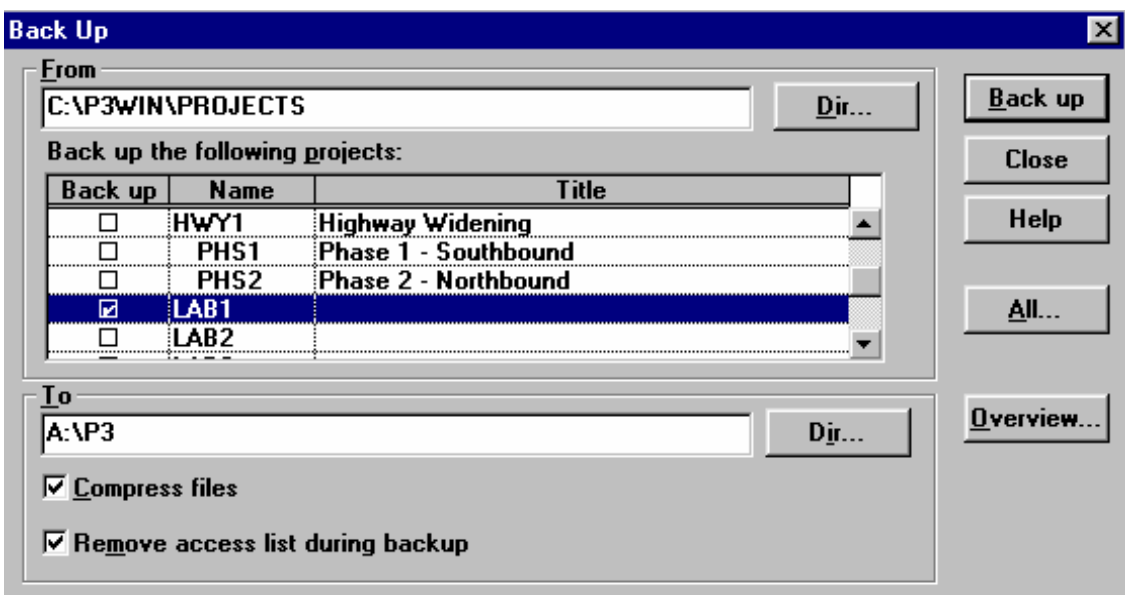Click on YES.

Now we are back to the original screen.

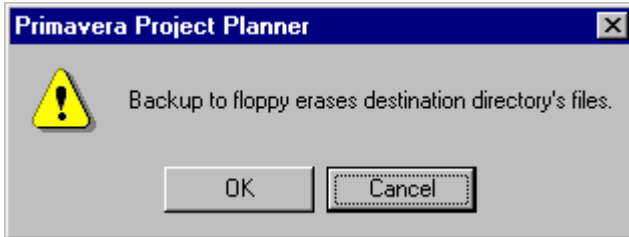**Select Tools, Project Utilities, Backup.**

Have a disk ready. Just like
the old DOS backup, this
will write over whatever is
on the disk. BE CAREFUL.

When you select BACKUP, you will see the menu below. Find your project and put a check mark, ☑, in the Back up box by clicking on it.

Back Up

From
C:\P3WIN\PROJECTS   [Dir...]

Back up the following projects:

Back up	Name	Title
☐	HWY1	Highway Widening
☐	PHS1	Phase 1 - Southbound
☐	PHS2	Phase 2 - Northbound
☑	LAB1	
☐	LAB2	

To
A:\   [Dir...]

☑ Compress files

☑ Remove access list during backup

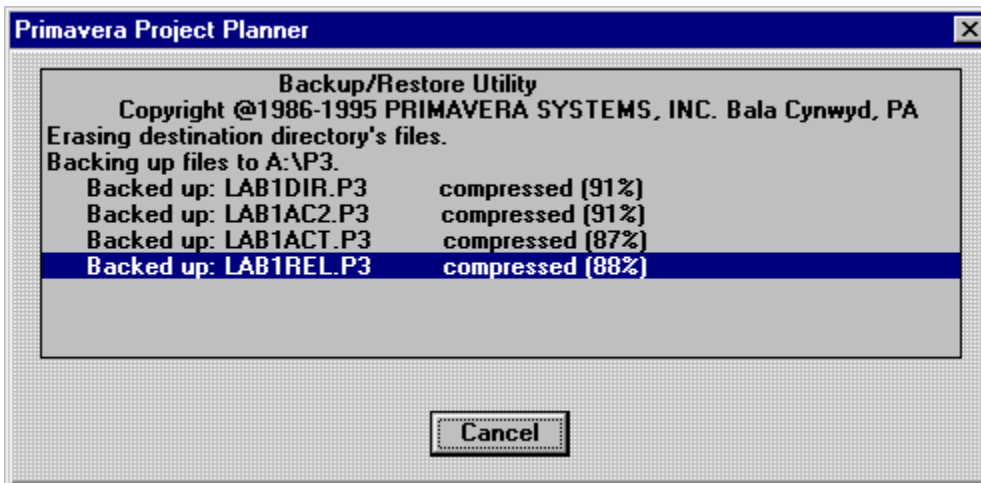[Back up] [Close] [Help] [All...] [Overview...]

It is always wise to compress the files so that they do not take up too much room or require a second disk. You can save your project to a subdirectory on your disk if you have information in the root directory that you would like to retain. Simply add a subdirectory, such as P3, to the file area.

Back Up

From
C:\P3WIN\PROJECTS   [Dir...]

Back up the following projects:

Back up	Name	Title
☐	HWY1	Highway Widening
☐	PHS1	Phase 1 - Southbound
☐	PHS2	Phase 2 - Northbound
☑	LAB1	
☐	LAB2	

To
A:\P3   [Dir...]

☑ Compress files

☑ Remove access list during backup

[Back up] [Close] [Help] [All...] [Overview...]
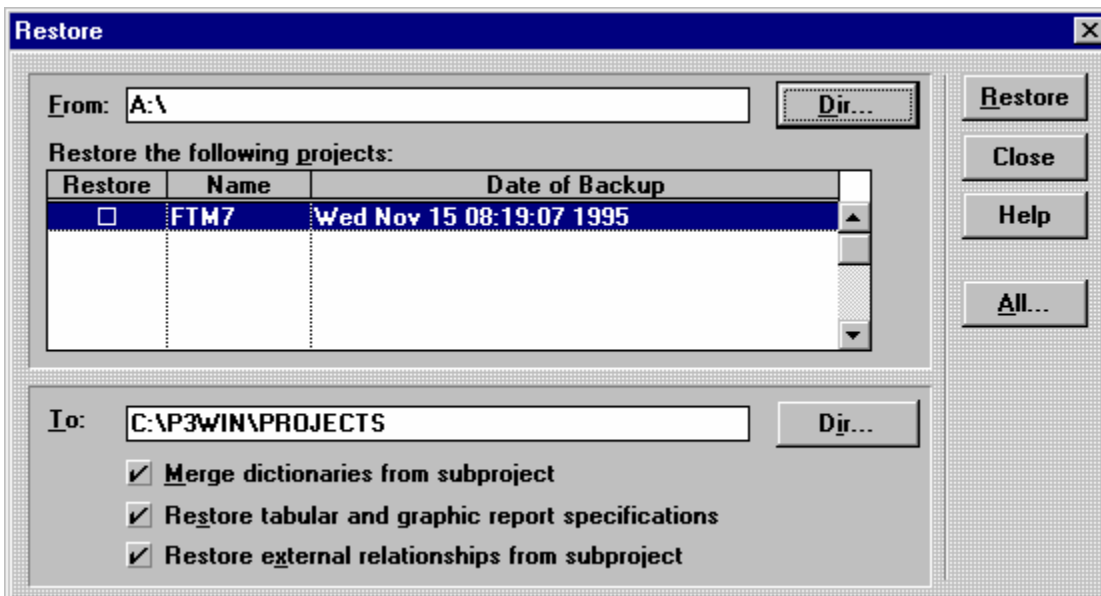
Click on Back up or hit enter.

Click on OK and watch the files scroll by.

1.5 Restore the Project

To reverse the process and restore your project the next time you want to work on it again go to the Tools, Project Utilities command in the Upper menu. This time select Restore.

Again put a check mark in the box under Restore and the files will be restored to your local computer.

This is enough for today. Go and have an enjoyable weekend. ☺