Microsoft Project Test

Please mark the statement as 'True' or 'False'.

I	II	III	
			1) Progress line indicates the project progress.
			2) Assignment is nothing but a task.
			3) We cannot schedule the project from finish date in MSProject.
			4) To change the project start date, start date of the first task in the schedule is changed.
			5) To change the project finish date, finish date of the last task in the schedule is changed.
			6) We cannot resolve resource overallocation by splitting task in MSP.
			7) We enter/select the task start date while entering the task(s) in the schedule.
			8) We follow the following path while developing the schedule – task definition (task name), start date, duration, dependency (ies), and resource(s).
			9) Critical path is shortest path in the project.
			10) We cannot get customized reports in MSProject.
			11) Resource information is entered in resource usage view.
			12) Critical path is a bunch of tasks done by very critical resource(s).
			13) Resource information is entered in resource graph.
			14) Project baseline is changed each time when the project is updated.
			15) We cannot use the customized fields in MSProject whenever necessary.
			16) Organization holiday is entered in calendar view by marking the day as non-working time.
			17) We cannot use different calendars for different locations (onsite/ offshore).
			18) Resource unavailability is made effective by marking the non-working day in project calendar.
			19) We cannot mark the half-day leave of a resource in MSProject.
			20) Milestones can be used for depicting the intra-group/ inter-group dependencies.
			21) If a resource is charged at more than one rate we use another project file for such tasks.
			22) Task grouping is not at all essential.
			23) Baseline information is just for the sake of records.
			24) Additional tasks cannot be entered in fully developed & baselined schedule.
			25) Task usage view shows only completed tasks.
			26) Resource usage view shows actual work put in by the resources by default.
			27) It is advisable to eliminate the use of task notes.
			28) It is advisable to include as many date-constraints as possible in the project schedule.
			29) Filters are not much of use while analyzing the schedule in MSProject.
			30) It is better to use task names with task id while communicating task information

	I	II	III
True			
False			
?			

Overview of Microsoft Project

MSP is a project management tool. It fulfills all the requirements of project management like scheduling, budgeting, tracking, controlling, analyzing, reporting and communication required for any project.

Every action you take in Microsoft Project does something to or for ***tasks***, ***resources*** and ***assignments***. These three components are the essential components of any project. We can work with these essential components in Microsoft Project, finding the configuration that suits with the needs.

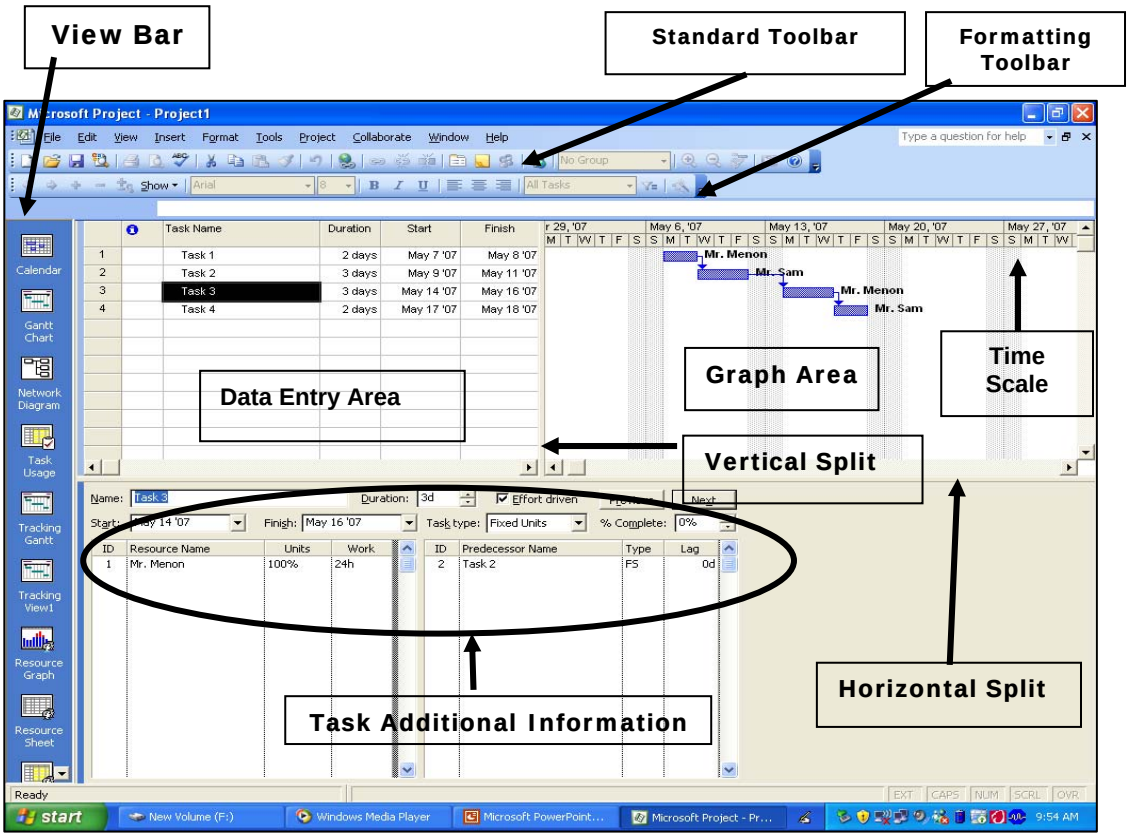
The actual work that needs to be accomplished to meet the project goals can be broken into *tasks*. A *resource* is usually a person or a piece of equipment, materials, and services – whatever required to complete a task. When we assign a *resource* to work on a *task* we make an *assignment.*

Task + Resource = Assignment.

There must be an exchange of information between you and Microsoft Project interface – what is seen on the screen - before it can flow within Microsoft Project. Microsoft Project communicates through its interface – various charts, graphs, views, menus, toolbars, and the dialog boxes. So using the Microsoft Project is nothing but communicating with Microsoft Project through its interface.

Parts of the Microsoft Project Window

Overall information about the project can be seen using MSProject (.mpp) file. When one opens the project file following screen is seen (while using version 2003)



There are various interfaces available in MSP. Through these interfaces we can add, edit, analyze and extract information from the application. Microsoft Project facilitates this through different parts that can be seen on Microsoft Project Window.

Main Parts are

- Menu Bar
- Tool Bars
- View Bar
- Timescale
- Split Bar

Menu bar

The menu bar is used to select menus and commands to perform actions in Microsoft Project. You can add, delete, and modify the menus on the menu bar and the commands on the menus. You can also create your own menu bars and display them. The menu bar appears below the title bar in the Microsoft Project window.

- Selecting a menu name on the menu bar displays a menu containing a list of related commands.
- To select a menu name on the menu bar, click the menu name or press ALT+ the underscored letter in the name.
- The commands that appear on menus may change depending on the view you're in and the actions you have taken in Microsoft Project.
- Command names followed by an ellipsis (...) display a dialog box.
- Command names followed by an arrow () display a cascading menu containing a list of related commands.
- Some command names are followed by a keyboard combination you can use to quickly execute the command.

Toolbars

Toolbars are sets of buttons that are shortcuts to commands. Microsoft Project includes a number of toolbars that you can display. By default, the Standard and Formatting toolbars appear below the menu bar at the top of your screen.

- You can change the buttons on toolbars, the commands assigned to the buttons, and the appearance of toolbars themselves.
- To display or hide a toolbar, point to Toolbars on the View menu, and then click the toolbar you want to display or hide.
- To add, remove, or change buttons on a toolbar, point to Customize on the Tools menu, and then click Toolbars. In the Customize dialog box, make the changes you want.
- To move a toolbar elsewhere on your screen, click the toolbar handle on the left edge of the toolbar and drag the toolbar to its new location. The toolbar is placed in a window that you can resize.
- To see the name of a toolbar button, position the pointer over the button.

Microsoft Project includes the following toolbars.

Toolbar	Purpose
Standard	Provides the most frequently used tools, which you can use to accomplish a wide range of common project management tasks.
Formatting	Provides tools for changing the appearance of text in views.
Custom Forms	Provides tools for entering task or resource information not included in the standard forms. Such information ranges from the very general to dealing with cost, work, earned value, and schedule tracking.
Drawing	Provides tools for adding graphics and text boxes to the Gantt Chart.
Resource Management	Provides tools for resolving resource overallocations and assigning resources.
Tracking	Provides tools for viewing project information and updating the schedule.
Visual Basic	Provides tools for recording, running, and editing macros with Microsoft Visual Basic for Applications.
Web	Provides tools that activate your web browser so that you can navigate an intranet or the World Wide Web.
Workgroup	Provides tools for exchanging information with others in a workgroup.
Analysis	Provides tools for adjusting and evaluating your project.
PERT Analysis	Provides PERT analysis tools for judging best-case, expected, and worst-case scenarios for task durations, start dates, and finish dates.
Network Diagram	Provides tools to display or hide summary tasks boxes, progress marks, page breaks, links labels, task information fields and fine tune your schedule in a flow chart format.
Database Upgrade Utility	Provides tools to run an automated process to upgrade your MSP 98 (.mpd), Microsoft Access (.mdb), or any supported ODBC-compliant database projects to MSP 2000

View Bar

The View Bar appears along the left edge of the Microsoft Project window and provides a convenient means of changing views by just clicking the icons that appear on the View Bar. If the view you want to display does not appear on the View Bar, click More Views on the View Bar, and then select the view from the More Views dialog box. If you do not want Microsoft Project to display the View Bar, click View Bar on the View menu.

The following table describes each view that appears on the View Bar and shows the icon for each view.

Note: This table does not contain all Microsoft Project views, only those displayed on the View Bar by default. For a description of all the Microsoft Project views, click .

View	Description
Calendar	A monthly calendar showing tasks and durations. Use this task view to show the tasks scheduled in a specific week or range of weeks.
Gantt Chart	A list of tasks and related information, and a chart showing tasks and durations over time. Use this task view to enter and schedule a list of tasks.
Task Usage	A list of tasks showing assigned resources grouped under each task. Use this task view to see which resources are assigned to specific tasks and to set resource work contours.
Tracking Gantt	A list of tasks and related information, and a chart showing baseline and scheduled Gantt bars for each task. Use this task view to compare the baseline schedule with the actual schedule.
Resource Graph	A graph showing resource allocation, cost, or works over time. Use this resource view to display information about a single resource or group of resources over time.
Resource Sheet	A list of resources and related information. Use this resource view to enter and edit resource information in a spreadsheet-like format.
Resource Usage	A list of resources showing allocation, cost, or work information for each resource over time. Use this resource view to show cost or work allocation information for each resource and to set resource contours.
Network Diagram	A network diagram showing all tasks and task dependencies. Use this task view to create and fine-tune your schedule in a flowchart format.

Timescale

The timescale is the gray band containing the timescale legend at the top of the Gantt Chart, Resource Graph, Task Usage, and Resource Usage views. The area below the timescale graphically presents task or resource information. Each view presents task or resource information differently. The following picture shows a timescale.

- The timescale consists of a major scale above a minor scale.
- Both the major and minor scales can display units of minutes, hours, days, weeks, months, quarters, and years. For example, the major scale can display months while the minor scale displays weeks.
- You can change the units on the major and minor scales and the format in which the units are displayed.
- In the Gantt Chart, vertical dashed lines represent the current date, the start date, and the end date for the project.
- In the Gantt Chart, gray vertical bands represent nonworking time. You can change the appearance of these bands using the Nonworking Time tab in the Timescale dialog box.
- To format text on the timescale, click Text Styles on the Format menu.
- To format gridlines in a Gantt Chart, click Gridlines on the Format menu.
- Using the right mouse button, click the timescale to see a shortcut menu listing the commands you can use on the timescale.

Split bar

The split bar splits a single-pane view horizontally to create a combination view, closes a combination view to create a single-pane view, or sizes the vertical portions of a view. The following picture shows the split bar and the split box.

Vertical Split Bar

The Gantt Chart, Resource Graph, and Resource Usage views have a vertical split bar, or divider bar. In the Gantt Chart view, the divider bar separates the table and chart portions of the view. In the Resource Graph view, the divider bar separates the legend and the graph. In the Resource Usage view, the divider bar separates the table and the chart.

Drag the vertical divider bar to the left or right to move it, or press SHIFT+F6 and use the arrow keys to adjust the horizontal and vertical panes.

Horizontal Split Bar

Drag the split box up or down to move the split bar, or press SHIFT+F6 and use the arrow keys to adjust the split between the two views.

- You can click Split on the Window menu.
- Splitting a task view displays the Task Form view in the bottom pane; splitting a resource view displays the Resource Form view in the bottom pane.
- In combination views, the view in the bottom pane displays information about the tasks or resources selected in the view in the top pane.

Specifications & limits

The following specifications and limits are supported in Microsoft Project on Windows 95 or Windows NT, although actual limits and performance speed are greatly dependent on the computer's configuration. Please note that Out of Memory errors may occur before you reach the listed limits.

Attribute	**Maximum**
Tasks per project file	1 million
Resources per project	1 million
Resource units per assignment	60,000,000 units or 6,000,000,000 percent
Resource availability dates	100
Task dependencies per project file	no limit
Predecessors per task	no limit
Successors per task	no limit
Outline levels per project	65,535
Consolidated projects	998
Open project files per consolidated project	998
Sharer files connected to a resource pool	999 (that is, maximum open project files minus 1 for the resource pool itself)
Open windows	50
Base calendars	unlimited
Calendar exceptions per calendar	1,400
Printable tasks in monthly calendar	4,000
Rate tables to support different pay scales and rates	5 per resource
Variable rates per rate table to support rate increases and decreases	25
Maximum cost value in a currency field	999,999,999,999
Maximum work value	1,666,666,667 hours
Maximum assignment work values for :	
Work assignments	999,999,999 minutes
Variable material assignments	999,999,999 units
Fixed material assignments	60,000,000 units
Print scaling adjustment range percentage	10 to 500 percent
Page header text	5 lines
Page footer text	3 lines
Page legend text	3 lines
Page legend text box width	5 inches (12.7 centimeters)
Filter tests per filter	40
Filter tests per AutoFilter	2 per column
Earliest date allowed for calculation	January 1, 1984
Latest date allowed for calculation	December 31, 2049
Maximum number of discontinuous selections on a sheet view	9

Reading the Project Plan

The objective of this exercise is to

1) Explore the tool systematically
2) Understand methods to extract project information

Assignment 1

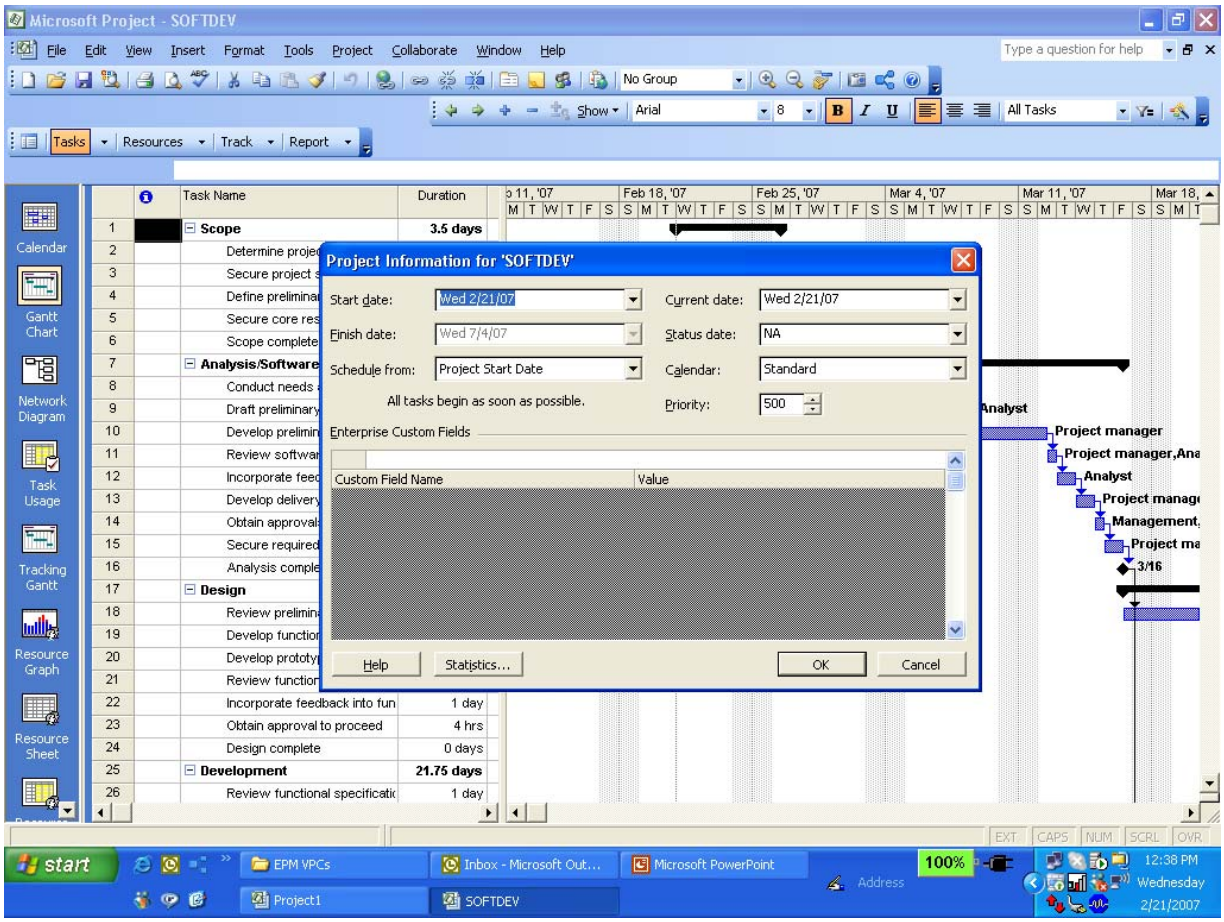
Following 16 points are generally looked at while reading the project plan in MSP. This is the information that one should understand and extract from MSP as a Project Manager / Team Member:

1) Start & Finish dates of the projects.
2) Calendar duration of the project in days or months or hours, etc.
3) The names and number of the resources.
4) Task assignments of the resources. Tasks allocated to a resource.
5) Dependencies of your tasks as a predecessor as well as successor.
6) Notes & constraints on the tasks.
7) Allocation: over-allocation & under-allocation.
8) The project calendar - working time & the holidays incorporated in it.
9) The resource calendar (for self) – working time, non-working time (e.g. leaves).
10) Total work (efforts) planned for the project.
11) Total work (efforts) planned for self for the complete project.
12) Critical Path of the project.
13) Presence of resource on critical activity.
14) Milestones of the project.
15) Tasks planned for a particular time frame – coming week, month, etc.
16) Summary or the overall project statistics.

Start & Finish dates of the projects

When one takes a project file to find out the details, the first thing one would like to know is start & finish date of the project. For any project planning can be done from project start or finish date. The dates set for a particular project can be viewed using: Menu Project-> Project Information.

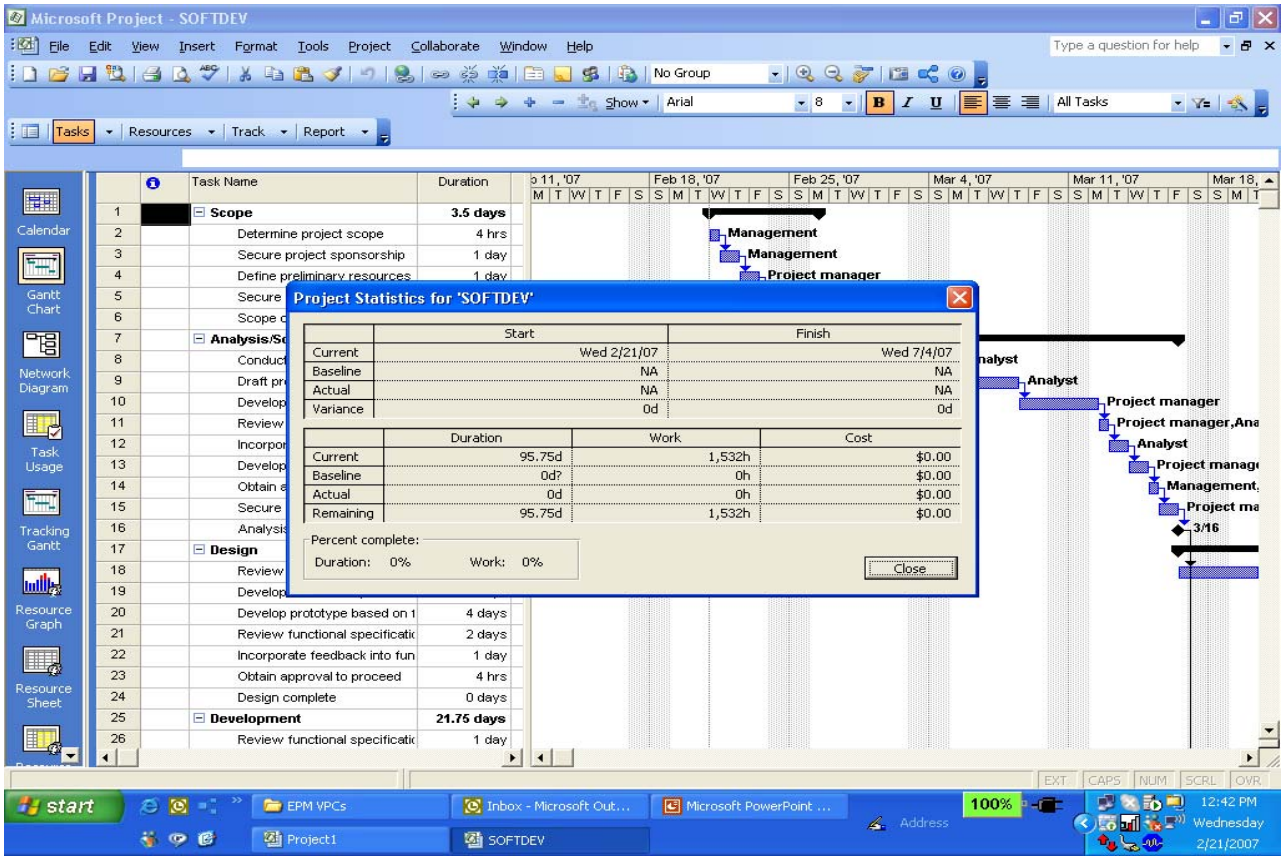
Project>Project Information



Calendar duration of the project in days or months or hours, etc.

The next important information about project is: knowing the duration, work and cost involved in the project. Also the agreed plan and actual as well as remaining work becomes point of concern. To find this information use: Menu Project-> Project Information and click "Project Statistics" button.

Project>Project Information>statistics

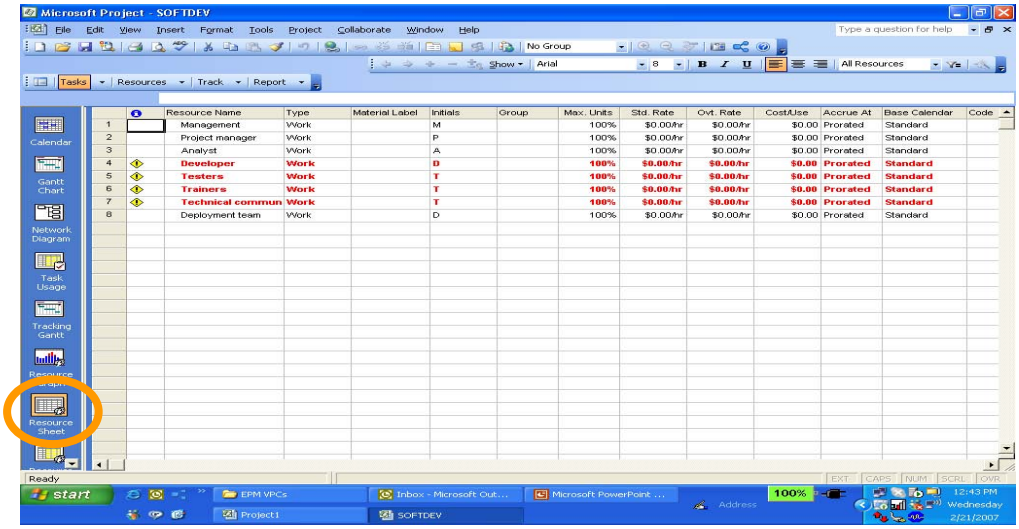


The names and number of the resources

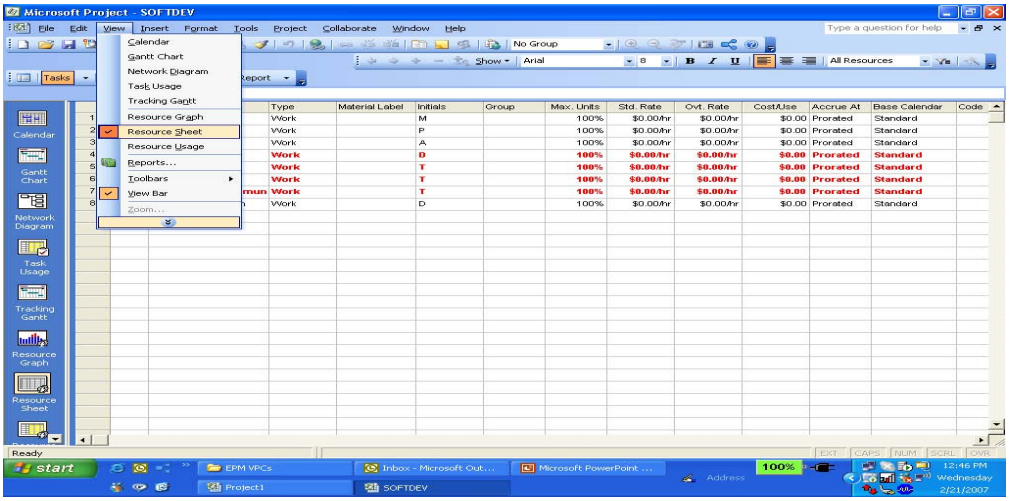
MSP provides varied information, using various views. Default view that opens when MSP file is opened is Gantt Chart View. This view shows various tasks, their relationships etc. information. To find information about resources one needs to change the view and switch to “Resource Sheet” view.

To find this information, one has to click “Resource Sheet” icon from View Bar and see the names & number of resources.

Resource Sheet



The second way to find this information, one has to click “Resource Sheet” menu from View-> Menu.



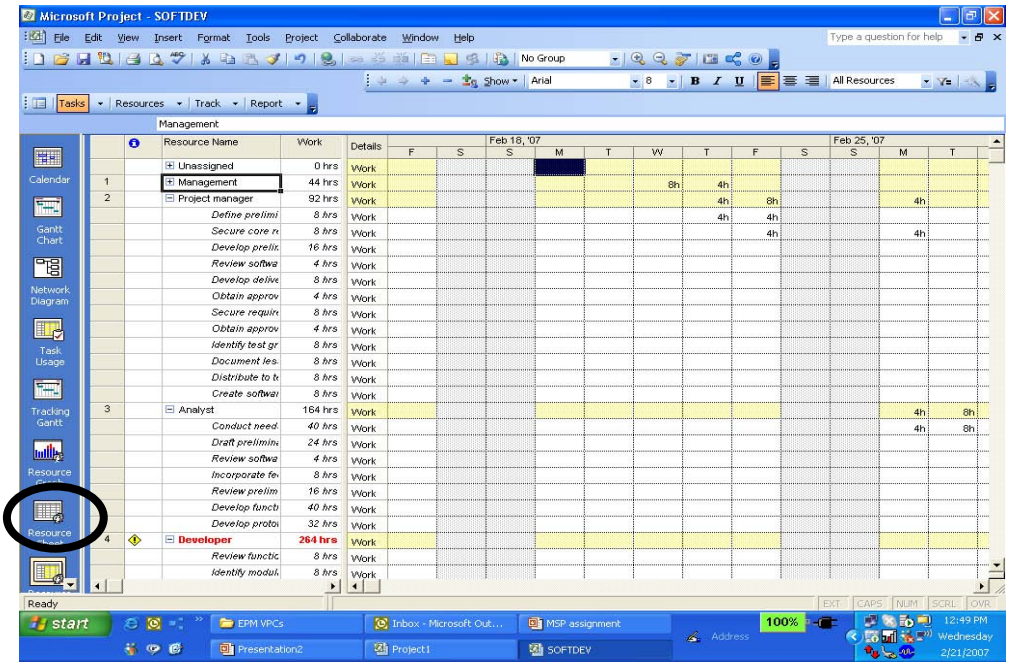
Sometimes Resource sheet can show more resources than those actually allocated to the project. Resource Usage will give a batter picture about how many resources are actually working in the project

Task assignments of the resources.

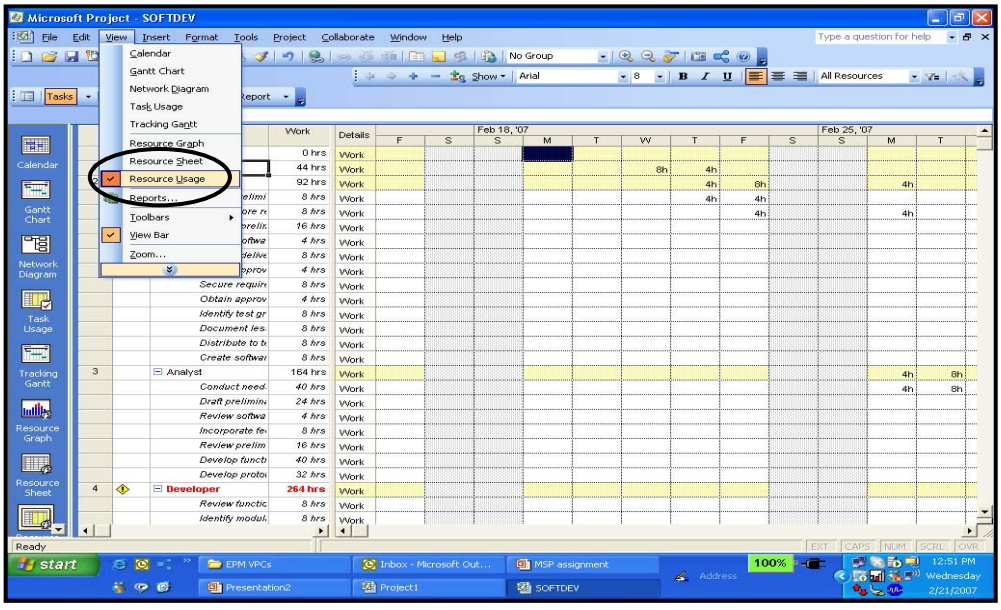
The various views from MSP are divided into “Task Dominant” views & “Resource Dominant “ Views. To find out task assignments of the resources is to find out how many tasks are done by a particular resource. This is done using “Resource Usage” view.

To find this information, one has to click “Resource Usage” icon from View Bar and see the names & number of resources.

Resource Usage

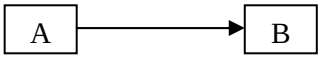


The second way to find this information, one has to click “Resource Usage” menu from View-> Menu.



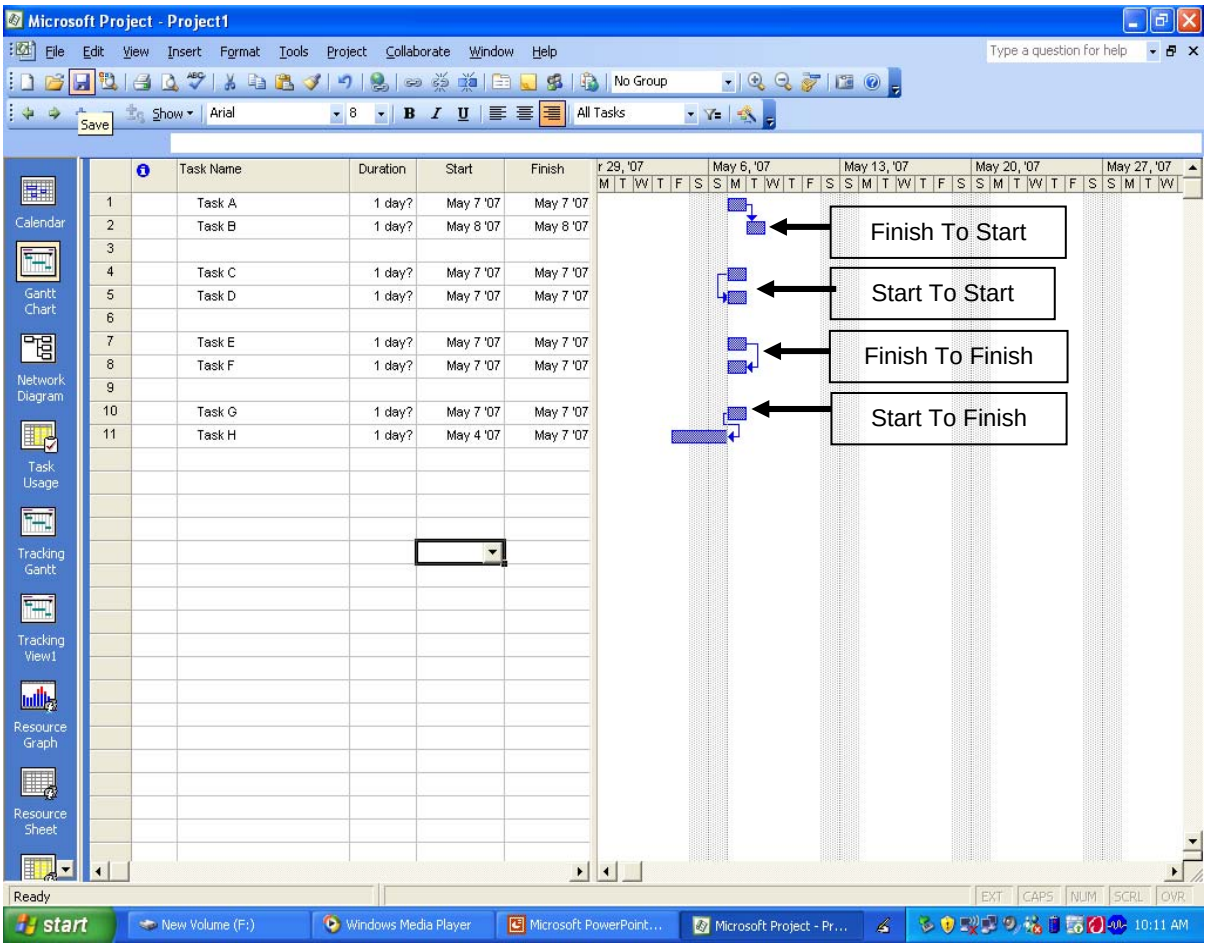
Dependencies of your tasks as a predecessor as successor

After finding resource information next important task is finding out detail information about tasks and dependencies. If there are two tasks Task A & Task B and we have to complete task A and then only we can complete Task B then, Task A is called as predecessor of task B and Task B is called as successor of task A.



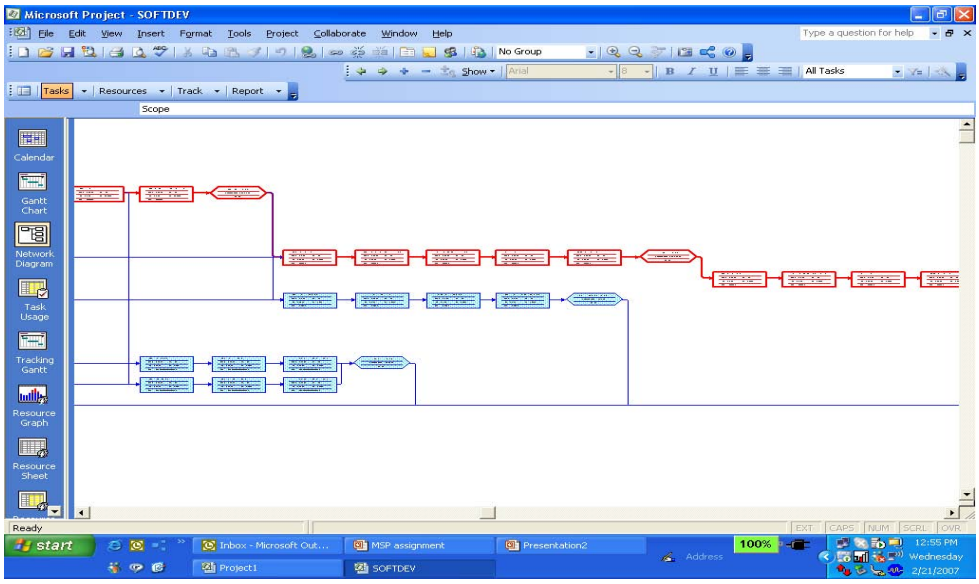
There are various types of relationships namely: Finish to Start, Start to Start, Finish to Finish, Start To Finish.

Task dependency types



To find this information, one has to click “Network Diagram” icon from view bar and see the dependencies and network Diagram.

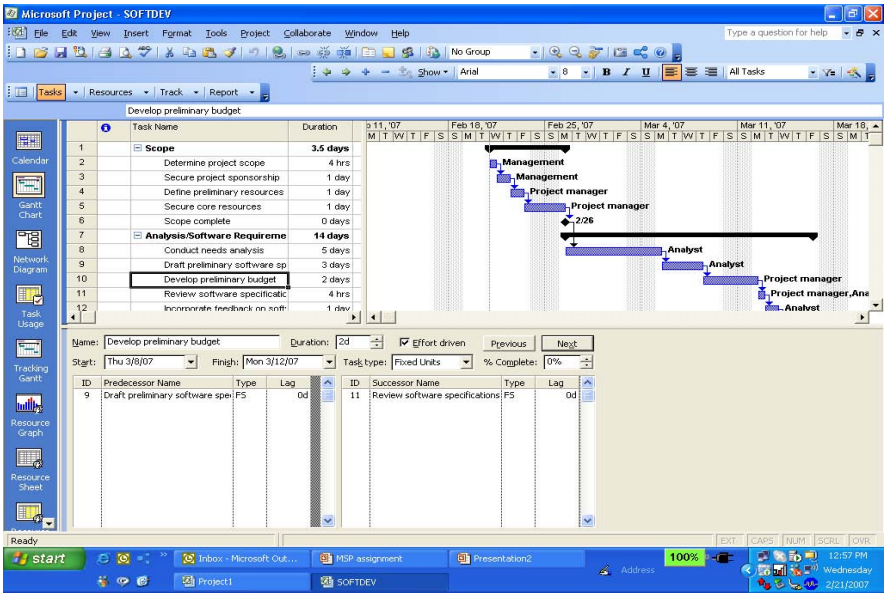
Gantt Chart



One can split Gantt chart view and see the additional information about task like predecessors, successors, work, task type, duration etc. To view this information one use following steps:

1. Open any Task dominant view
2. Menu: Windows -> split

Window>split>click task



Many users do not find network diagram very useful, especially if the project is large with hundreds of tasks. Gantt chart itself shows the predecessors and successors of every task. Sometimes this can also get complex, when there are a lot of dependencies. One more option is to insert a “successors” column and use autofilter to see all the tasks that are successors to a current task.

Notes & constraints on the tasks

Various attributes to the task can be seen on “Task Information” dialog box. These attributes are separated on various tabs of the dialog box. These attributes are separated using

a) General Tab – has name of the task, start- finish dates, % complete etc.

b) Predecessor Tab – has information about predecessors of the task, task dependency type & lag (also lead).

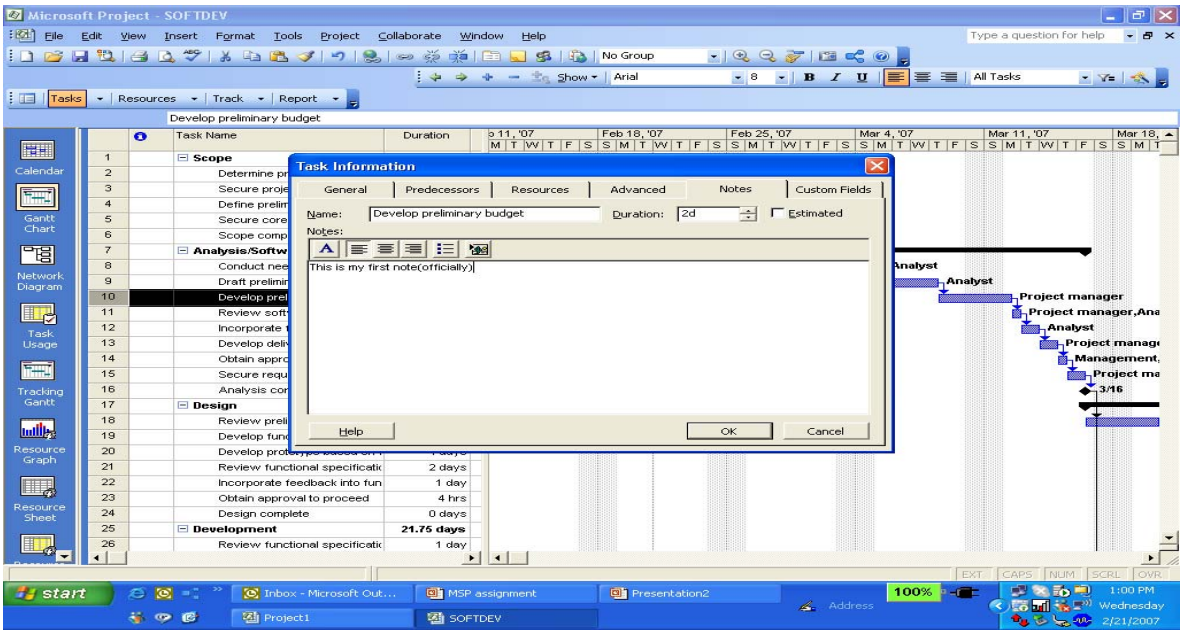
c) Resources Tab – shows resources working on the selected task.

d) Notes Tab: - here one can add notes related to a particular task.

e) Advanced Tab – on this tab one can find information about deadlines, constraints such as start no earlier than, as soon as possible etc.

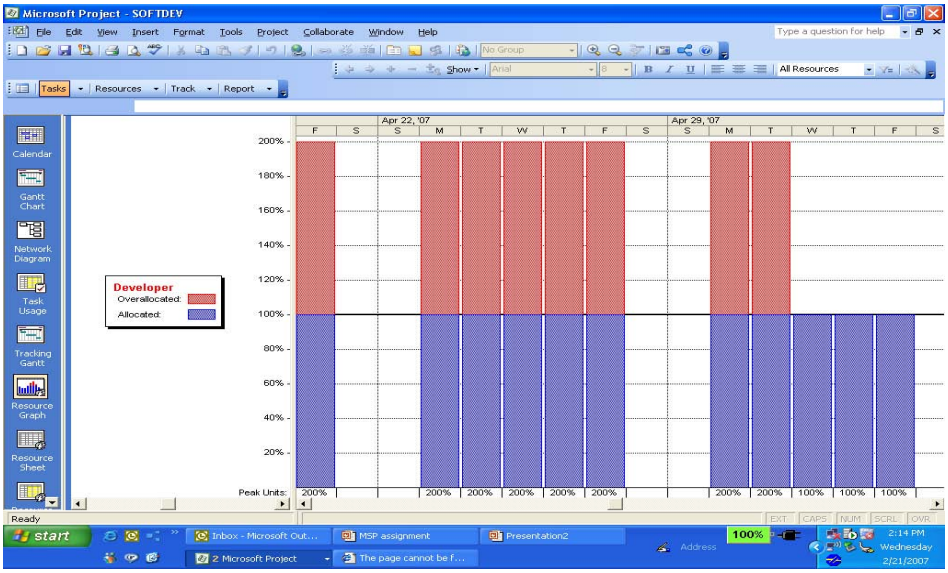
Making use of task information dialog box gives a lot of information handy to the users.

Double click on any task > get task information> notes tab

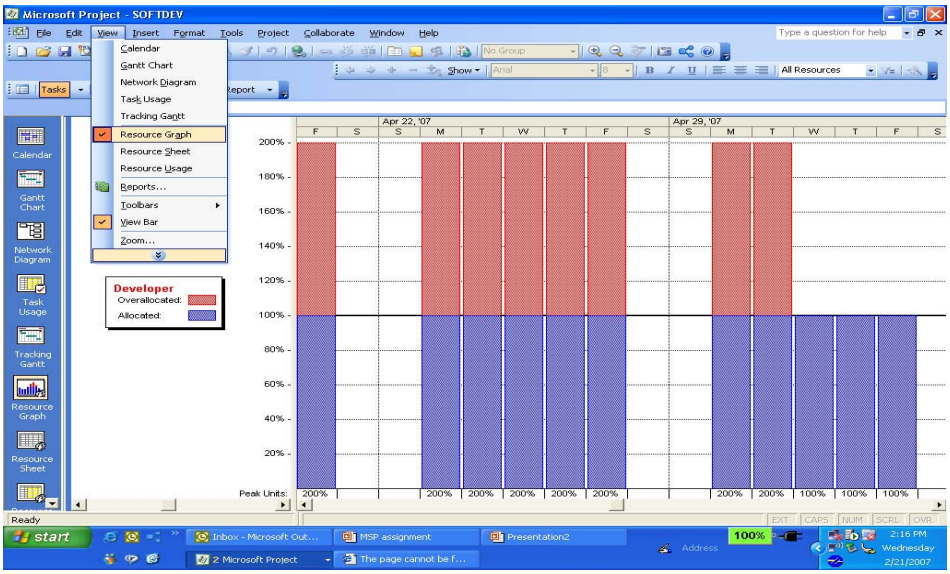


When the task allocations of the resources are allocated, important job for any project manager is to review the resource allocations. From Project Management Best Practices it is always preferable to have resource allocation in a balance manner from entry of the resource on a particular project to his/her exit.

To find this information, one has to click “Resource Graph” icon from View Bar and see the names & number of resources.



The second way to find this information, one has to click “Resource Graph” menu from View-> Menu.



Here again, Resource Usage is a better option, because it shows more details than just 50%, 100% etc.(as shown in the graph). RU view can also show the “availability” of resources which can tell whether the resource is over-allocated or under-allocated.

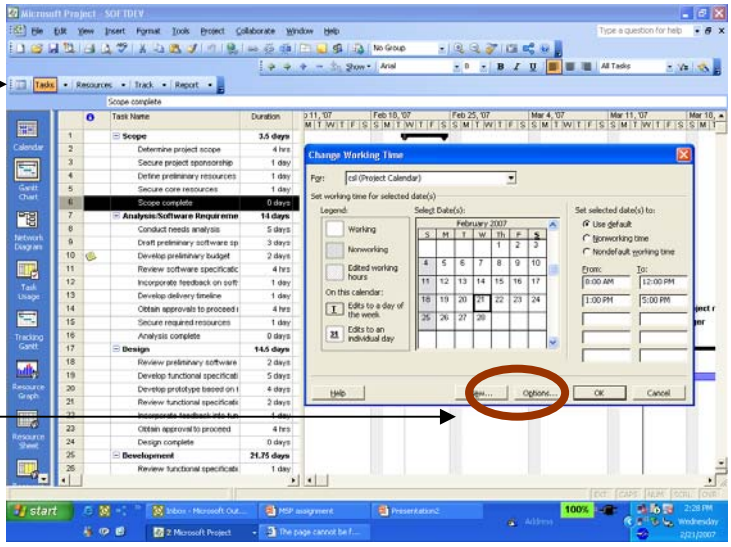
There is another view called Resource Allocation, which provides better clarity.

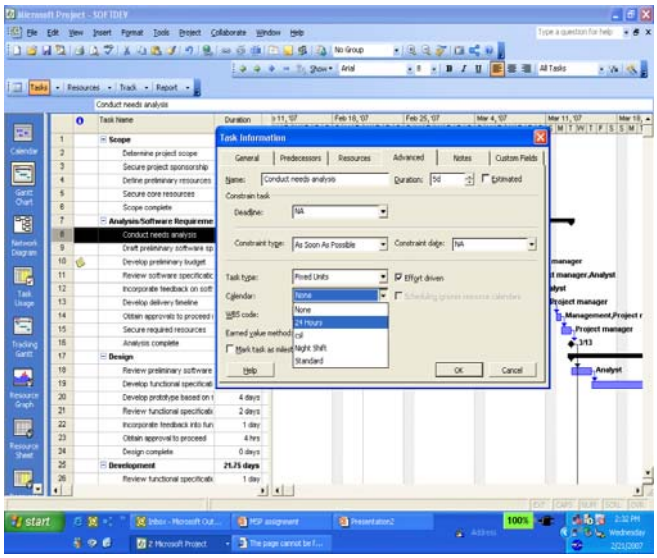
The project calendar - working time & the holidays incorporated in it.

There are 3 default calendars available with MS Project namely: Standard, Night Shift and 24 hours. For a project we can mark project or organizational or national holidays as non-working day on project. This marking can be done on any of the above-mentioned calendars. Customizing calendar and making it suit to the working culture of the project is also possible.

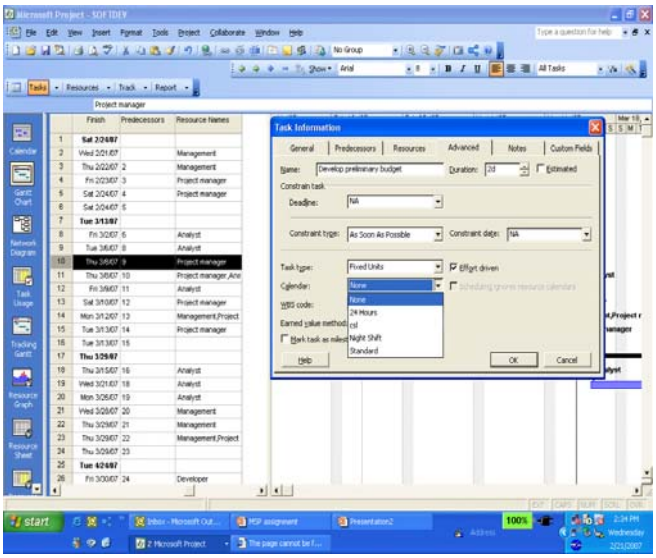
1. Tool>change working time

2. To create a new calendar





3. Task Calendar-Double click on Task



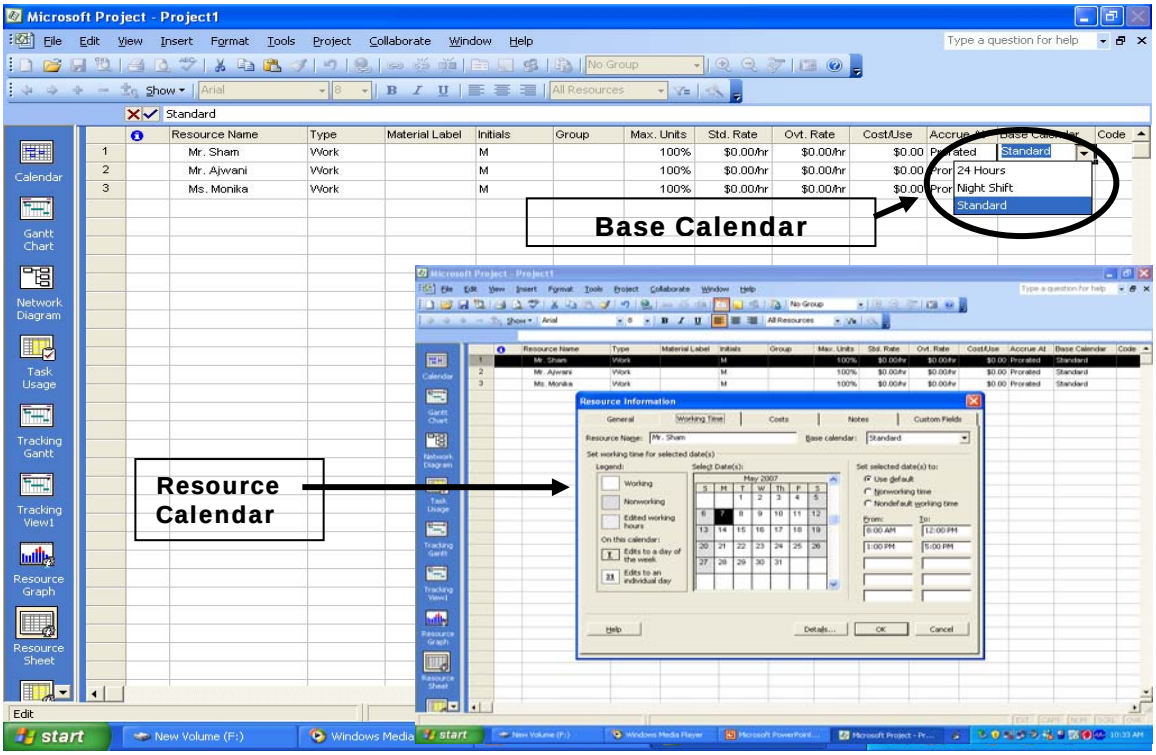
4. Resource Calendar-Double click on resources.

The resource calendar – working time, non-working time (e.g. leave).

Resource Sheet view is used for entering basic information about resources. When a resource is added MSP creates a separate calendar for the resource. By default this calendar is the project standard calendar, but MSP allows you to select a calendar different from the project standard calendar. (For example, the project standard calendar may have a normal 5 day – 40 hours calendar, while one resource may have a night shift / 24 hours calendar.)

More specific details about resource availability can also be entered in “resource information” dialog box. One way of getting this dialog box is by double clicking on a resource in the Resource Sheet view.

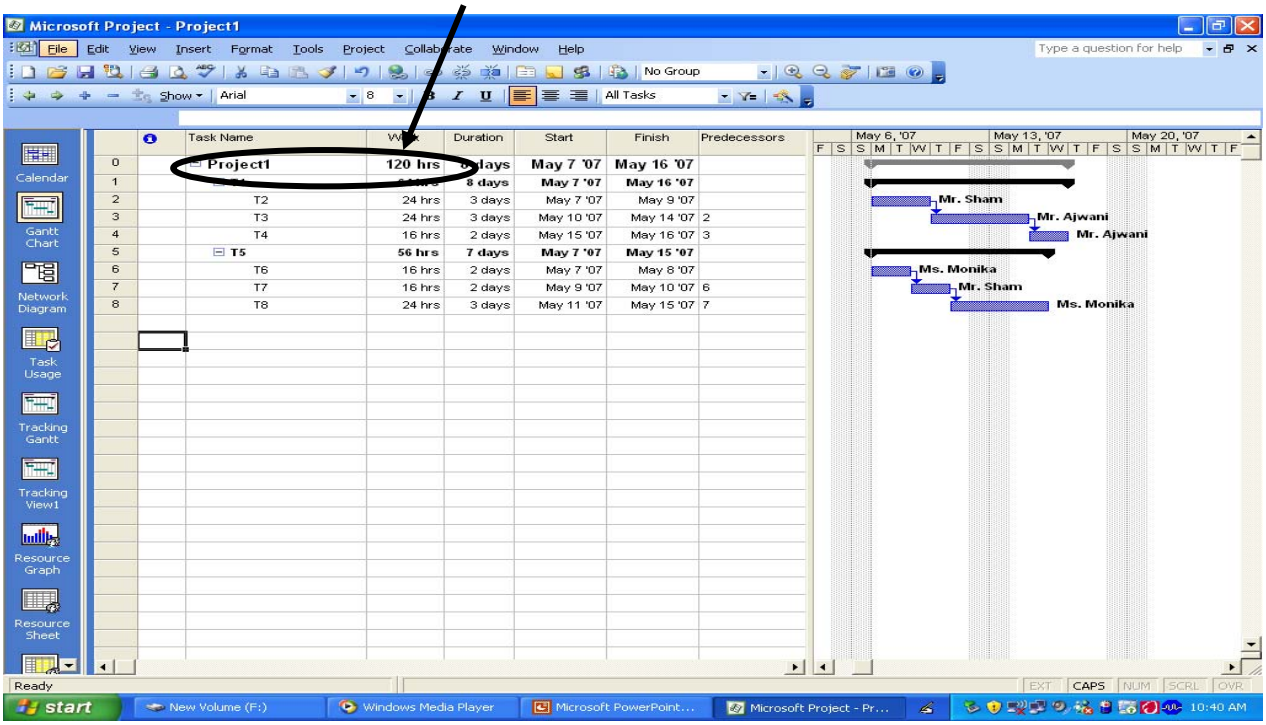
Resource Calendar



Total work (efforts) planned for the project

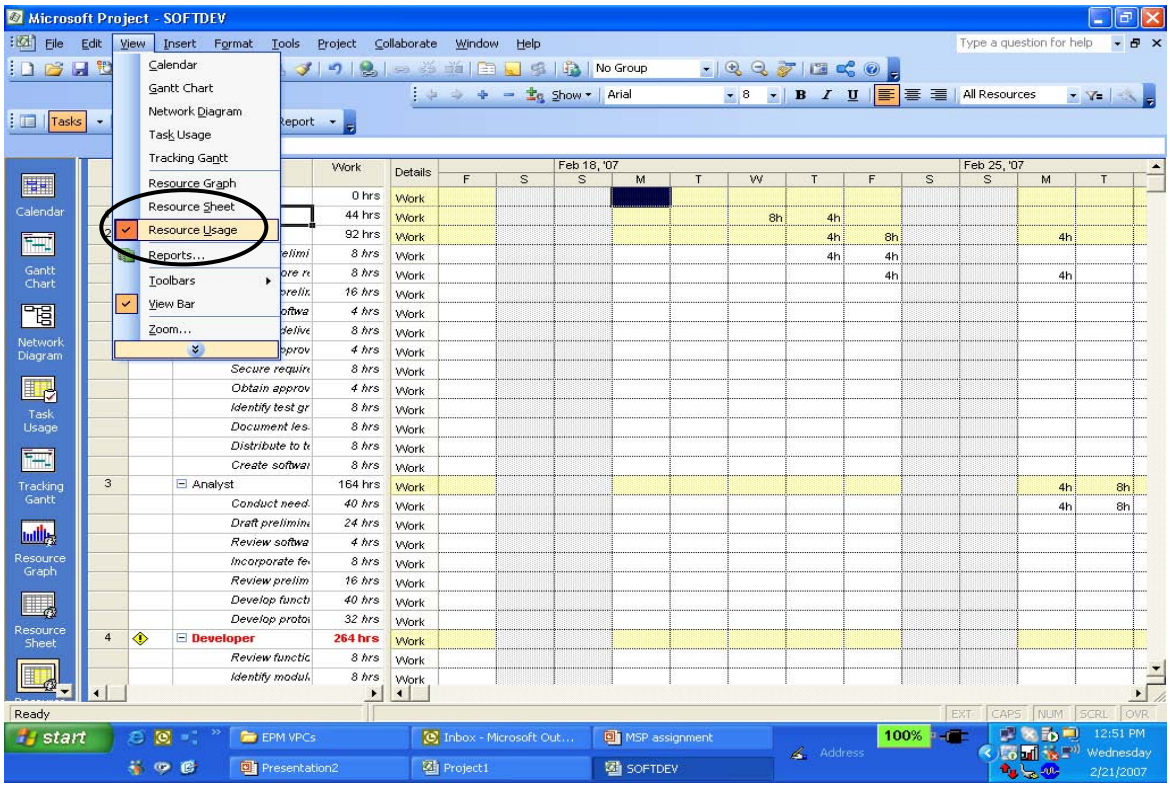
(you can see total work planned even without saving a baseline)To find this information there are various ways. One easy way to find the information from Project Information Statistics. (Refer point no. 1)

Work Column, Task id 0



Total work (efforts) planned for a resource for the complete project

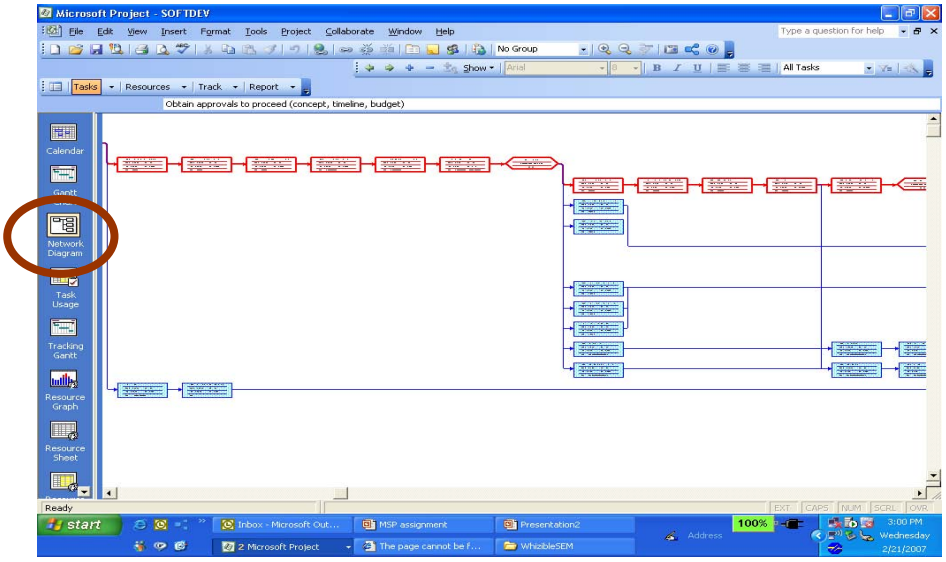
This is resource specific information one can get from Resource Usage view or any resource dominant view.. RU view shows details of this total too – how much work is involved in each task assigned to the resource.



Critical Path of the project

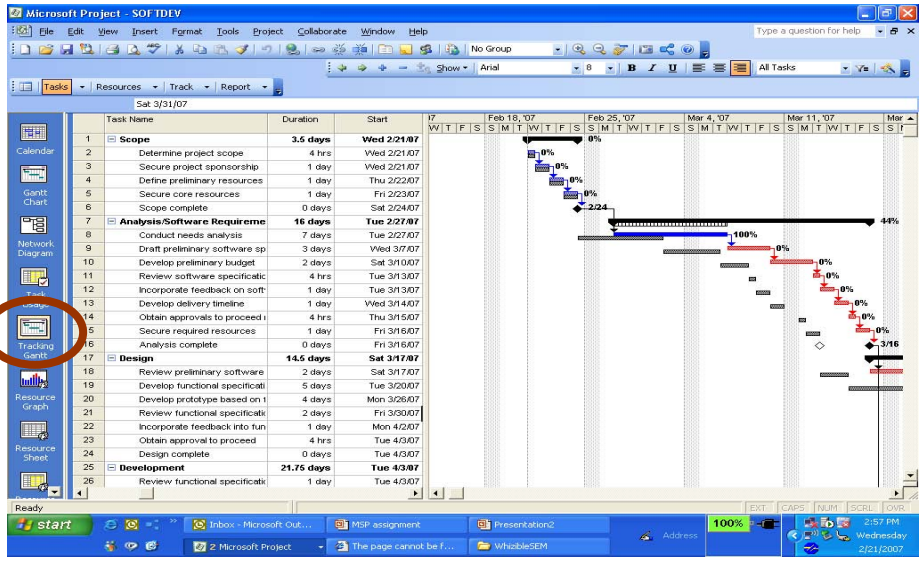
The critical path is very important because any delay in any of the critical tasks will delay the project; project duration can also be shortened by reducing the duration of critical tasks.

To find this information, one has to click “Network Diagram” icon from View Bar / View -> Menu.



Or

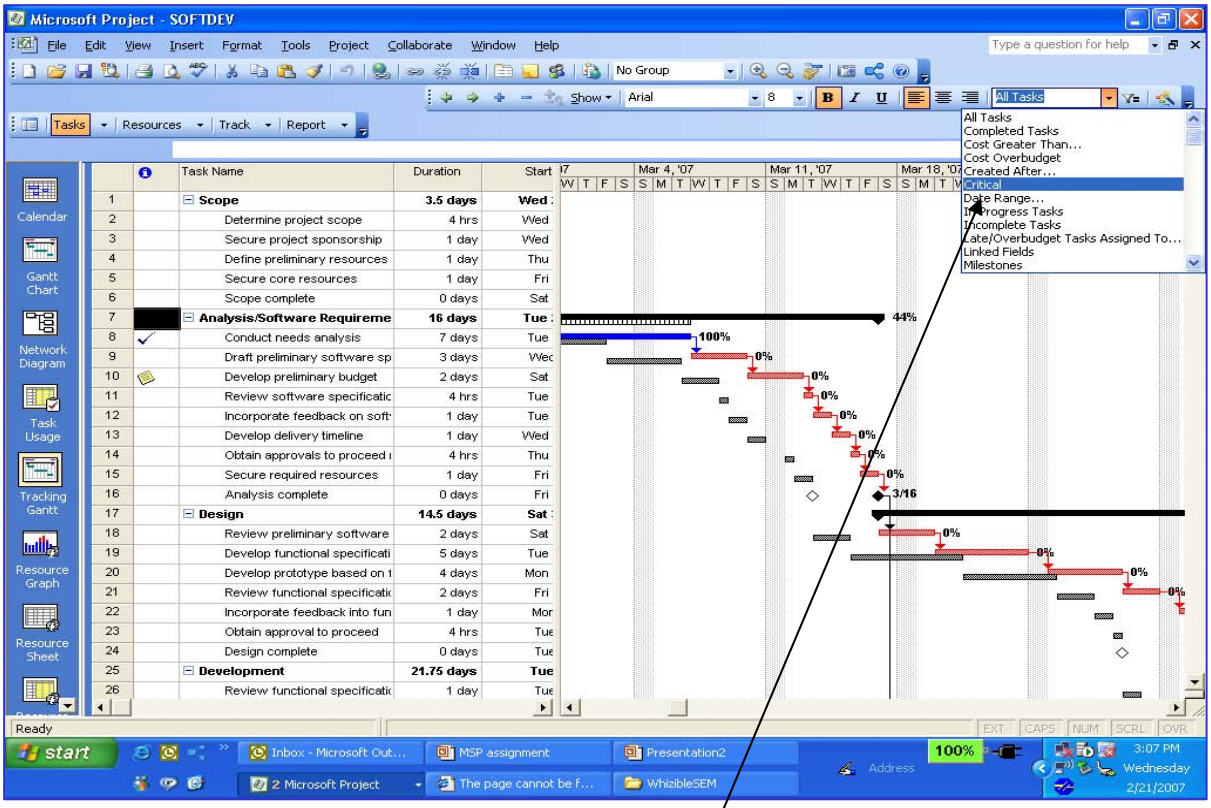
The second way to find this information, one has to click “Tracking Gantt” menu icon from View Bar / View -> Menu. (I would like this to be the first option)



Presence of an activity / a resource on the critical path

Critical activities are the activities, which appear on critical path. Critical path may change during the project when the actual duration of tasks is entered.((Refer point 12, image 1)

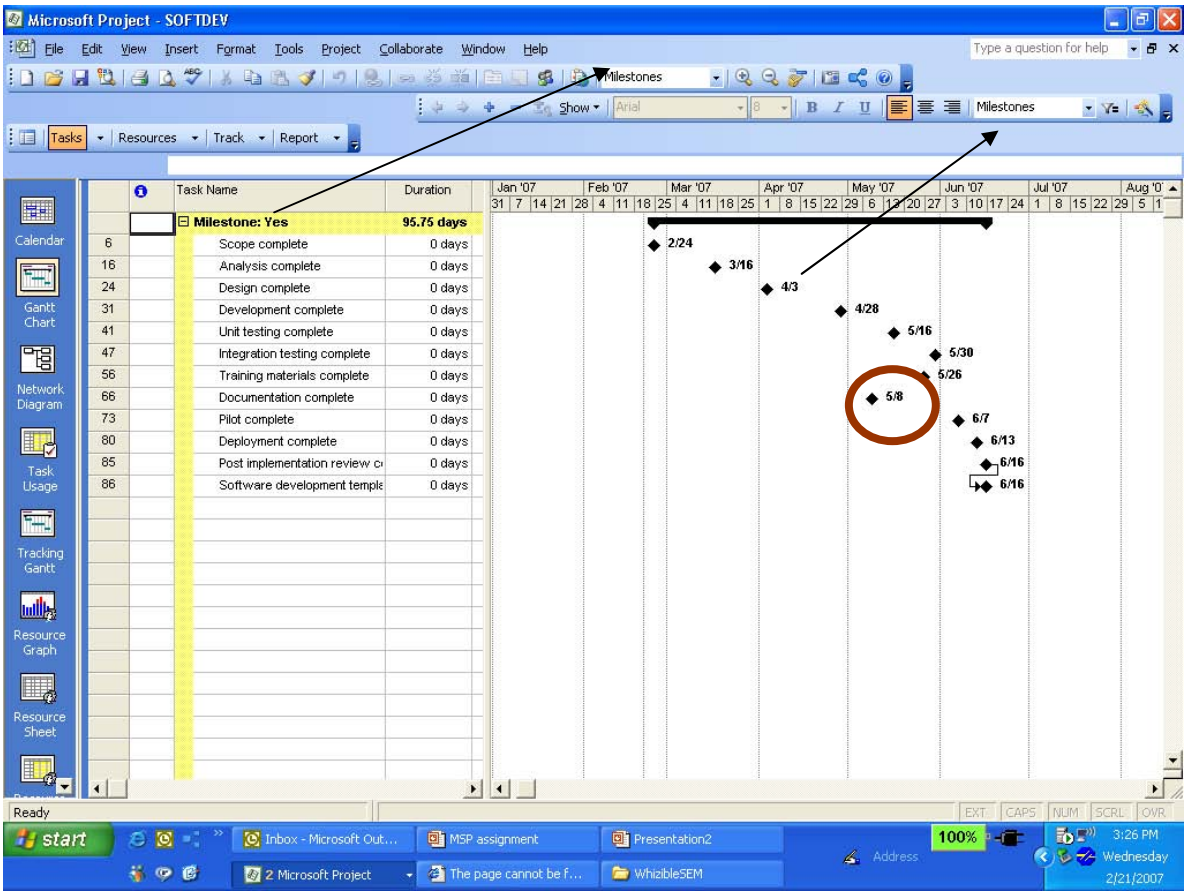
Additionally, one can insert “critical” column in Gantt chart or can apply critical group / critical filter to find this information



Gantt chart/Tracking Gantt and Use Filter

Milestones of the project

MSP treats tasks with duration = 0 as milestones (denoted by black diamond on the Gantt chart). Alternatively you can define any normal task or summary task as a milestone too. One easy way to view milestones defined in a MSP document is to use “Project->Filtered for->Milestones” option.



Use Filter and Group

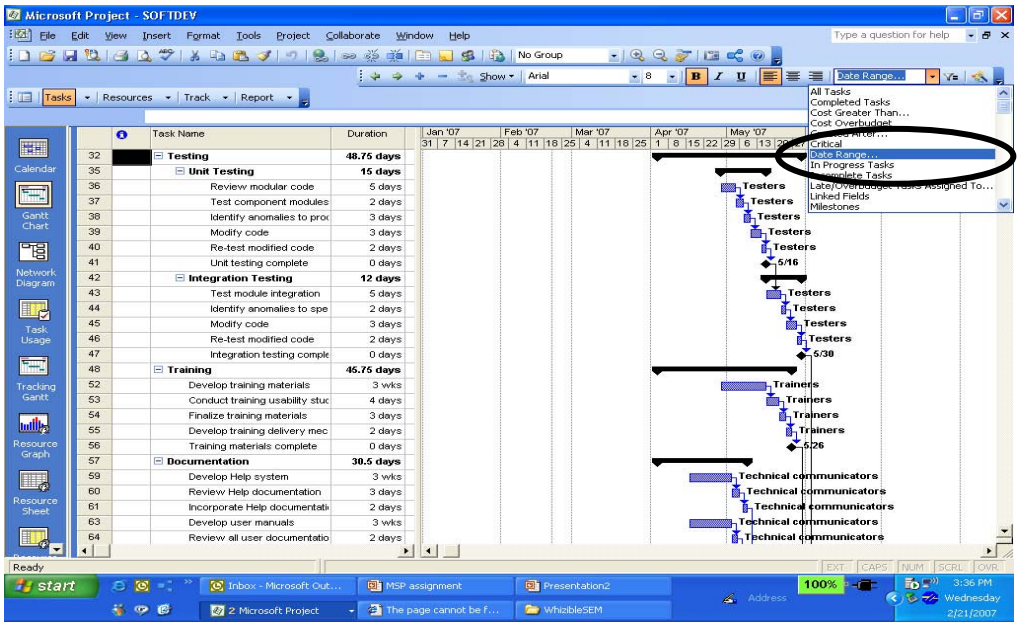
Tasks planned for a particular time frame – coming week, month, etc.

This information can be found out using “Project->Filtered for->Date Range” option and entering the desired “from-“and “to-“dates.

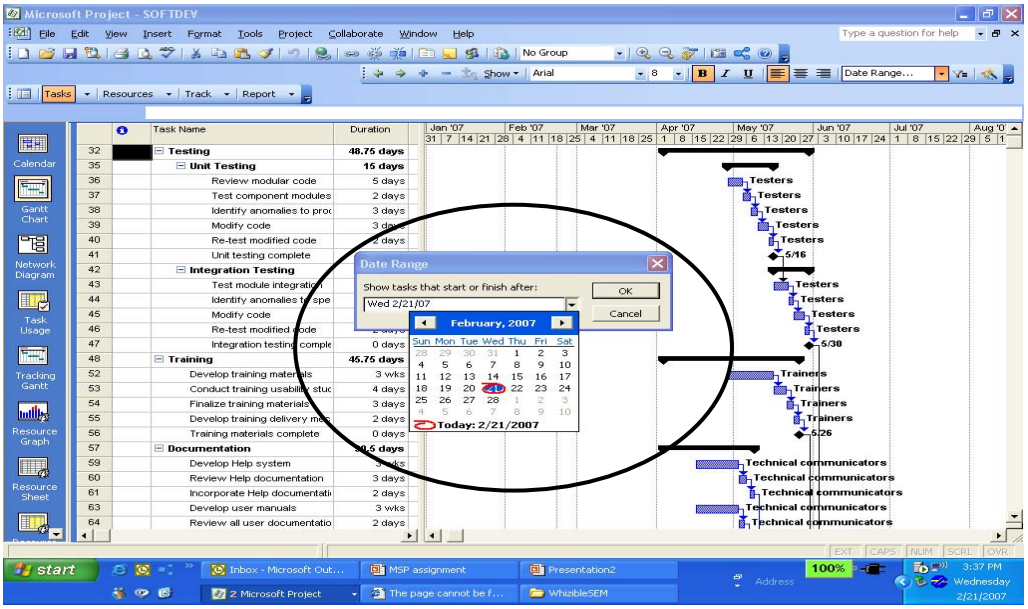
The steps to achieve this are

1. Select date range Filter.
2. Select from & to dates from the date picker

Step I



Step II



Best ways to view task and resource data

Microsoft Project offers many different ways to see task, resource, or combined task and resource data. Different views provide different angles on the data. You can also attain a greater level of detail using tables and filters. Click to see the most helpful way to track basic task data, work on tasks, cost of tasks, resources' work or resources cost.

Task Data	Use
To check the start and finish dates for the project	Choose Project Information from the Project menu, and then click Statistics.
To update all tasks to the current date or a status date	Choose Tracking from the Tools menu, and then click Update Project. To set a status date, pick a date in the Update work as complete through box.
To show Progress Lines for tasks	Gantt chart, and choose Tracking from the Tools menu, and then click Progress Lines.
To update task by task	Gantt Chart or Task Sheet, with Entry table applied (drag the dividing bar to the right to see all columns).
To update on a daily basis	Task Usage view, and format details to show Work, Actual Work, and Cumulative Work.

Work on Tasks	Use
To check the work on the entire project	Choose Project Information from the Project menu, and then click Statistics.
To update work on a task at a topmost level	Gantt Chart or Task Sheet, with Work table applied (drag the dividing bar to the right to see all columns).
To update work on a task by resource assigned	Task Usage view, and format details to show Work, Actual Work, and Cumulative work.

Cost of Tasks	Use
To check the cost on the entire project	Choose Project Information from the Project menu, and then click Statistics.
To see task costs at a topmost level	Gantt Chart or Task Sheet, with Cost table applied (drag the dividing bar to the right to see all columns).
To check Earned Value on the project	Gantt Chart with Earned Value table applied (choose Table from View menu, then click More Tables).
To check Earned Value per task	Gantt Chart or Task Sheet, with the Earned Value table applied (choose Table from the View menu, then click More Tables).
To check Earned Value on a daily basis	Choose the Task Usage view, then on the Format menu, click Detail Styles, and then click the Usage Details tab. In the Available fields list hold down CTRL, click the fields you want to display, and then click Show.

Resources' Work	Use
To check the work on the entire project	Resource Sheet with Work table applied.
To check for over allocations	Resource Graph (for a graphical view) or Resource Usage view (check for work formatted in red).
To update on a daily basis	Resource Usage view (details to show Work and Actual Work).

Resources' Cost	Use
To check a resource's productivity on the entire project	Resource Sheet with Work table applied.
To check for how much a resource is over budget and on which tasks	Resource Usage view, with the Cost table applied.
To update on a daily basis	Resource Usage view (format details to show Work and Actual Work).

Assignment 2: Development of training material for a training program

Activities

ID	Task Name	Duration	Predecessors
1	**Scope defn of the training material**		
2	Define the objective of the course	1.5 d	
3	Define the pre-requisite the training course	1 d	2
4	Define the general portfolio & number of the participants	0.5 d	3
5	Define the topics to be covered in the course	1 d	4
6	Training scope & objective defined	0 d	5
7	**Ground Work for the Training Material**		**1**
8	Select the reading material/ books	1.5 d	
9	Take the notes from the selected reading material	2.5 d	8
10	Formatting the notes (typing & related work)	1.5 d	9
11	Generate the drawings/ figures for the training material	1.5 d	
12	Prepare the assignments	1 d	
13	**Preparation of the master set**		
14	Compile the training material	1 d	12,11,10
15	Review the first draft	1 d	14
16	First draft ready	0 d	15
17	Changes if any	1 d	16
18	Prepare the final draft	1.5 d	17
19	Review the final draft	1 d	18
20	Final copy ready	0 d	19
21	Prepare the training ppt.	2 d	16
22	Review the ppt	1 d	21
23	Changes if any	1 d	22
24	Final ppt ready	0 d	23
25	Master set ready	0 d	20,24
26	**Reproduction of the training material**		**13**
27	Send for Xeroxing & binding	0.5 d	
28	Receive Xerox & bound copies	1 d	27FS+2 d
29	Co-ordinate for the assignment/ games material	1.5 d	
30	Games/ assignment material ready	0 d	29
31	**Training Material Ready**	**0 d**	**30,28**

1) Draw a network diagram showing all the activities and the links between them.
2) Identify the critical path.
3) Draw a bar chart of all the activities against an imaginary calendar, showing each activity.
4) Draw a top level bar chart from the detailed activities.
5) Generate a schedule in MSProject.

Writing/ Developing a Project Schedule in MSP

The objective of this exercise is to

1) Understand systematic approach of developing the Schedule.
2) Develop realistic and “easy to track” Schedule.

You may refer the following guidelines/ checklist while writing the plan.

(These guidelines are based on the observations made and practical difficulties encountered in writing & tracking. These are not hard & fast rules/procedure. There may be better way(s) of writing a project schedule in MSP.)

1) The first steps in creating a schedule are starting a new file, designating a project start or finish date, and entering general project information. This information can be entered in ‘File’ menu under ‘Properties’. This information is used in future while printing the reports/ forms, etc.

   Project Name **:** To enter in 'Title'

   Project Manager **:** To enter in 'Manager'

   Project Code **:** To enter in 'Subject'

   Client **:** To enter in 'Company'

   Description & key words if any :

2) Project Start / Finish Date : Project can be scheduled from the Start Date or Finish Date. MSP allows you to enter either the start date or the finish date of the project and not both. You can choose this option in ‘Project Information’. If the target date is known then you can select ‘Schedule the project from the finish date’ option. This will help work out the expected start date. Default option is scheduling from the start date.
3) Project Calendars : The project calendar is used by MSP to calculate the duration (finish date) of the project. There are 3 built-in calendars. 24 hrs calendar, Night Shift Calendar & a Standard calendar. The project calendar can be changed to reflect the actual working hrs for the project i.e. working timings & organizational holidays.

   Working Time: Enter the actual working time of our company. I.e. from 9:00 to 6:00 in 2 parts i.e. considering the lunch break.

   Non-working time: Enter the holidays i.e. by selecting the full respective day as 'Non-working time'.

   Note: If the project is running simultaneously on ‘offshore’ as well as ‘onsite’ then a copy of standard calendar can be made and marked as ‘Onsite Calendar’ with appropriate working time, working hrs & holidays.

   Once this preliminary work is done, you can actually start entering the task information.
4) Task Entry: A task represents an activity with a clear deliverable.

   Types of tasks

   There are 4 types of tasks that you can enter in MSP

   a) Summary Task-are tasks that contain subtasks
   b) Sub Task – are small tasks that roll up into a summary task
   c) Recurring Tasks – are tasks that occur at regular interval
   d) Milestones – are tasks that mark the completion of a phase of the project. These usually have duration of 0 days.

   List down all the tasks to be done and enter them in the order they occur with the respective duration.

Note: It is advisable to limit the duration of all subtasks (end level tasks) to 3 - 4 days.

Do not worry about the start/ finish dates, links & resource allocation. Try to develop the logical tasks with logical grouping. Indentation is also not the point of concern at this stage.

5) Task Grouping : You can group related tasks and indent them under a more general task, creating a hierarchy. The general tasks are called summary tasks and the indented tasks are the subtasks. You can have multiple levels of subtasks.

   Note: A summary task derives its values from its subtasks. It is advisable to carry out the high level grouping in line with SDLC phases – RA, Design, Coding, Testing, etc. It has the advantages in management reporting as the reporting is done accordingly.

6) Adding Milestones : You can enter the milestone at the end of each phase or at the end of each main 'Summary Task'. The milestone is the task having duration = 0. Generally there should not be any resource allocated to such task.

7) The links & dependencies : At this stage, predecessors and successors are keyed into the project plan. Entering the task id of the predeceasing task in the 'Predecessor' column enters such dependencies. Start and Finish dates change depending upon these dependencies. MSP creates a finish to start dependency by default.

   Note: Start or Finish dates should not be selected but it should be left to MSP to derive based on the links & dependencies. If the date is selected in the Start or Finish column, **MSP treats it as a constraint**. Such constraints prevent auto-adjustments of pre-poning *or postponing of the tasks based on linking.*

8) Lead and Lag in the task schedule : You can add flexibility to the project by entering overlap (called lead time) or delay (called lag time) in linked activities. This also helps in removing the otherwise unnecessary constraints. E.g. RA Approval is a milestone. It is dependent upon 'Final RA Report Submission'. If you think that client will take 5 working days from the date of submission for approval, then instead of calculating 5 working days and allocating a date, you can easily add a lag of 5 days. The Predecessor can be written as '15FS+5d'. (where, 15 is a task ID of 'Final RA Report Submission'.)

9) Resource Details: Once you know the resources on your project, these should be entered in the **Resource sheet** view, which is the primary means of entering both work and material resources. You can enter the details such as Standard rate, overtime rate, available from & to date, etc. for each of the resources. You can assign resource groups to similar resources to indicate the category of resources e.g. Prog etc

   Note: It is advisable to enter resources individually and not on group basis. Individual resource names of the resources working on the project should be mentioned in the project plan. This facilitates the realistic resource allocation and helps resolving over-allocation of resources. If the exact names are not known you can assign the functional names such as Prog 1,Prog 2 etc. You can replace these by actual names later.

   You can assign a group name to similar resources to indicate the category of resource. Eg: Millers, Turners, Programmers, Administrators etc.

   Resources should not be mentioned as XYZ LTD.-1200% & Client-500% indicating 12 people from XYZ LTD. and 5 people from client are working on the project.

10) Resources Calendars : Individual resource calendars become available once the resources are entered .By default such resource calendars are a copy of standard calendar. You can customize the working calendar for a specific resource depending upon the resource working time and/or leaves- if known in advance.

Note: If a group of resources has the same special working hours and days off, you can create a new base calendar for them.

11) Resource Allocation: You can assign one resource to one task, one resource to multiple tasks, multiple resources to one task and multiple resources to multiple tasks. It is advisable to make use of 'Gantt Chart' view, 'Resource Usage View' &/or 'Task Usage View' simultaneously while allocating resources to the task. By using these views you can keep an eye of the total daily work for the resources. If it is exceeding 8 hrs then you may go for other ways like allocating different resource, allocating part time resource, assigning the predecessor so that such task is carried out after the previous task is finished & when the required resource is free.

Note: Thus predecessors are task based as well as resource based. While planning a project, the availability of the resources is to be considered quite often by using Resource Usage view. Please do not assign resource to summary task and milestones.

12) Baselining the project plan: Once you complete the initial process of creating a schedule (entering tasks, establishing dependencies, assigning resources, and checking and adjusting your schedule) you're ready to set a baseline plan.

Note: It is advisable to review the entire project schedule once again before setting the baseline. Have a look at the task-list. Look for missed out tasks (if any), dependencies, links, duration, resource allocation to all tasks (except summary tasks), notes for tasks & resources, project & resource calendars, etc.

Concept of baseline: A baseline is a project plan that contains the original estimates of task, resource, assignment and cost. With this information you preserve the plan and use the variances to judge the progress. These variances are helpful for identifying potential problems in the project and in planning future projects. Baseline schedule means stakeholder (mainly client) accepted scenario

When you save a baseline, MSP saves the baseline data as part of the project file and not as a separate file. It saves the key project data into baseline fields within the existing project. Ideally, you create a baseline after you've completed and fine-tuned your project plan. You can modify baseline data to accommodate changes in the project such as combining, adding, and deleting tasks. You can also remove all the data from a baseline, by clearing the baseline, if, for instance, the project is over and you want to use the project plan as a template for a future project. Baseline plan includes information regarding the following:

Tasks (start and finish dates, duration, work, cost, splits, timephased work, and timephased cost)

Resources (work, cost, timephased work, and timephased cost)

Assignments (start and finish dates, work, cost, timephased work, and timephased cost)

13) Recurring Tasks: Tasks that repeat throughout the project at regular intervals are called recurring tasks. You can add such tasks by adding 'Recurring Task'. E.g. Team Meetings. You can plan for a team meeting once a week approx. of 2 hrs.

14) Ongoing Tasks: You will enter additional ongoing tasks as follows. This is mainly to account for the time spent in these activities.

    Project Monitoring/ Tracking. (Monthly with 13 to 15 % PM resource allocation)

    Management Reporting. (24 to 32 hrs per month – last Thu. Fri. – Project Manager)

    Team Meetings. (1 to 2 hrs per week – every Mon or Fri – all the resources)

    All these tasks can be entered as 'Recurring Tasks'. You can assume the duration mentioned in the adjacent bracket. The resources are also mentioned. These tasks are added as a guideline or as a base to account for the actual time spent in these activities. It may happen that these tasks may not be carried out on the day specified, however it will appear in the timesheet as planned tasks.

15) Additional Tasks: If you are required to add new tasks, then please determine and mention the predecessor(s) & successor(s) of such tasks. Such situation may arise at any point of time during the project. Insert such tasks at proper outline level.

    Note: These tasks should be baselined once they are added into the project plan. MSP facilitates baselining for selected tasks.

16) Additional Tasks at actual: Any additional task(s) can be added as and when takes place. E.g. Client Interaction. Time Spent in discussions, etc. These tasks can be listed under anticipation however; neither resources nor the duration should be specified for them.

    Note: It is advisable to keep some free ends/ buffers while planning the project to account for such unplanned/contingency tasks. This is especially applicable during the period of critical tasks. Such buffers can be inserted by adding lags in certain tasks.

Don't worry even if you ~~spend~~ invest (✓) more time in planning & writing a project plan in MSP. For it is quite useful in later stages of tracking and updating.

Developing a Project Schedule

Please check the following points while & after developing a project schedule.

Sr.	Checkpoint	Y / N#
1.	Is the basic information such as Project Title, Project Manager's Name, Project Code and Client Name entered?	
2.	Is the project start date OR finish date (as the case may be) entered?	
3.	Are organizational holidays incorporated in the project standard calendar?	
4.	Is the working time specified in the calendar?	
5.	Are the resource details such as Name, Group, Standard Rate, Overtime Rate, Availability entered in resource sheet?	
6.	Are the leaves of the resources marked in individual calendars?	
7.	Are the tasks broken up so that the duration of each end level sub-task is not more than 4 days?	
8.	Are all the tasks entered?	
9.	Are the tasks such as Project Management/Monitoring, Project Schedule Tracking, Management Reporting, Project Review Meeting, Quality Activities are specified in the schedule?	
10.	Are all the tasks allocated to resources?	
11.	Are the milestones specified in the schedule?	
12.	Do the milestones specified in the schedule go as per the billing schedule? (if the billing schedule is milestone based)	
13.	Are all the intra-group and inter-group dependencies clearly specified in the schedule?	
14.	Are buffer tasks / contingency tasks incorporated in the schedule?	
15.	Is the schedule reviewed for more than twice for modification of information?	
16.	Is the critical path(s) in the schedule reviewed?	
17.	Are all the assumptions/ predictions for the tasks/ resources/ assignments incorporated in the form of notes?	
18.	Is the schedule baselined?	

Don't worry even if you ~~spend~~ invest (✓) more time in planning & writing a project plan in MSP. For it is quite useful in later stages of tracking and updating.

Note: #: If any of the above-mentioned checkpoint shows status 'N', then the project plan should be reviewed once again as against the checkpoint.

Tracking of a project plan

Effective monitoring on any project demands regular & accurate tracking of the project plan.

The objective of this exercise is:

1) Understand systematic approach of tracking the Schedule.
2) Understand how to identify risks.

After you've saved a baseline plan, you can update the schedule with real data anytime you want. You can do it day-by-day (timescaled resource and task data), task-per-task as each task is finished, or at selected intervals, depending on the information you receive and how often you need to measure the progress of your schedule. You just need to decide which level of granularity fits your project best.

Ensure that you are in the Tracking Gantt View before you start tracking the project. The Tracking Gantt view pairs the current schedule with the original schedule for each task.

As you enter actual information while you track, the variance from the original plan is reflected in the corresponding Tracking Gantt Chart.

You may refer the following guidelines/ checklist while tracking the plan.

(These guidelines are based on the observations made and practical difficulties encountered in tracking. These are not hard & fast rules/procedure. There may be better way(s) of tracking a project plan in MSP.)

1) Ensure that all the team members have submitted the **duly filled in TimeSheets**.

2) It is better to **track the activities in a combination view** comprising Resource Usage View (Top Pane) & Task Usage View (Bottom Pane).

   'Date Range…' filter can be applied for the Resource Usage view so as to list the tasks in the required time frame.

3) It is advisable to update the plan by **updating the resource actual work information** for the listed tasks.

   You may update the information for a particular task by updating the actual work information for all the resources assigned to it. This can be executed in the Task Usage view in the bottom pane.

   You may also update the information for a particular resource by updating the actual work information for all the tasks allocated to that particular resource. This can be executed in the Resource Usage view in the top pane.

   A suitable combination of the above two methods should be selected.

4) To start with an actual tracking, check for **the leaves / unavailability of the resources**. If the resource is on unplanned leave or was not available on work, then modify the resource calendar appropriately. (i.e. mark for non-working time). Marking half-day timings as non-working time can mark half-day leave.

   (Planned leaves have already been entered in the plan in resource calendar while preparing the plan).

5) Next, check the status of the task – whether it is completed.

   If the task is completed, mark % work complete as 100%, remaining work/ remaining duration as 0.

   Now, There are following possibilities -

   The task is completed as scheduled. – In this case there is no need of entering the actual start & finish dates. MSP automatically updates the scheduled dates as actual dates.

   The task is completed before schedule.

   The task is delayed / completed after the scheduled date.

   For the above 2 cases, it is necessary to mark the actual start & finish dates. Once this is done, you may enter the actual work information for the task for each of assigned resources.

6) **If the task is not completed** then enter the actual work information for task and the remaining duration for that task. In this case you might observe that the remaining assignment work is getting transferred to the next available day.

   In case there is no actual work done on the task by the resource, then merely enter the actual work information for resource(s). In this case you do the remaining assignment work is getting transferred to the next available day. This happens when the actual work done is nil or less than that planned for that day.

   At this point, scheduling/rescheduling comes in the game. If you see that work of the other resources are also being transferred to next day due to dependency and the resources are allocated to much less work (or no work) on that particular day, then you might have to pull such work backward by actually filling in the 'Work' field in 'TimePhased' area.

7) Check for work done by the resource on a **task(s) not falling in the prescribed timeframe**. This implicates that such task(s) has been worked out in advance and has to be treated like tasks completed ahead of schedule.

8) Check for the **task(s) not listed in the project plan**. This implicates that such task(s) has to be added in the project plan. You may enter the task at appropriate location under proper summary task. Assign the proper resource(s) and mention the dependencies (predecessors/ successors). The most important thing is to baseline this newly created task. Track such task only after baselining.

9) Check for the **tasks that are not thoroughly planned in the project plan**. These are the tasks that are supposed to be updated as and when occurs. E.g. 'Client Interaction' is a task that can not be planned. It has to be updated as and when occurs. Track such task by updating the resource/task information in terms of Actual Work.

10) Some tasks, especially **the tasks that are allocated to all of the resources** (most of the resources) simultaneously; are easy to update from the task usage view – Task Information dialog box. e.g. For a task like 'Team Meeting' for which almost all or most of the resources are assigned.

    If some of **the tasks are keeping pace with the schedule** such tasks can be assigned by clicking 'Update as scheduled' button on Tracking tool bar.

11) Over and above these guidelines, always **keep an eye on the baselined information**, such as Baseline Start, Baseline Finish, Baseline Duration, Baseline Work, before & during tracking the plan. MSP provides with the facility of storing 10 start & finish dates. You may save the current dates and/or baselined dates in to these 10 versions.

12) Make it a **mandatory activity to make a note** of any changes, assumptions, comment on feedback, etc. A note; describing the pin point matter for any task/information facilitates record keeping of the tasks. E.g. if a task is completed by a resource other than a planned one (due to emergency) you may go and change the resource allocation and track accordingly. However, a note simply stating 'Earlier the task was assigned to resource X' helps to great extent in future.

13) A **Progress Line** is the pictorial representation of the project-update status, it has nothing to do with the progress of the project.

    When we add a progress line MSP draws a line that connects in progress tasks and tasks that should have started on a particular date. A straight progress line indicates that the project status as on that date is known and updated in schedule. Backward peaks(peaks pointing to the left) do not mean that the project is lagging ,it indicates that the status of those tasks is not known or known and not updated. You can specify a status date or use the current date, or you can specify daily, weekly, or monthly intervals to show progress lines.

To define progress line

- On the View Bar, click Tracking Gantt Chart
- On the **Tools** menu, point to **Tracking**, and then click **Progress Lines**.
- Click the Dates and Intervals tab.
- Select the Always display current progress line check box.
- To show progress for the project status date, click **At project status date**.
- To show progress for the current date, click **At current date**.

Tracking signifies entering the actual information as against the planned information about the tasks, resources & assignments. If the project progress is not as scheduled, the succeeding tasks in the plan are bound to change. **Entering the complete tracking information facilitates realistic tracking. Regular & thorough tracking ensures effective project monitoring.**

After you have analyzed the source of problems with your projects, you can make necessary adjustments to correct/reduce the variances and get the project back on track.

Tracking of a project plan

Please check the following points while & after tracking the project plan.

Sr.	Checkpoint	Y/N#
1.	Have all the resources submitted the timesheets?	
2.	Are the timesheets duly completed – (has each day & each activity been accounted for)?	
3.	Are the leaves* and /or unavailability* of resources entered as non-working time in the schedule?	
4.	Are all the tasks checked for completion status?	
5.	Is the remaining work for the tasks checked?	
6.	Are the additional project tasks entered?	
7.	Are the newly entered tasks baselined?	
8.	Are the additional one-time task (actually completed) entered?	
9.	Are the notes written for update/ changes/ resources shuffling, etc?	
10.	Are the successors & predecessors of tasks under tracking reviewed?	
11.	Is the Idle time entered for all the resources	
12	Are the ongoing tasks (e.g. Project Management, SCM, etc.) tracked?	
13.	Is the baselined information checked?	
14.	Is the complete information regarding tracking fed to the Project Schedule?	
15.	Is the Progress Line straight?	
16.	Are the individual timesheets checked for overallocation?	
17.	Is the overallocation resolved?	

Entering the complete tracking information facilitates realistic tracking. Regular & thorough tracking ensures effective project monitoring.

Note:

***:** Leaves and/or unavailability of resources are ideally to be entered while developing the project plan. However, if a resource takes an unplanned leave or he becomes unavailable for the project unexpectedly, then such leaves should be entered while tracking the plan. These leaves should be mentioned in the timesheet by the resources

#: If any of the above-mentioned checkpoint shows status 'N', then the project plan should be reviewed once again as against the checkpoint.