

Creating a New Project

Microsoft Project is a project management software program designed to assist project managers in developing plans, assigning resources to tasks, tracking progress, managing budgets, and analyzing workloads.

To create a new project in Microsoft Project, either click the 'New' icon on the toolbar or select 'New' from the 'Files' menu. Unfortunately, the two methods of creating a project do not behave the same. If the 'New' icon is clicked, a new blank project will automatically be created. If the menu method is selected, a dialog box like the one in Figure 1 will be shown.

From the 'New' dialog box, the options of creating a new blank project or selecting from one of the predefined templates are shown. Looking at the templates can be helpful, especially for those that are new to project management. Similar projects typically follow the same pattern. The patterns have been laid out in the project templates. (They may also help with things that may have been forgotten!)

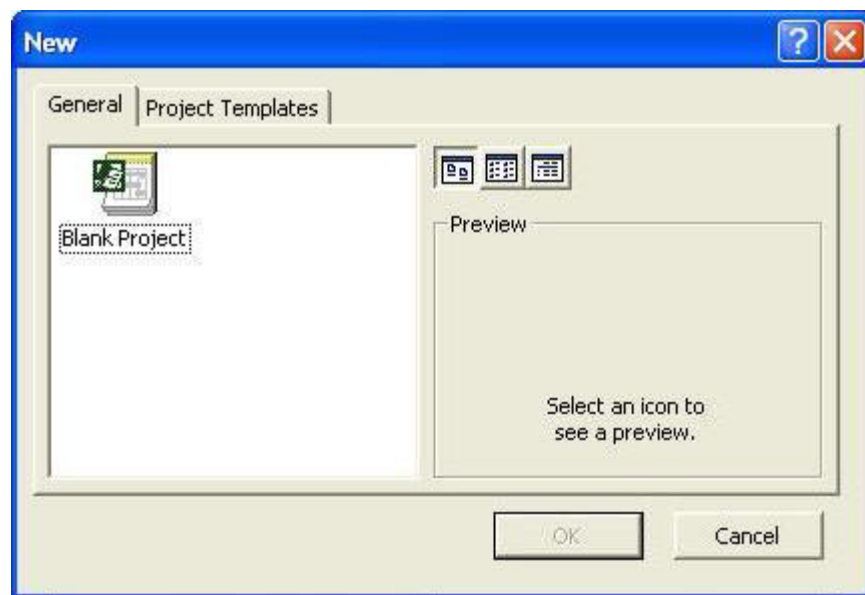


Figure 1: New Project Dialog Box

Once a new project is created, the Project Information dialog box will be displayed. The following are options in this dialog box:

- Start Date - This dropdown box displays the anticipated start date of the project and defaults to the current date. Selecting the dropdown arrow displays a calendar to select the start date.
- Finish Date - This is disabled since the project finish date will be calculated from the tasks of the project. The default project scheduling model used in Microsoft Project schedules from the project start date.
- Schedule From - Another common project scheduling model is to start with the finish date and work backwards. This is known as scheduling from the project end date. If this method of scheduling is used, the Finish Date dropdown box becomes active, allowing the project's expected end date to be entered.
- Calendar - Microsoft Project supports three types of calendars: standard, 24-hour, and Night Shift. Select the calendar appropriate to the project. Click the 'OK' button.

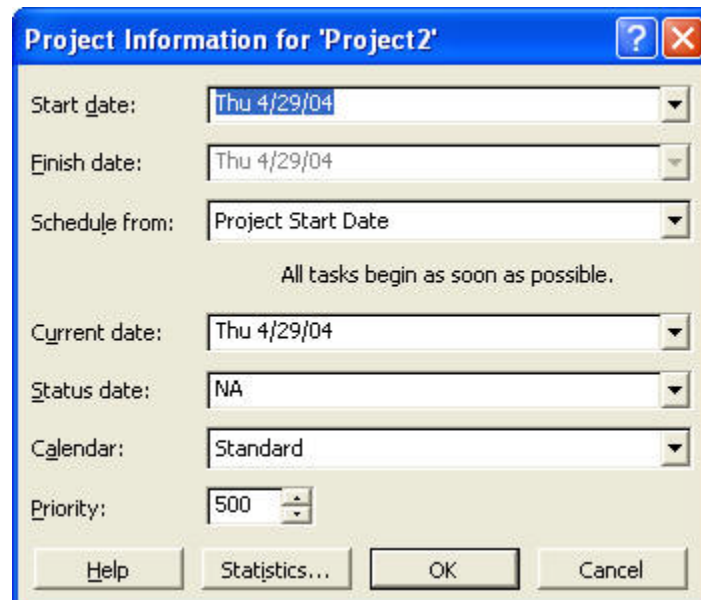


Figure 2: Project Information Dialog Box

Entering Task Information in Microsoft Project

Having just created a new project, the Microsoft Project screen should look similar to the one shown in Figure 2. The project is now ready for project information to be entered.

There are two basic methods for entering task information into Microsoft Project. Tasks can be directly entered into the Gantt Chart view (the default view, shown in Figure 3), or a row in the tasks area can be double-clicked on to display the Tasks dialog box (shown in Figure 4). Each method has its strong points as well as its weak points.

If the project has a list of tasks, entering them directly into the task area of the Gantt Chart view is the quickest. The Task dialog box is more detailed, allowing for items not available in the Gantt Chart view.

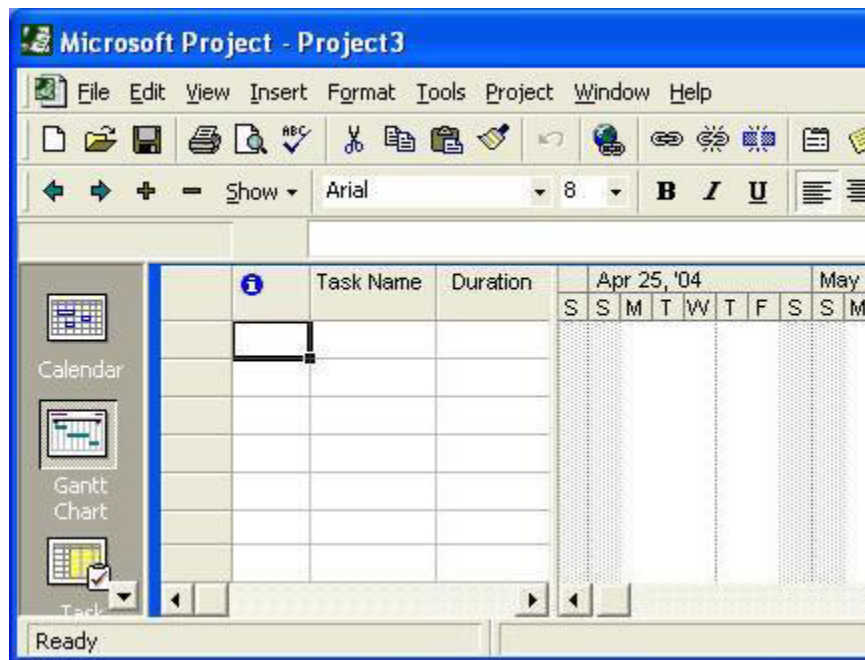


Figure 3: Project Information in Gantt Chart View

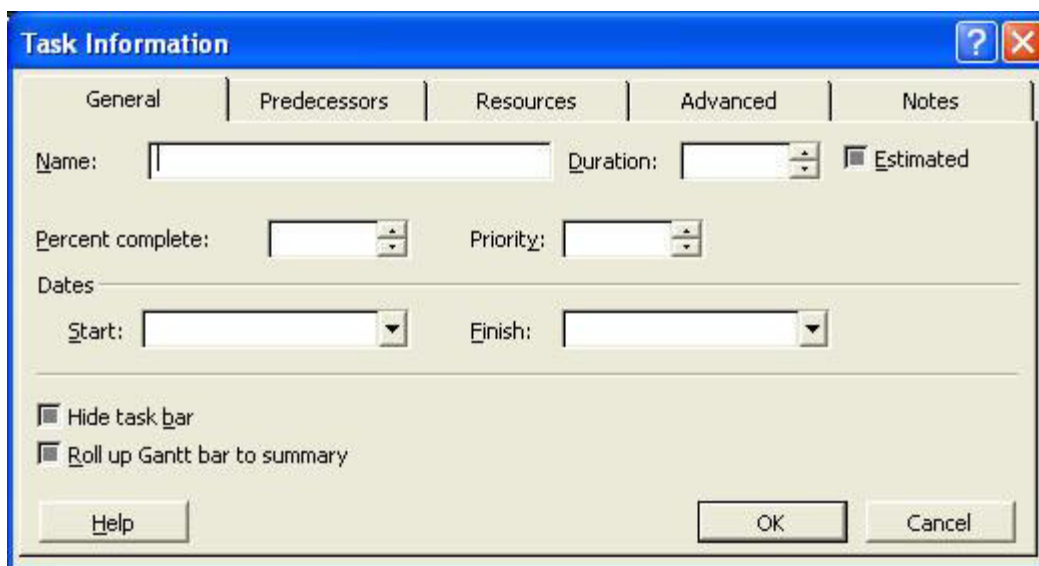


Figure 4: Task Information Dialog Box

For this tutorial we will use the creation of a new Project Management Office as our example.

We will use the task area of the Gantt Chart view to enter our tasks. Start with a blank, new project, and select the first row of the project.

- Type “Project Office” and press enter.
- Type “Scope” and press enter.
- Type “Determine project office scope” and press tab, enter 3 days for the duration and press enter. Press left arrow once.
- Type “Document high-level project office requirements including resources”, press tab, enter 2 days for the duration, and press enter. Press left arrow once.
- Type “Justify project office via business model”, press tab, enter 3 days for the duration, and press enter. Press left arrow once.
- Type “Secure executive sponsorship”, press tab, enter 2 days for the duration, press enter, and press left arrow once.
- Type “Scope complete”, press tab, enter 0.
- The screen should look like the one shown in Figure 5.

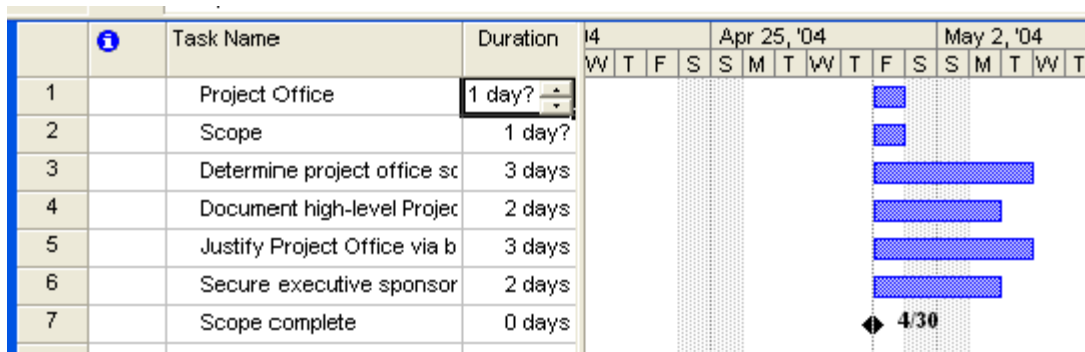


Figure 5: Entering Task Information in Microsoft Project

At this point none of the tasks’ dependencies and/or recourses have been entered, and nothing has been rolled up into major task headings; those will be done next.

Note: Any task that is created without a duration is a milestone.

Creating Sub Tasks in Microsoft Project

To create sub-tasks, move the tasks over to the right under the tasks category. For example, Scope is a sub-task of Project Office and all the other tasks listed below Scope are sub-tasks to Scope. So things should be moved around to represent this fact.

- Click on row 2 (Scope) to highlight the row. Once the row is selected, click on the arrow pointing right in the toolbar. Scope will shift right and Project Office will change to bold and have a + symbol in front of it. These represent the fact that Project Office has sub-tasks.
- Click on row 3 (Determine project office scope), and while holding the mouse button down, highlight row 3 (Determine project scope) through row 7 (Scope complete). Press the right arrow twice to move these tasks over to make the sub-tasks of Scope. The screen will look like Figure 6.

	Task Name	Duration	Apr 25, '04							May 2, '04						
			S	S	M	T	W	T	F	S	S	M	T	W		
1	Project Office	3 days														
2	Scope	3 days														
3	Determine pr	3 days														
4	Document hi	2 days														
5	Justify Proj	3 days														
6	Secure exec	2 days														
7	Scope comp	0 days														

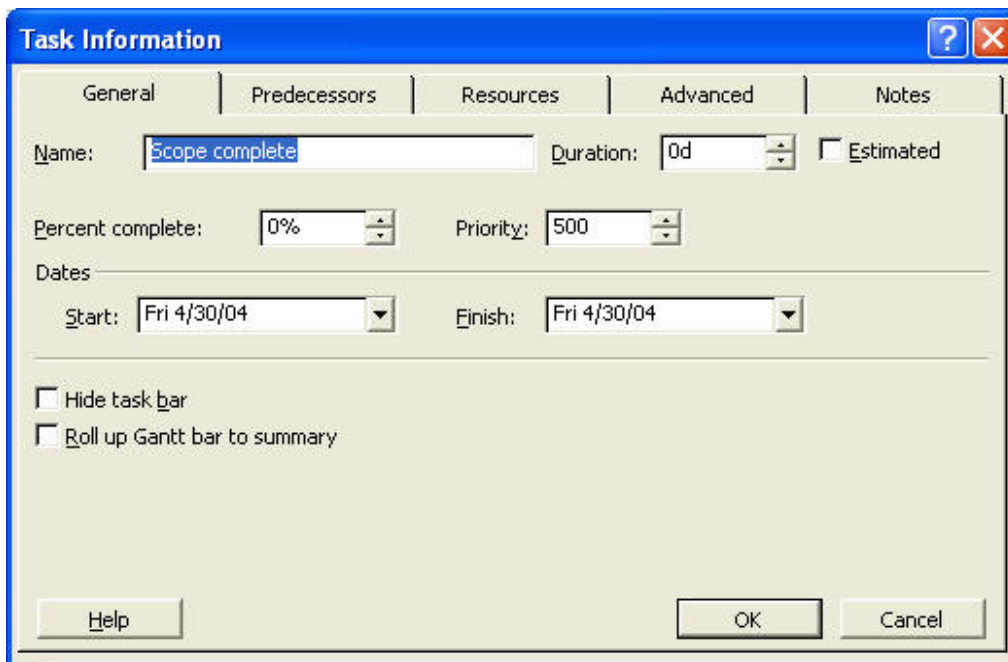
Figure 6: Tasks That Have Been Moved to Sub-Tasks

Sub-tasks can be created by using the mouse. Place the cursor in the task field that should be a sub-task, and click and drag the task either left or right to move it to the appropriate task level.

Next, some predecessors will be added to the tasks that have been defined so far.

By using predecessors, Microsoft Project can show the sequence of tasks. There are two ways to enter predecessors within a project. Those will be discussed here.

- Select row 4 (Document high-level Project Office requirements including resources) of the project.
- Tab out past the Duration field.
- A number of fields will now be shown:
 - Start Date
 - End Date
 - Predecessors
 - Resource Name
- In the Predecessor field type “3” and press enter.
- On row 5 type “4” in the predecessor field and press enter.
- On row 6 type “5” in the predecessor field and press enter.
- Double click row 7 and the dialog box (Figure 7) will be displayed.



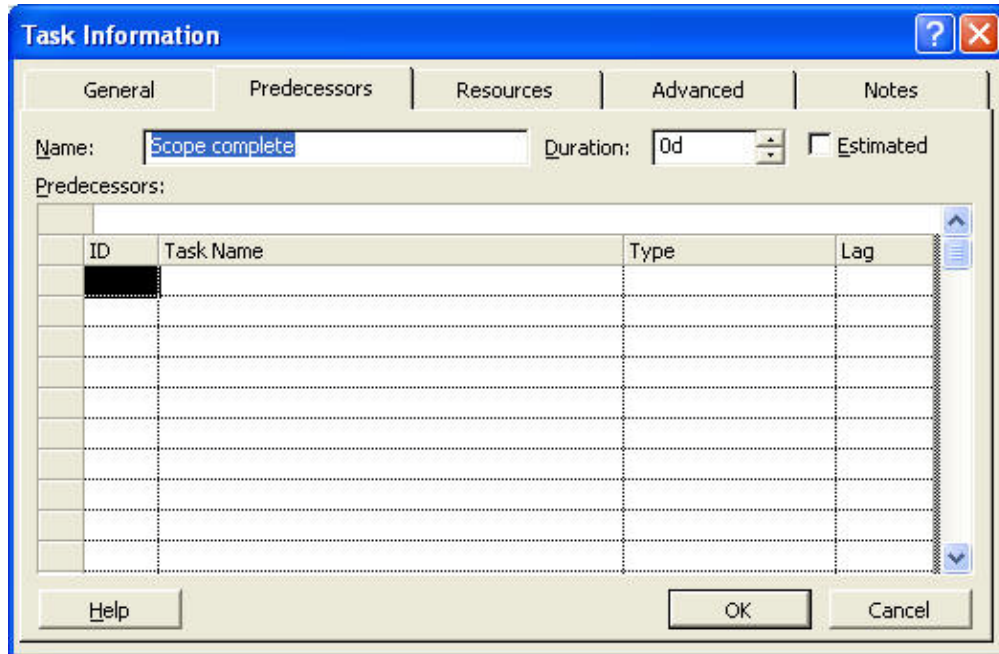
The screenshot shows the 'Task Information' dialog box with the 'General' tab selected. The 'Name' field contains 'Scope complete'. The 'Duration' is set to '0d'. The 'Estimated' checkbox is unchecked. 'Percent complete' is '0%' and 'Priority' is '500'. Both 'Start' and 'Finish' dates are set to 'Fri 4/30/04'. At the bottom, there are checkboxes for 'Hide task bar' and 'Roll up Gantt bar to summary', and buttons for 'Help', 'OK', and 'Cancel'.

Figure 7: Task Information Dialog Box - General Tab

Figure 7 is the Task Information dialog box and contains all the fields associated with the task. There are a number of fields available in the Task Information dialog box that are not on the Task Information spreadsheet.

Click on the Predecessors tab.

The dialog box in Figure 8 will be displayed.



ID	Task Name	Type	Lag

Figure 8: Task Information Dialog Box - Predecessors Tab

- Click on 'Task Name' in the first row of the spreadsheet.
- A drop-down dialog box will be displayed listing all the tasks of the project.
- Select 'Secure executive sponsorship' and press tab.

The screen will now look like Figure 9:

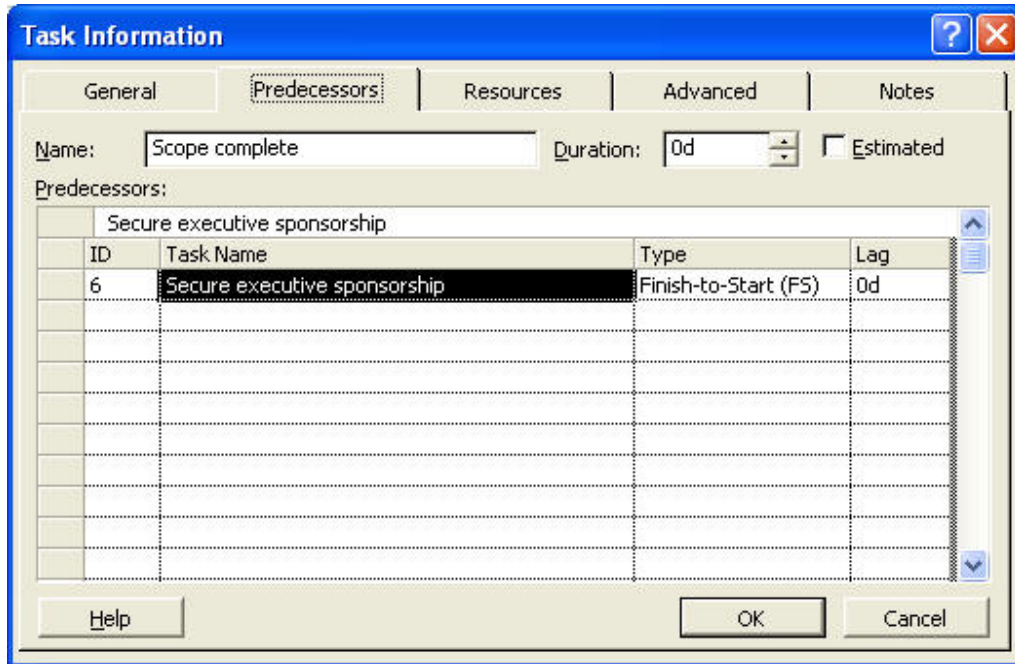


Figure 9: Task Information Dialog Box – Predecessors Tab with Tasks

Click the 'OK' button to close the dialog box.

The project will now look like Figure 10.

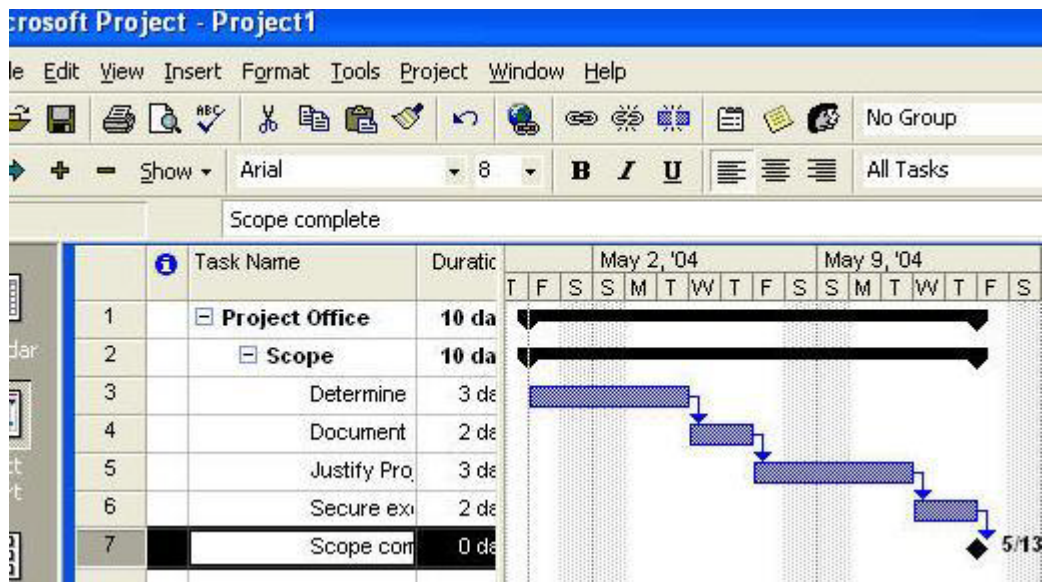


Figure 10: Scope of the Project

Entering Resource Information in Microsoft Project

While a number of tasks have been entered and predecessors have been set for these tasks, resources have not been assigned to the individual tasks of the project. Before resources can be assigned to tasks, we need to first create those resources that will be responsible for completing the work. Microsoft Project allows entering of tasks without resources being associated with them since in most instances it is unknown who will actually be doing a specific task until later in the project.

To switch to the screen used to create new resources, click on the 'Resource Sheet' from the left toolbar. The screen will look similar to Figure 11. There are two ways to enter resources into Microsoft Project. Either the Resource Spreadsheet or the Resource Information dialog box may be used. Both methods of entering resources into Microsoft Project will be explained.

Note: If a resource is created, and that resource is assigned to a task, the resource cannot be deleted from the project until all tasks associated with the resource have been reassigned to another resource.

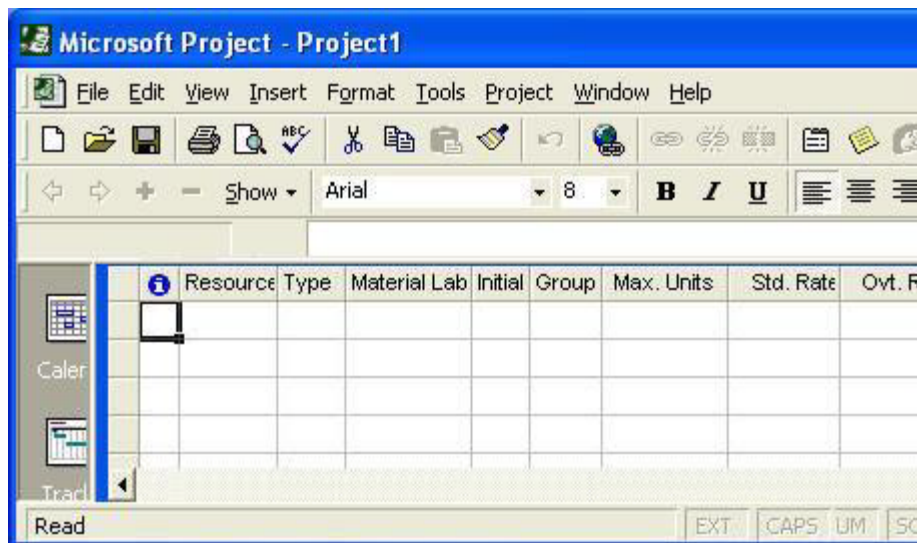


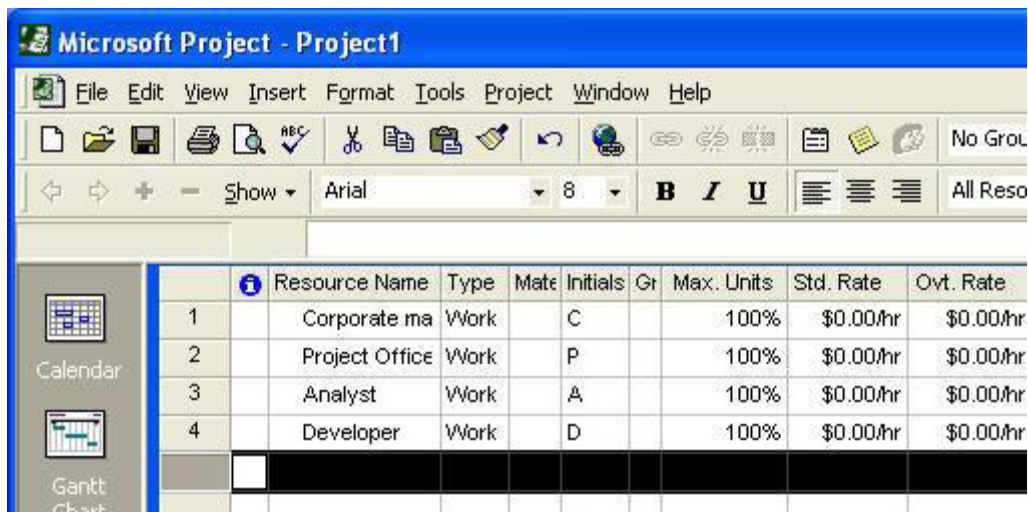
Figure 11: Resource Sheet

Creating Project Resources Using Spreadsheet in Microsoft Project

For our project we are going to create a number of resources to carry out the work. Both methods will be used to create resources for this project.

- Select the first row of the resources spreadsheet and type “Corporate Management” under the Resource Name column.
- Select Work from the drop down dialog box in the Type column.
- Leave Material Label blank.
- Type “C” in the Initials column.
- Leave the rest of the columns at their default values.
- Repeat the steps above for: Project Office Coordinator, Analyst, and Developer, using the first letter of each title for the Initials column.

The screen should look like Figure 12.



	Resource Name	Type	Mat	Initials	Gr	Max. Units	Std. Rate	Ovt. Rate
1	Corporate ma	Work		C		100%	\$0.00/hr	\$0.00/hr
2	Project Office	Work		P		100%	\$0.00/hr	\$0.00/hr
3	Analyst	Work		A		100%	\$0.00/hr	\$0.00/hr
4	Developer	Work		D		100%	\$0.00/hr	\$0.00/hr

Figure 12: Project Resources

Creating Project Resources Using Dialog Box in Microsoft Project

To create a resource using the Resource Information dialog box, follow these instructions:

- Double-click on the fifth row of the resource spreadsheet and a dialog box like the one in Figure 13 will be shown.
- In the Resource name field, type “Project Office staff analyst”.
- Type “POA” in the Initials field.
- Select Work from the Resource type drop-down dialog box.
- Click the 'OK' button to create the resource.

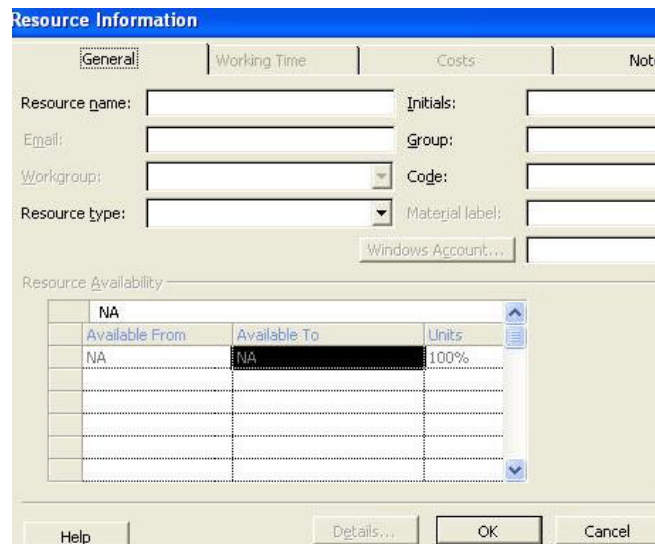
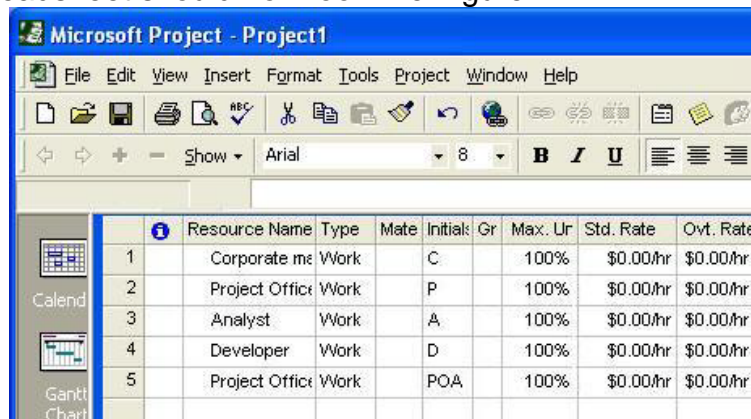


Figure 13: Resource Information Dialog Box – General Tab

The resource spreadsheet should now look like Figure 14.



	Resource Name	Type	Mate	Initials	Gr	Max. Ur	Std. Rate	Ovt. Rate
1	Corporate me	Work		C		100%	\$0.00/hr	\$0.00/hr
2	Project Office	Work		P		100%	\$0.00/hr	\$0.00/hr
3	Analyst	Work		A		100%	\$0.00/hr	\$0.00/hr
4	Developer	Work		D		100%	\$0.00/hr	\$0.00/hr
5	Project Office	Work		POA		100%	\$0.00/hr	\$0.00/hr

Figure 14: Completed Resource Spreadsheet

Assigning Project Resources Using Task Spreadsheet in Microsoft Project

Now that we have created some resources for our project, we can go back and assign tasks to these resources. There are a number of ways to do this. The two most common will be explained. In this section the task spreadsheet of the 'Gantt View' of Microsoft Project will be discussed.

- Click on 'Gantt Chart' in the left-hand toolbar.
- Select row 3 and tab to the end column marked Resources.
- From the drop-down dialog box, select Corporate Management.
- Repeat this for all other tasks in the project.
- Since these tasks will have more than one resource assigned, other resources will need to be assigned from the Task Information dialog box.

The project should now look like Figure 15.

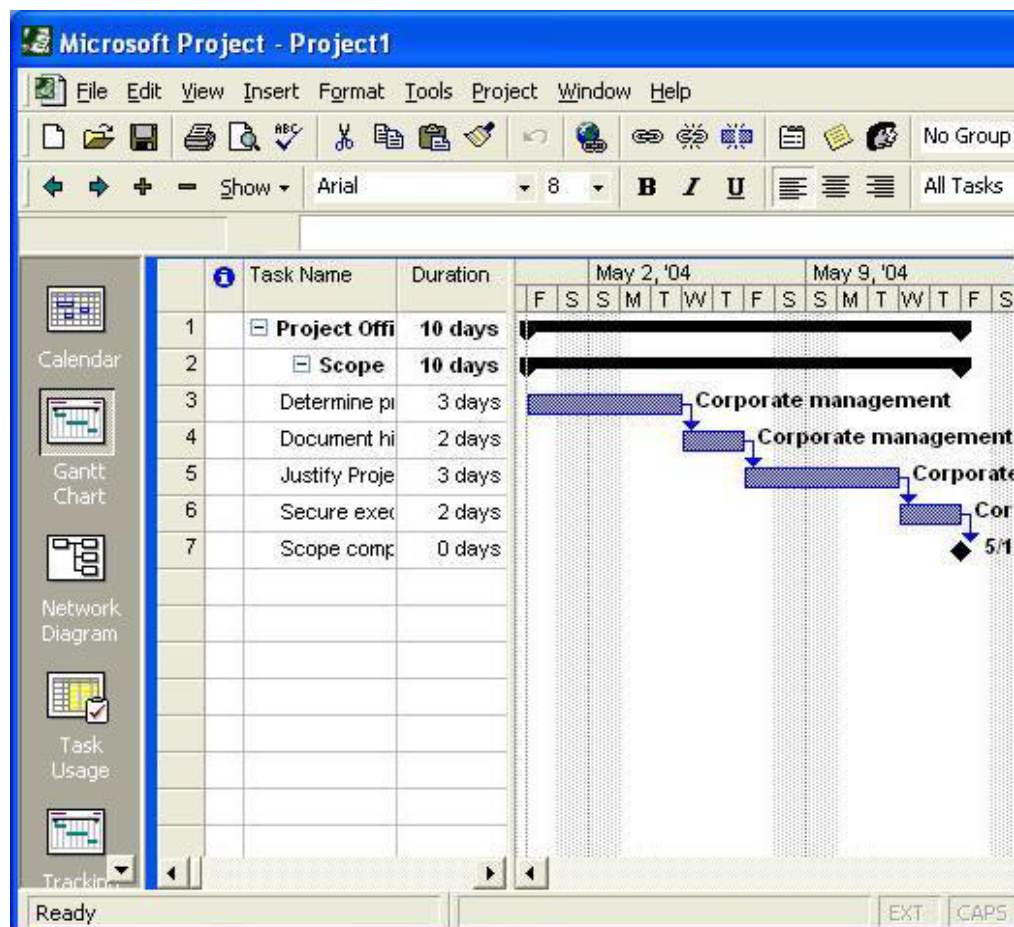
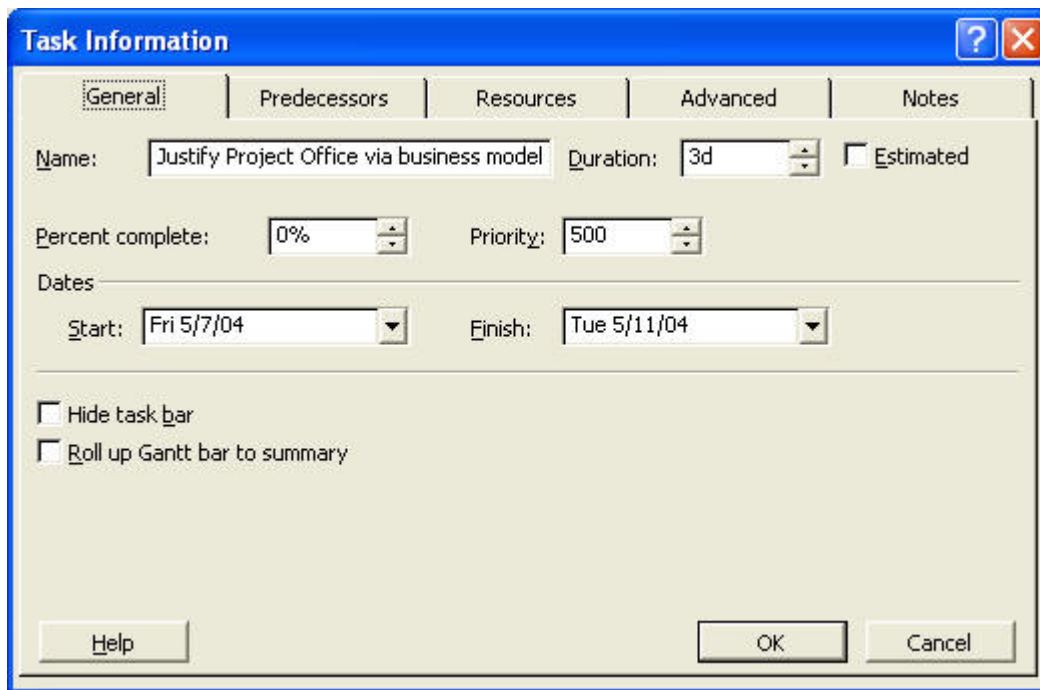


Figure 15: Task Spreadsheet of the Gantt Chart View

Assigning Project Resources Using Task Information Dialog in Microsoft Project

The quickest way to assign resources to a task is through the Task spreadsheet of the 'Gantt Chart' view of the project. The only problem with this method of entering resources is that only one resource for a project from this area can be entered. In order to assign more than one resource to a project, use the Task Information dialog box. This process will be discussed here:

- Double-click on line 3 of the task spreadsheet. The dialog box shown in Figure 16 will be displayed.



The screenshot shows the 'Task Information' dialog box with the 'General' tab selected. The dialog box has a blue title bar with a question mark and a close button. The tabs are 'General', 'Predecessors', 'Resources', 'Advanced', and 'Notes'. The 'Name' field contains 'Justify Project Office via business model'. The 'Duration' is set to '3d' and the 'Estimated' checkbox is unchecked. The 'Percent complete' is '0%' and the 'Priority' is '500'. The 'Dates' section shows 'Start' as 'Fri 5/7/04' and 'Finish' as 'Tue 5/11/04'. There are two checkboxes: 'Hide task bar' and 'Roll up Gantt bar to summary', both of which are unchecked. At the bottom, there are 'Help', 'OK', and 'Cancel' buttons.

Figure 16: Task Information Dialog Box – General Tab

Adjusting the Calendar in Microsoft Project

Now that a basic project plan is put together, some of the other features that will be needed on a regular basis or those that can help spot trouble in the project will be examined. One such area is the base calendar used by the project. The default calendar has work-time scheduled every Monday-Friday, 8 a.m.-5 p.m., 52 weeks of the year.

To effectively calculate dates for items within the project, modify the base calendar to include things like holidays, planned shutdowns, etc. This is how these adjustments are made:

- Click on 'Tools' menu.
- Select 'Change Work Time' from this menu and the following dialog box in Figure 18 will be displayed.

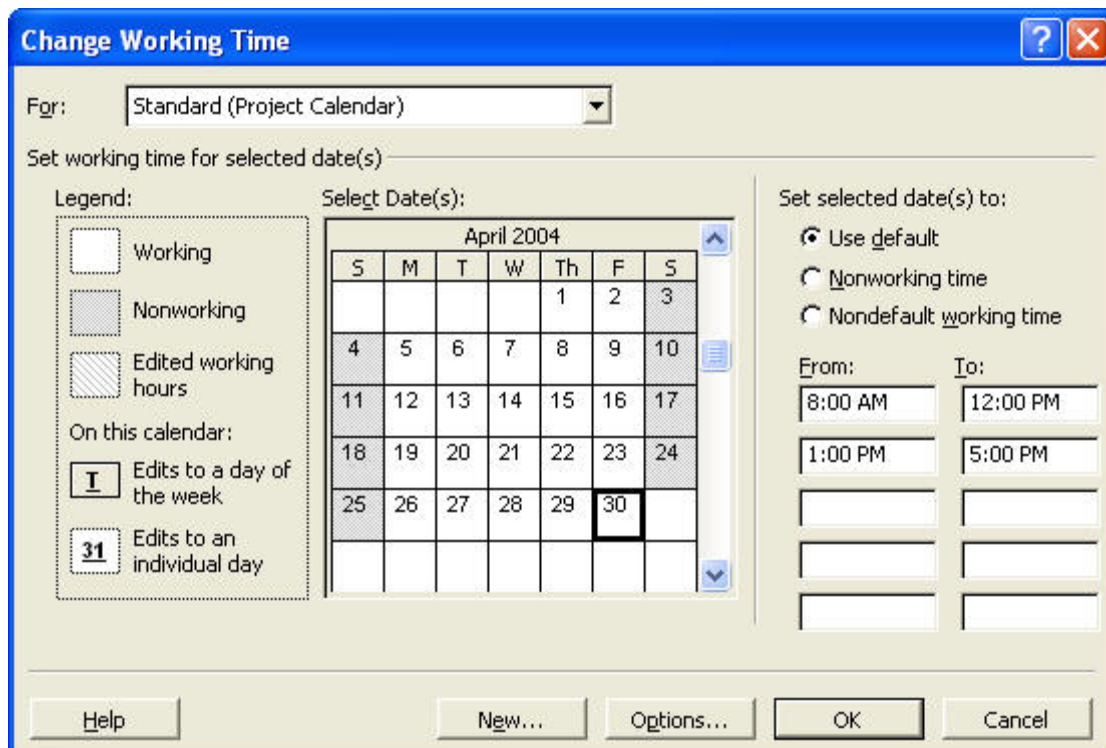


Figure 18: Change Working Time Dialog Box

- With a copy of the company's holiday schedule, scroll through the calendar to find the correct month for a holiday.
- Click on the day that needs changed so that it is highlighted with a box outline.
- Then click the 'Nonworking time' radio button on the right-hand side of the dialog. This day will now be marked as a non-workday and any tasks that fall on that

date will be updated automatically. Set a date to half a day by using the 'Nondefault working time' radio button.

Note: Every resource in the project has an individual calendar based off the Standard calendar. Update a Resources calendar from the Resource Information dialog to enter things like vacation time, business trips, etc.

Gantt Chart View

The Gantt Chart is the most commonly used chart in Project Manager. It shows all the relationships between tasks, when tasks are expected to start, the person assigned to a task, when the task is scheduled to end, etc. Because of this, this chart can very quickly become large and unreadable. Adjustments can be made to the items displayed on the Gantt Chart or the size can be changed, but these tend to make it less easy to read and understand.

The Gantt Chart for our small project is displayed in Figure 19.

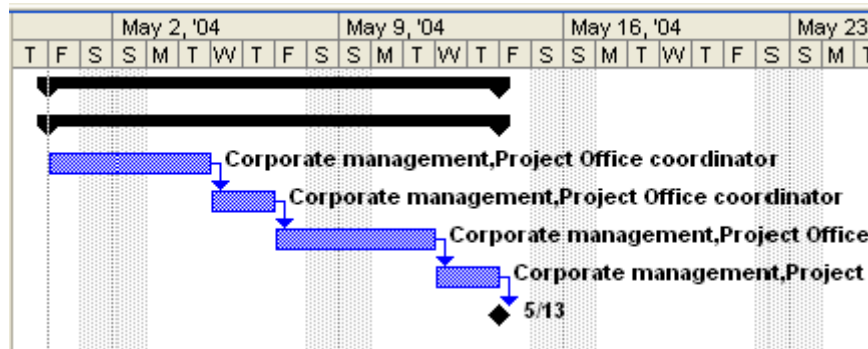


Figure 19: Gantt Chart

Network Diagram View in Microsoft Project

Another commonly used diagram in Project Manager is the network diagram. Basically, a network diagram shows all the relationships between tasks. More importantly, the network diagram shows what is called the critical path of a project. It is called the critical path because any changes to any of the tasks on the critical path affect the outcome of the project. If a task on the critical path takes longer than expected, the entire project will be late because of it. A minimized view of the network diagram for our small project is shown in Figure 20.



Figure 20: Network Diagram

The Task Usage view displays useful information about all the tasks in a project. This view shows the amount of time and money needed for each task. Once an hourly rate is assigned to the different resources in the project, an estimate of how much the project

is going to take can be given. The Task Usage view can be modified to display a number of different pieces of information.

Figure 21 shows the work effort and the estimated cost for each of the tasks associated with our small project. The top line, Project Office, contains a total amount for the given day.

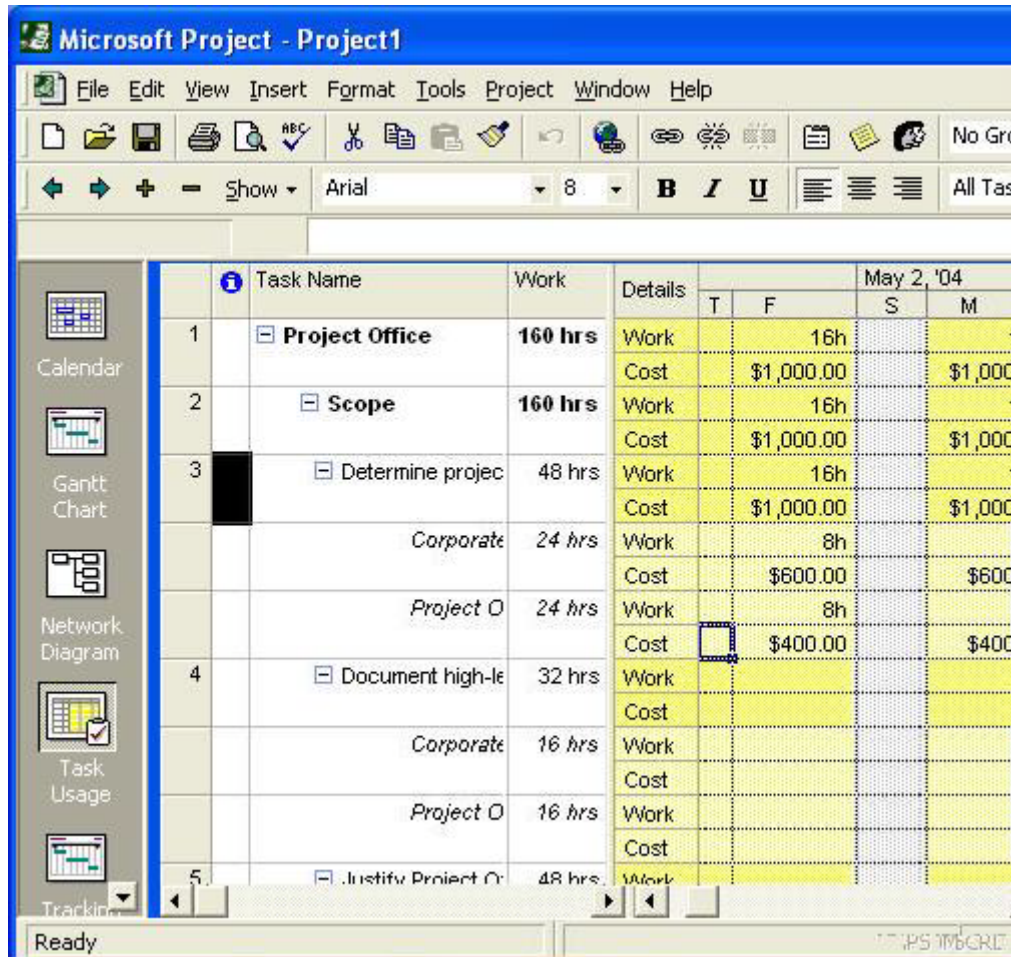
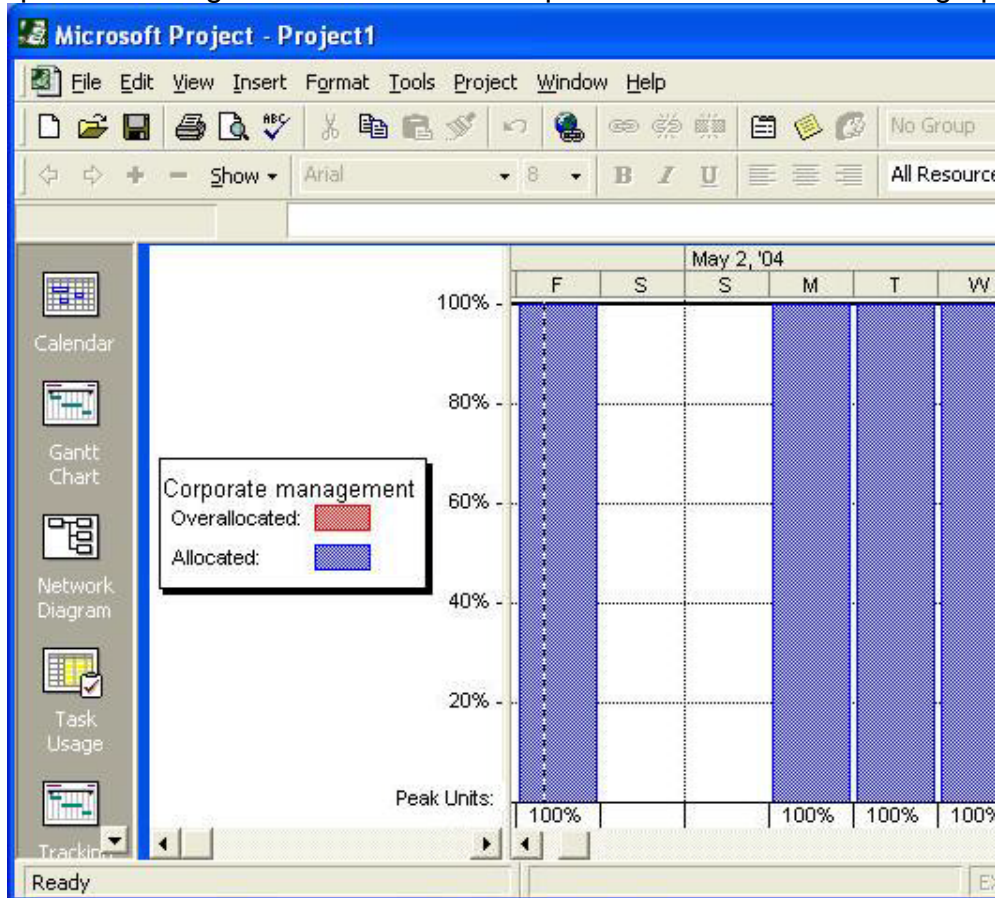


Figure 21: Work Effort and Estimated Cost for Each Task

The Resource graph, obtainable by clicking on 'Resource Graph' on the left toolbar, displays a graph for each resource defined in the project. By using this graph, resources that have been assigned too many (over utilization) or too few (under utilization) tasks within the project can be spotted. One of the primary goals of a Project Manager is to make sure that people are being used at the optimal level of utilization. Over-allocated resources burn out and do not perform well over the life of the project; under-allocated resources are an added expense to the project since the company is paying for their time even if they are not kept busy.

Project management is a constant juggling act, and resource utilization is just one of the many balls that must be juggled. Microsoft Project makes it fairly easy to spot resource utilization problems. Figure 22 shows an example of a resource utilization graph.



22: Resource Utilization

Microsoft Project has a number of built-in reports to help monitor different items within the project. The dialog box in Figure 23 displays a few of the standard categories of reports in Microsoft Project. Custom reports can also be created to suit the needs of the project; however, the most commonly needed information is already available in the standard reports.

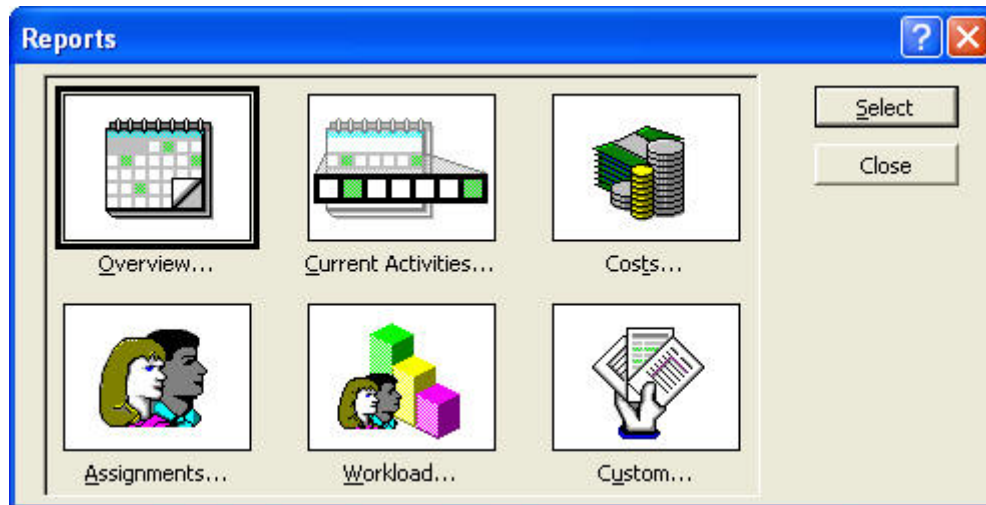


Figure 23: Categories of Reports Available in Microsoft Project

Conclusion

This has been a very quick overview of Microsoft Project and the portions of it that will be needed to get a project set up and running with it. There are whole books dedicated to the topic of Microsoft Project. If it will be used frequently, the books may be helpful. This tutorial has given all that is needed to get a quick start using Project. Even those who use Microsoft Project daily can still find things they did not know in a book.

