

Managing Projects Using MS Project 2013



Learning Objectives

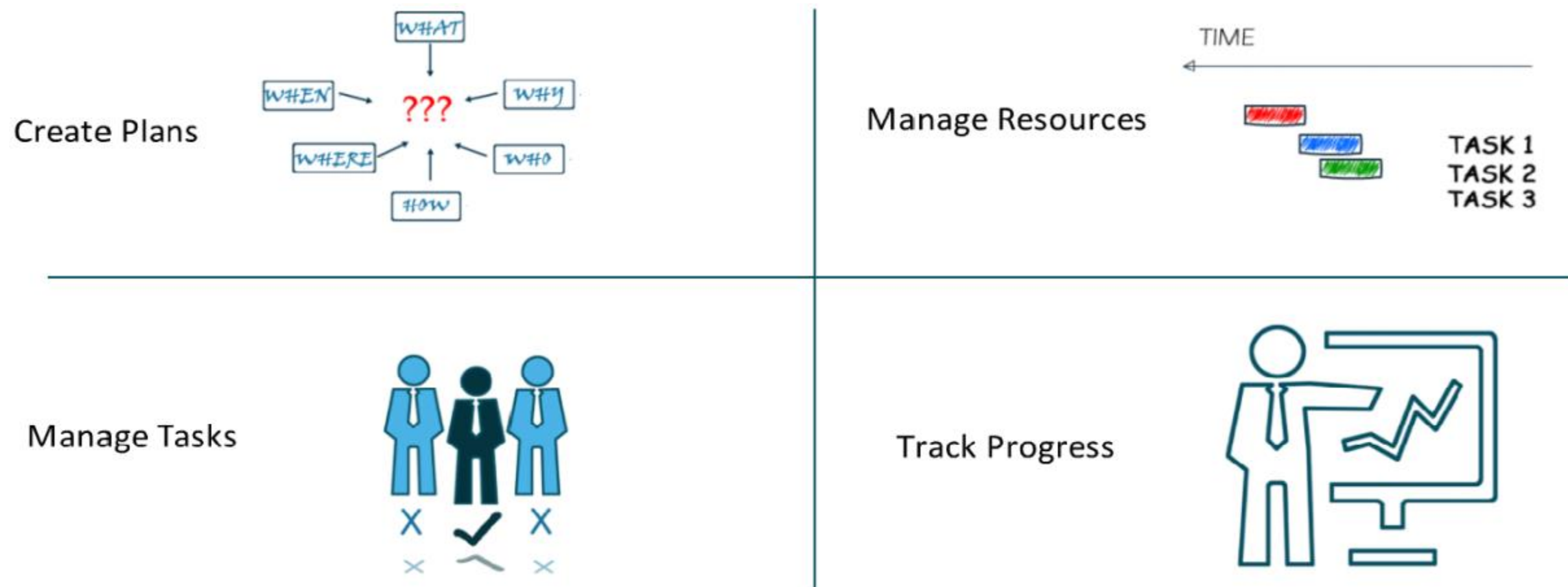
By the end of this lesson, you will be able to:

- 👁 Create a project using Microsoft Project 2013
- 👁 Navigate through the different features of Microsoft Project 2013
- 👁 Identify Critical Path using Microsoft Project



Microsoft Project 2013

Microsoft® Project 2013 is an application that enables you to plan and manage projects effectively.



Basic Information for a New Project

The Project Manager needs to define basic project details at the commencement of a new project.

Start date of a project

Finish date of a project

Project Schedule

Project Calendar

Project Information for 'Software Development'

Start date: Wed 2/19/14

Current date: Fri 3/21/14

Finish date: Tue 3/11/14

Status date: NA

Schedule from: Project Start Date

Calendar: Standard

Enterprise Custom Fields

Department:

Custom Field Name	Value
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Help

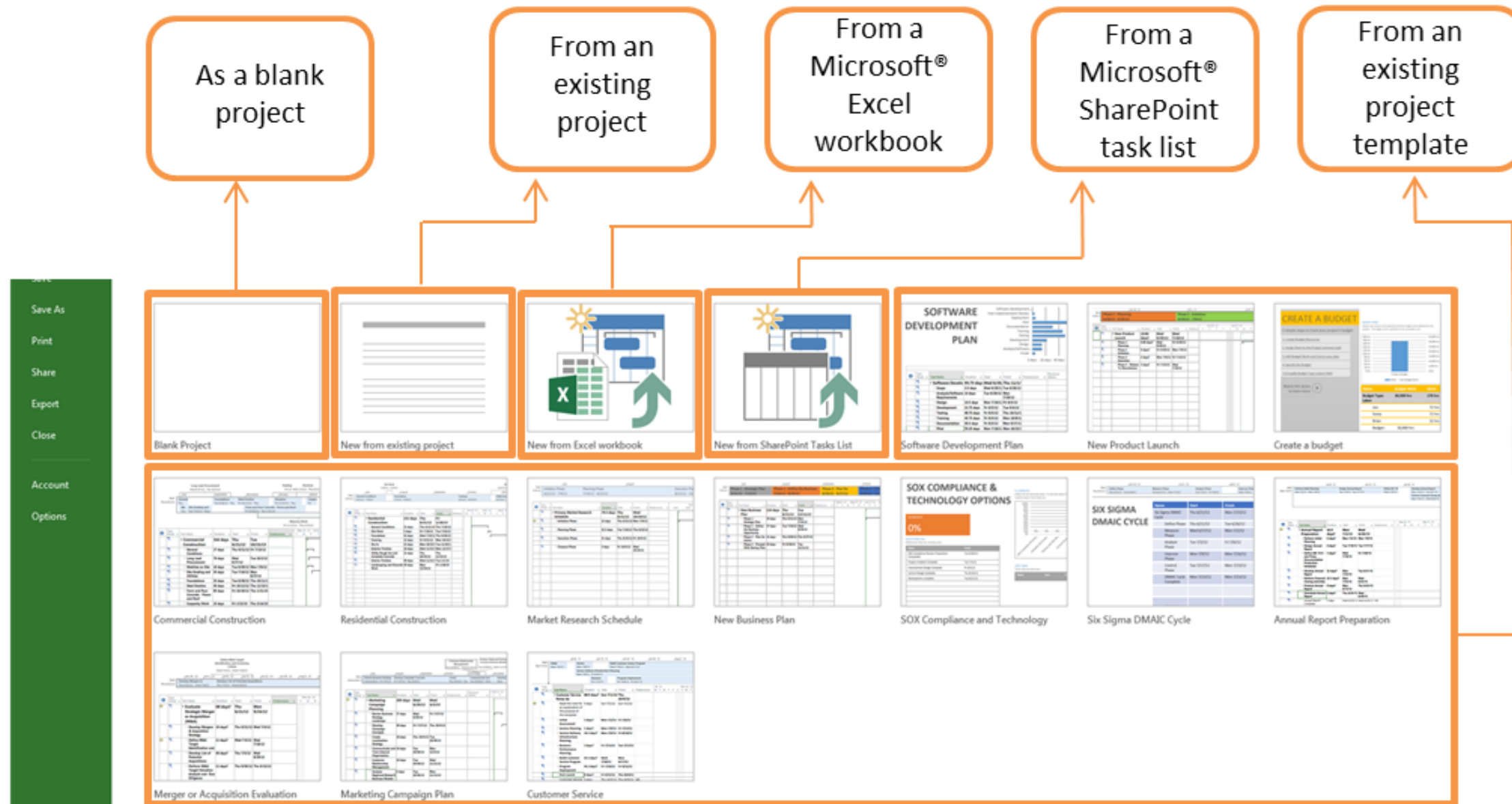
Statistics...

OK

Cancel

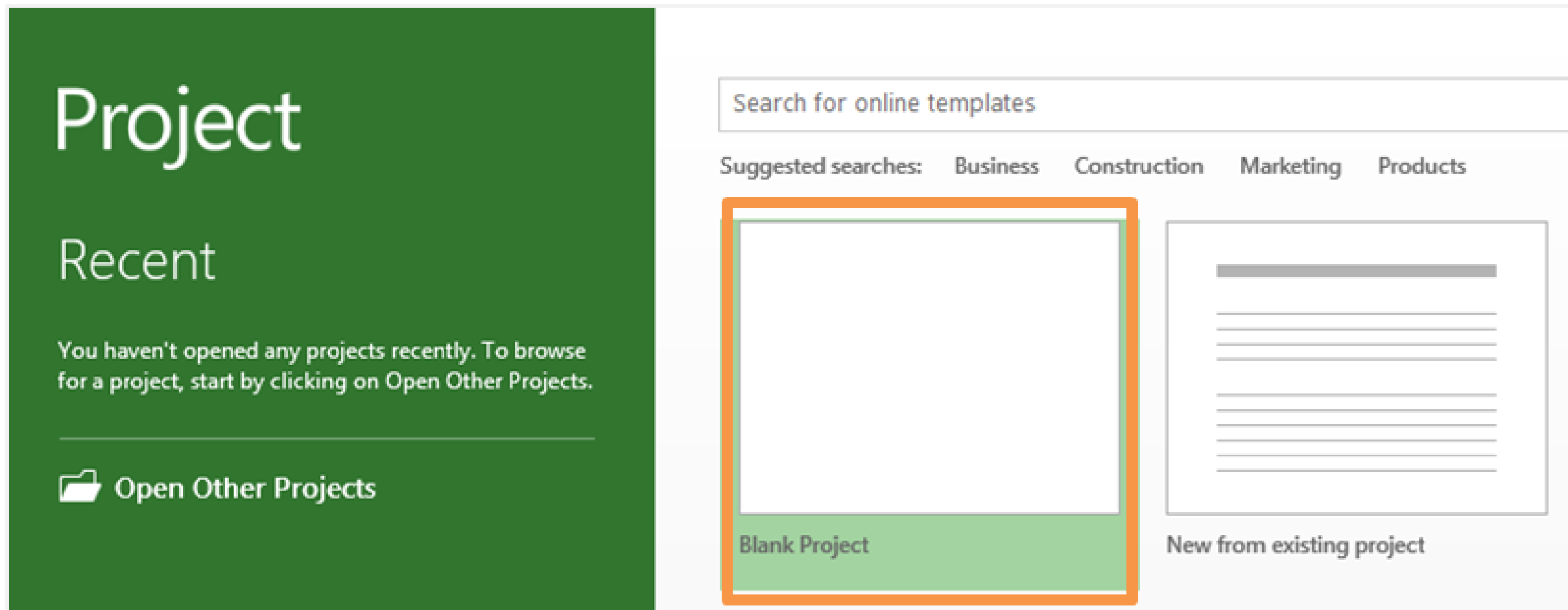
Microsoft 2013 Interface

There are different methods to create a project in Microsoft® Project 2013.



Create Project from a Blank Project Template

A new project can be initiated in Microsoft® Project 2013 by creating a blank project and then adding project details into it.



Components of a Blank Project Template

The important components of a Blank Project template are shown here.

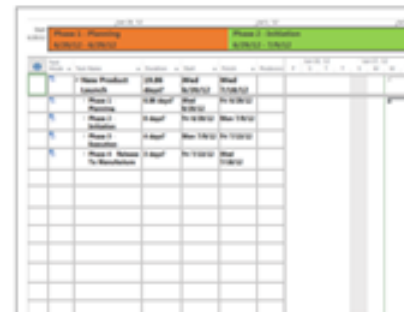
The screenshot displays the Microsoft Project application window titled 'Project1 - Project Standard'. The interface is divided into several key areas, each highlighted with an orange box and labeled on the left:

- Quick Access Toolbar:** Located at the top left, containing icons for Save, Undo, and Redo.
- Ribbon:** The main menu area at the top, showing tabs like FILE, TASK, RESOURCE, REPORT, PROJECT, VIEW, and FORMAT. The 'FORMAT' tab is currently active, displaying sub-tabs for Gantt Chart, View, Clipboard, Font, Schedule, Tasks, Insert, Properties, and Editing.
- View:** A vertical sidebar on the left side of the main workspace, showing options like Gantt Chart, Task Sheet, and Resource Sheet.
- Task Name and Description:** The central area containing a table with columns for Task Name, Duration, Start, Finish, and Predecessors.
- Gantt Chart:** The main workspace area on the right, displaying a Gantt chart with task bars and a timeline.
- Zoom:** A vertical slider on the right side of the Gantt chart area, used to adjust the zoom level.
- Status Bar:** The bottom-most area, showing the current status (READY) and task type (NEW TASKS : MANUALLY SCHEDULED).

The Gantt chart area shows a timeline from Friday, 1/31/14 to Friday, 1/31/14, with task bars and a zoom slider.

Create a Project from an Existing Template

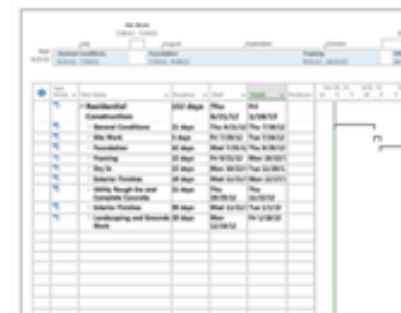
Microsoft® Project 2013 has many pre-installed templates that can be used to create a new project.



Task	Start	Finish	Duration
Phase 1: Planning	1/1/2013	3/1/2013	61 days
Phase 2: Development	3/1/2013	6/1/2013	92 days
Phase 3: Testing	6/1/2013	7/1/2013	31 days
Phase 4: Release	7/1/2013	7/1/2013	1 day

New Product Launch

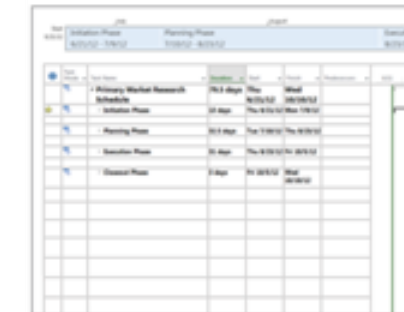
New Product launch



Task	Start	Finish	Duration
Foundation	1/1/2013	1/1/2013	1 day
Framing	1/1/2013	1/1/2013	1 day
Roofing	1/1/2013	1/1/2013	1 day
Interior Finishes	1/1/2013	1/1/2013	1 day
Exterior Finishes	1/1/2013	1/1/2013	1 day

Residential Construction

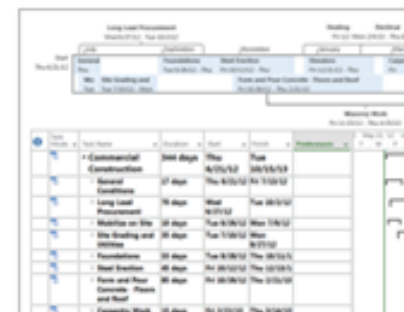
Residential Construction



Task	Start	Finish	Duration
Planning Phase	1/1/2013	1/1/2013	1 day
Execution Phase	1/1/2013	1/1/2013	1 day
Reporting Phase	1/1/2013	1/1/2013	1 day

Market Research Schedule

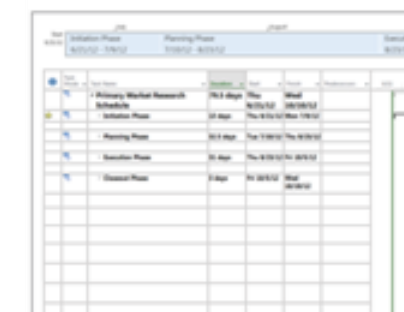
Market Research Schedule



Task	Start	Finish	Duration
Foundation	1/1/2013	1/1/2013	1 day
Framing	1/1/2013	1/1/2013	1 day
Roofing	1/1/2013	1/1/2013	1 day
Interior Finishes	1/1/2013	1/1/2013	1 day
Exterior Finishes	1/1/2013	1/1/2013	1 day

Commercial Construction

Commercial Construction



Task	Start	Finish	Duration
Planning Phase	1/1/2013	1/1/2013	1 day
Execution Phase	1/1/2013	1/1/2013	1 day
Reporting Phase	1/1/2013	1/1/2013	1 day

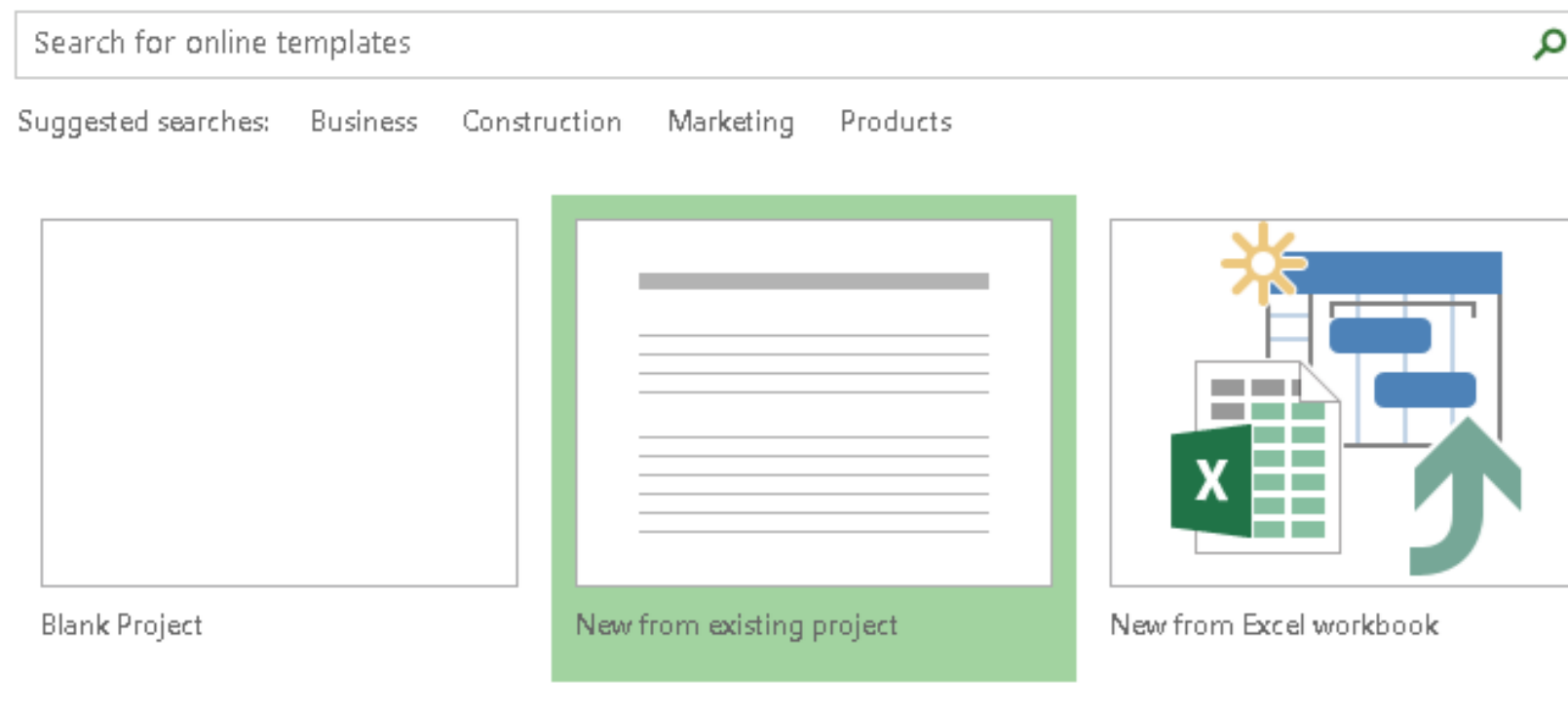
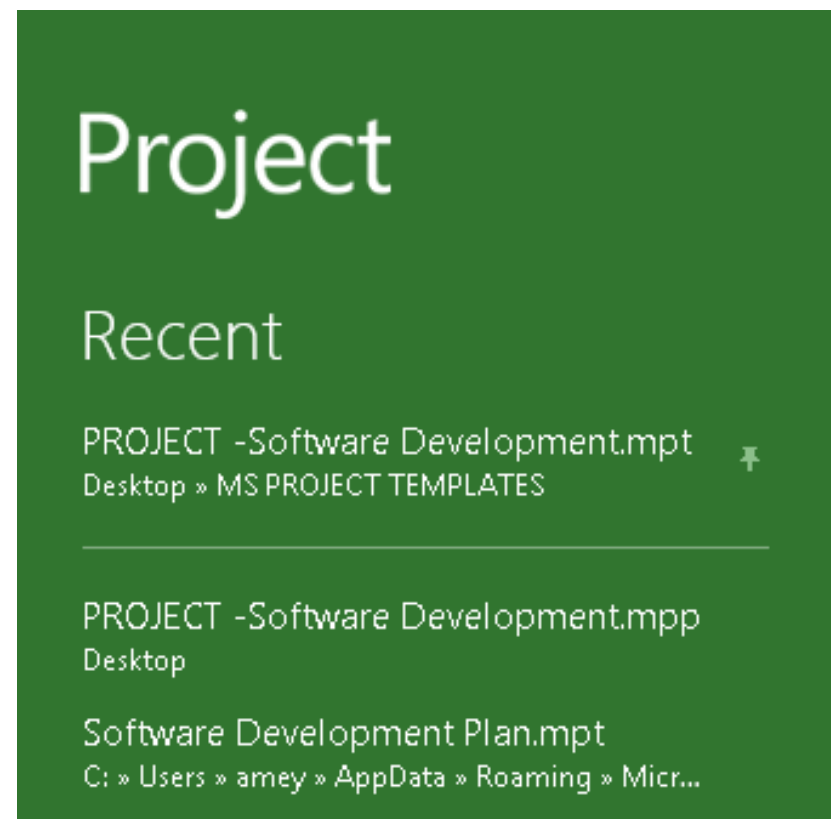
Market Research Schedule

Merger or Acquisition Evaluation

Create a Project from an Existing Project

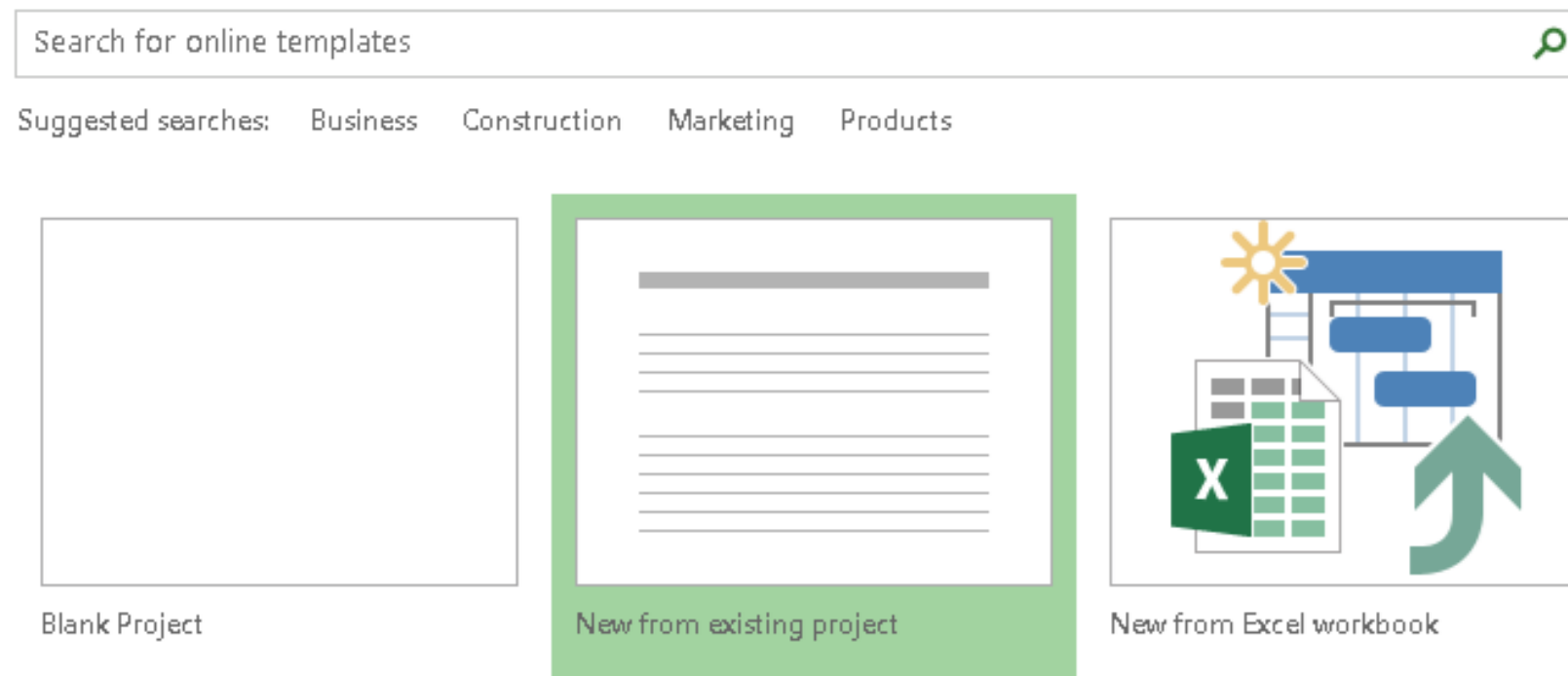
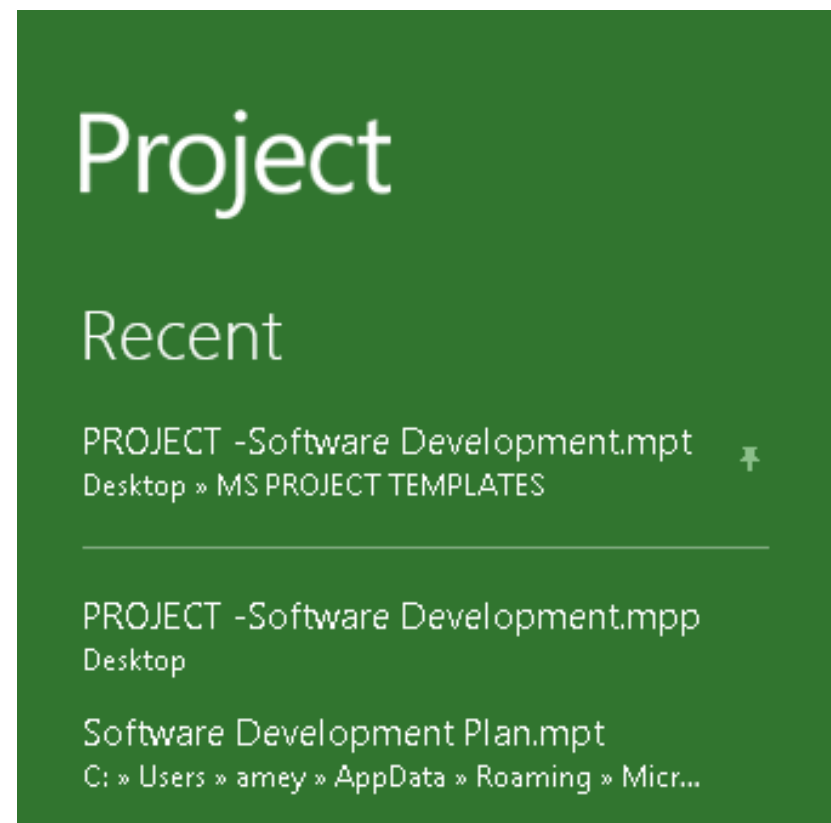
A new project can be created from an existing project.

- A similar project can be used from the previous history to enter the new project details to it.
- When a project is created this way, the existing project acts as the foundation for the new project.



Create Project from Microsoft® Excel Workbook

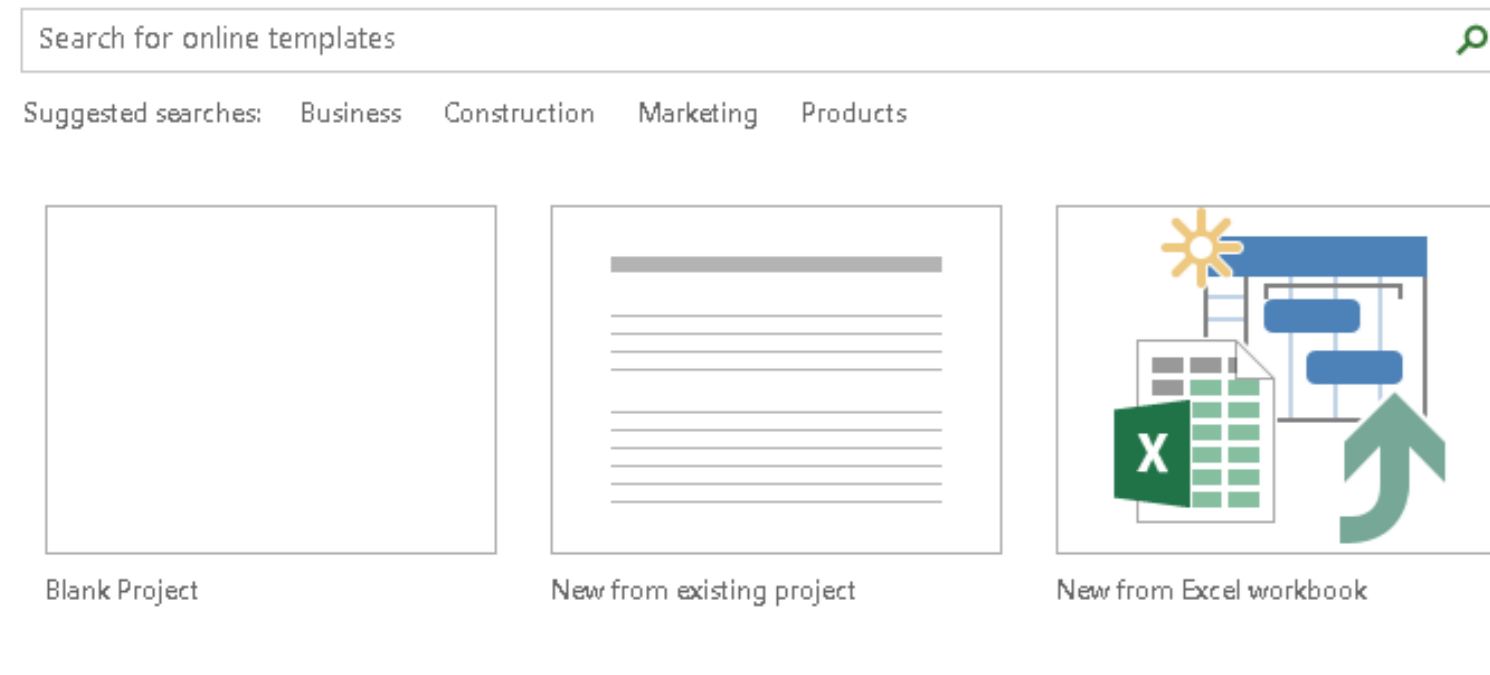
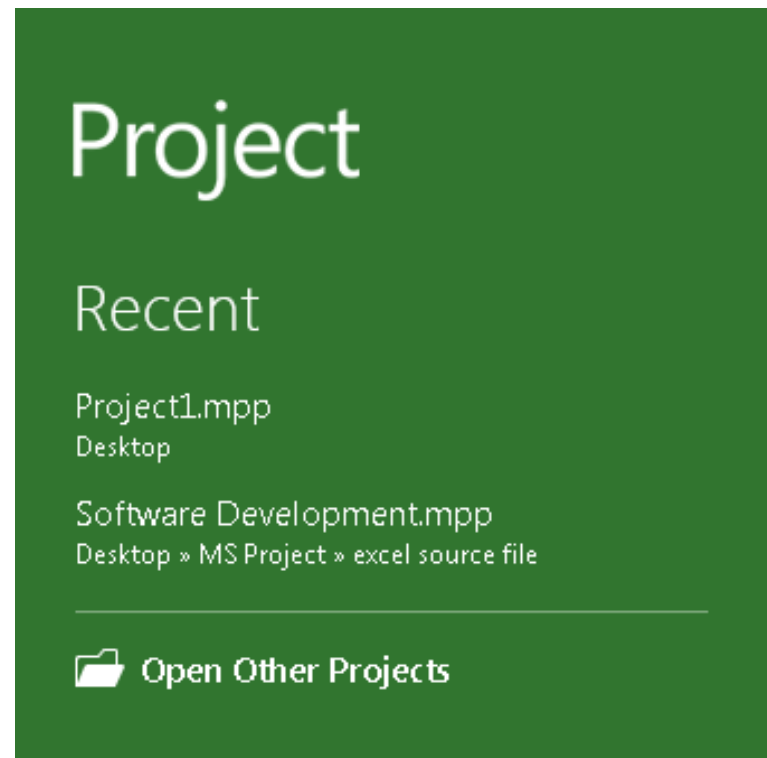
New project can be created from an Excel workbook.



Create Project from Microsoft® SharePoint Task List

If the development team is using SharePoint for a project, the Project Manager can synchronize the task list from SharePoint without using the Project Web App.

- This will allow the team members to view the project schedule on SharePoint.
- Any updates on SharePoint will be reflected in the Microsoft® Project plan.



Three Types of Base Calendar

Standard Calendar

- This calendar is from Monday to Friday.
- This calendar is based on the standard work timings, between 8.00 a.m. to 5.00 p.m.

Night Shift Calendar

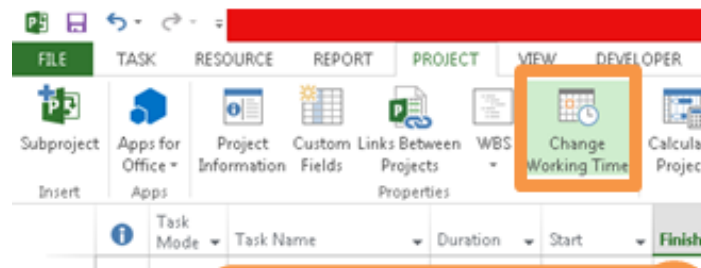
- This calendar is from Monday to Friday.
- This calendar is based on the general night shift work timings, between 11.00 p.m. to 8.00 a.m.

24-Hour Calendar

- This calendar is used throughout the week.
- This calendar is based on round-the-clock-work concept.

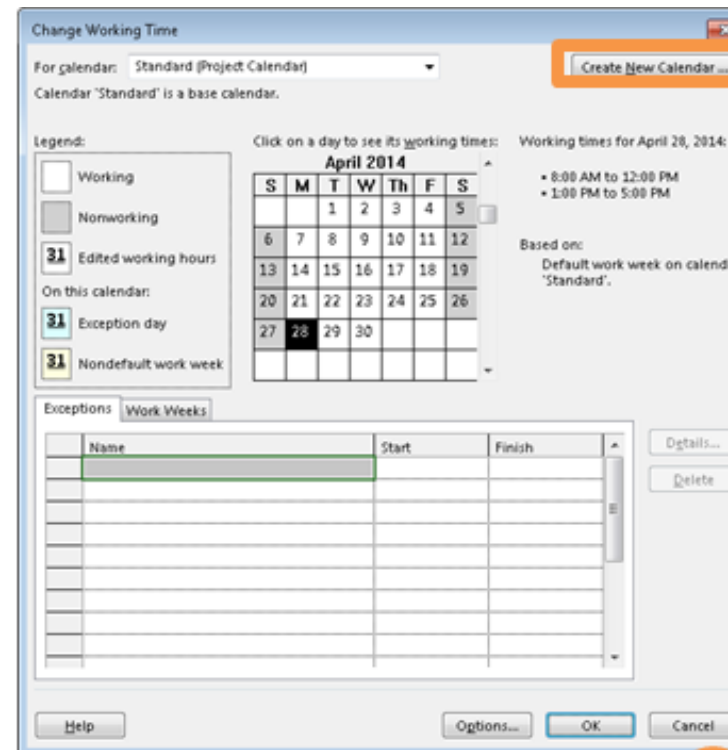
Create New Base Calendar

When the project team is spread across geographies, with each region having its own set of working and non-working days, the Project Manager can create a new calendar for each geographical region and apply these calendars to the resources and tasks.



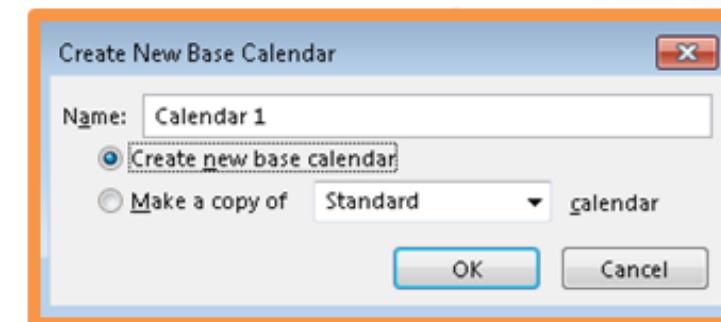
Click **Change Working Time**.

1



Click **Create New Calendar...**

2



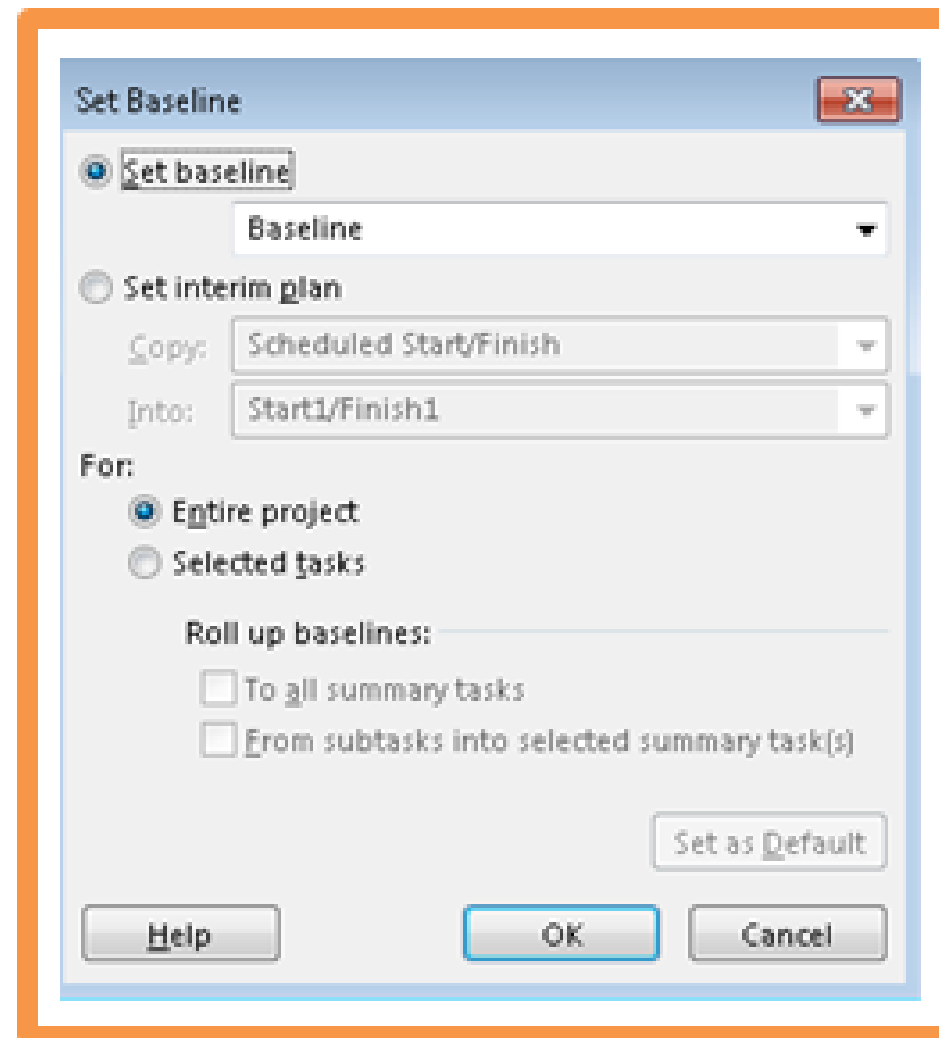
Create New Base Calendar window is displayed.

3

Set Baseline

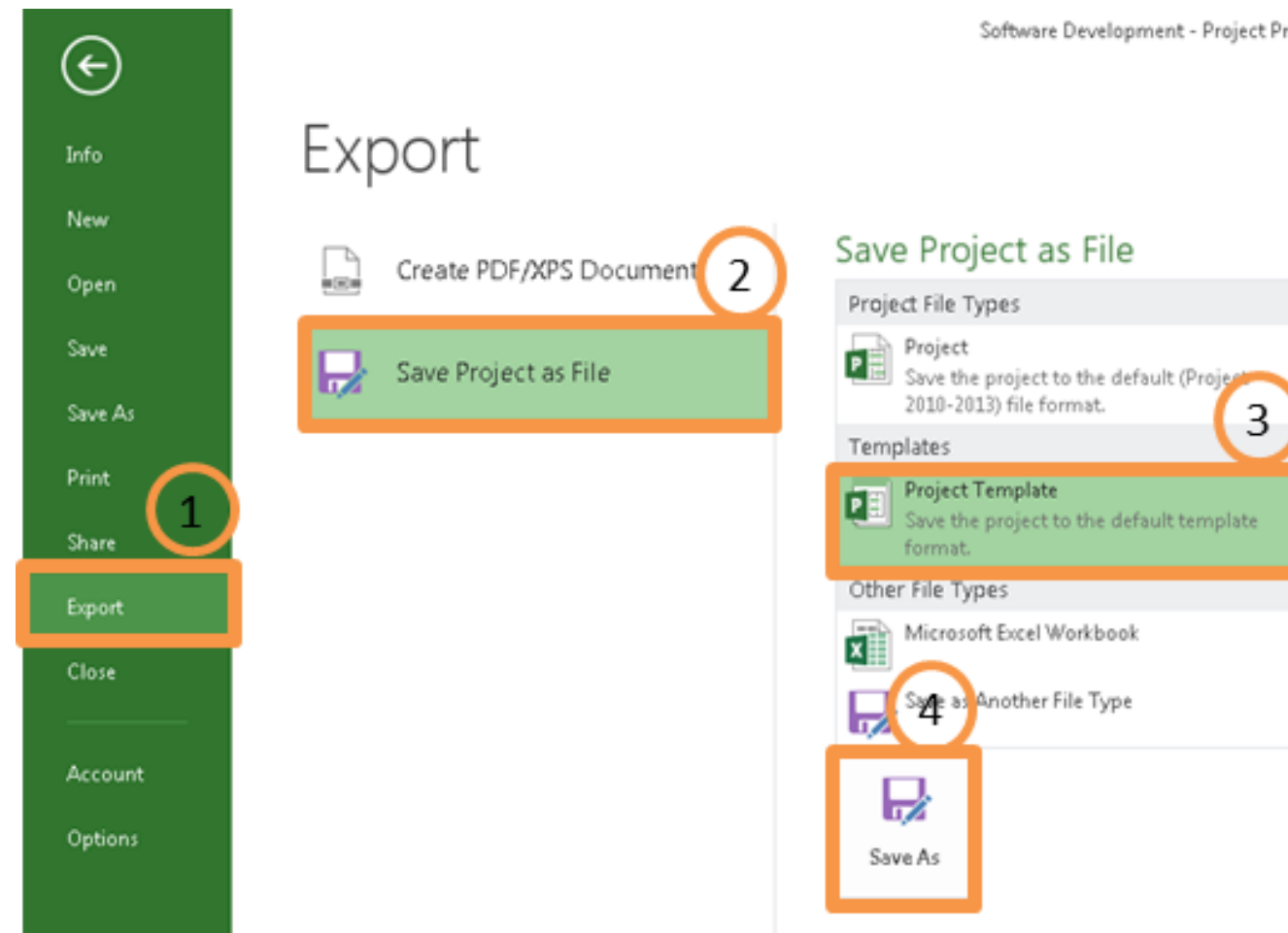
The *Set Baseline* command can be used to compare the status of the project with the original plan.

- Baseline records the project plan and the resource allocation.
- Microsoft® Project 2013 permits eleven benchmarks.



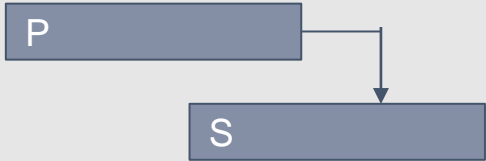
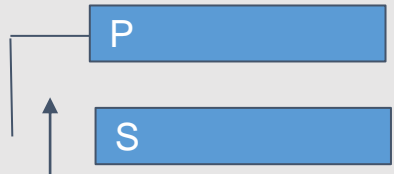
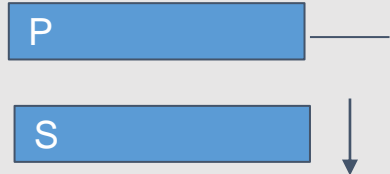
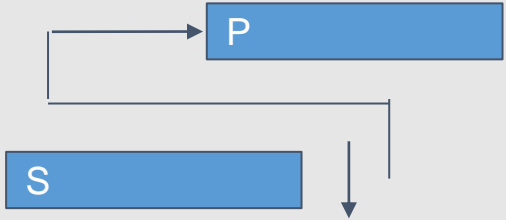
Create a Template from a Completed Project

Microsoft® Project 2013 allows you to save the completed project plans as project templates. Strategies from past projects can be shared and can be applied to future projects.



Create Task Dependencies with Links

Sometimes the tasks in a project are dependent on other tasks. This dependency can be projected in Microsoft Project 2013 by linking these tasks.

Finish-to-Start		Predecessor task has to finish, for the successor task to start
Start-to-Start		Predecessor task has to start, for the successor task to start.
Finish-to-Finish		Predecessor task has to finish, for the successor task to finish.
Start-to-Finish		Predecessor task has to start, for the successor task to finish.

Create Project Milestones

Milestones in a Project are the significant events, either reached within the plan or are dependent on the plan.

- Milestones can be created to highlight the critical points of the project.
- Milestones can be recognized in Microsoft® Project 2013 as tasks that have zero duration.

1

The screenshot shows the Microsoft Project 2013 interface. The 'TASK' tab is selected in the ribbon. The 'Milestone' button is highlighted in the 'Insert' group of the ribbon. The task list below shows a project plan with tasks like 'SRS', 'Design', and 'Development'. A new milestone task is being added at the end of the 'Design' task.

Task ID	Task Name	Duration	Start	Finish
1	SRS	4 days	Wed 2/19/14	Mon 2/24/14
2	Meet Client for SRS	1 day	Wed 2/19/14	Wed 2/19/14
3	Create SRS Document	3 days	Thu 2/20/14	Mon 2/24/14
4	Design	1.5 days	Tue 2/25/14	Wed 2/26/14
5	System Architecture	1 day	Tue 2/25/14	Tue 2/25/14
6	Design Prototype	1 day	Tue 2/25/14	Tue 2/25/14
7	Class Diagram	1 day	Tue 2/25/14	Tue 2/25/14
8	Database Design	0.5 days	Wed 2/26/14	Wed 2/26/14
9	Development	8 days	Wed 2/26/14	Fri 3/7/14

2

The screenshot shows the task list with a new milestone task added. The task is named '<New Milestone>' and has a duration of 0 days. It is scheduled for Tuesday, 2/25/14.

Task ID	Task Name	Duration	Start	Finish
4	Design	1.5 days	Tue 2/25/14	Wed 2/26/14
5	System Architecture	1 day	Tue 2/25/14	Tue 2/25/14
6	Design Prototype	1 day	Tue 2/25/14	Tue 2/25/14
7	Class Diagram	1 day	Tue 2/25/14	Tue 2/25/14
8	<New Milestone>	0 days	Tue 2/25/14	Tue 2/25/14
9	Database Design	0.5 days	Wed 2/26/14	Wed 2/26/14
10	Development	8 days	Wed 2/26/14	Fri 3/7/14

3

The screenshot shows the task list with a milestone task named 'Diagram Approval' added. The task is scheduled for Tuesday, 2/25/14.

Task ID	Task Name	Duration	Start	Finish
4	Design	1.5 days	Tue 2/25/14	Wed 2/26/14
5	System Architecture	1 day	Tue 2/25/14	Tue 2/25/14
6	Design Prototype	1 day	Tue 2/25/14	Tue 2/25/14
7	Class Diagram	1 day	Tue 2/25/14	Tue 2/25/14
8	Diagram Approval	0 days	Tue 2/25/14	Tue 2/25/14
9	Database Design	0.5 days	Wed 2/26/14	Wed 2/26/14
10	Development	8 days	Wed 2/26/14	Fri 3/7/14

Timeline View

Timeline View allows a Project Manager to view all the project related information at a glance.

1

The screenshot shows the Microsoft Project Professional interface. The 'Gantt Chart Tools' ribbon is active, and the 'Timeline' button is highlighted with an orange box. The task list on the left includes:

Task ID	Task Name	Duration	Start	Finish
1	SRS	4 days	Wed 2/19/14	Mon 2/24/14
2	Meet Client for SRS	1 day	Wed 2/19/14	Wed 2/19/14
3	Create SRS Document	3 days	Thu 2/20/14	Mon 2/24/14
4	Design	1.5 days	Tue 2/25/14	Wed 2/26/14
5	System Architecture	1 day	Tue 2/25/14	Tue 2/25/14

2

The screenshot shows the Microsoft Project Professional interface with the 'Timeline' view selected. The 'Timeline' button in the 'Gantt Chart Tools' ribbon is highlighted with an orange box. A secondary orange box highlights the timeline area, which displays a horizontal timeline with dates from Wed 2/19/14 to Fri 3/7/14. The timeline area includes a text prompt: "Add tasks with dates to the timeline".

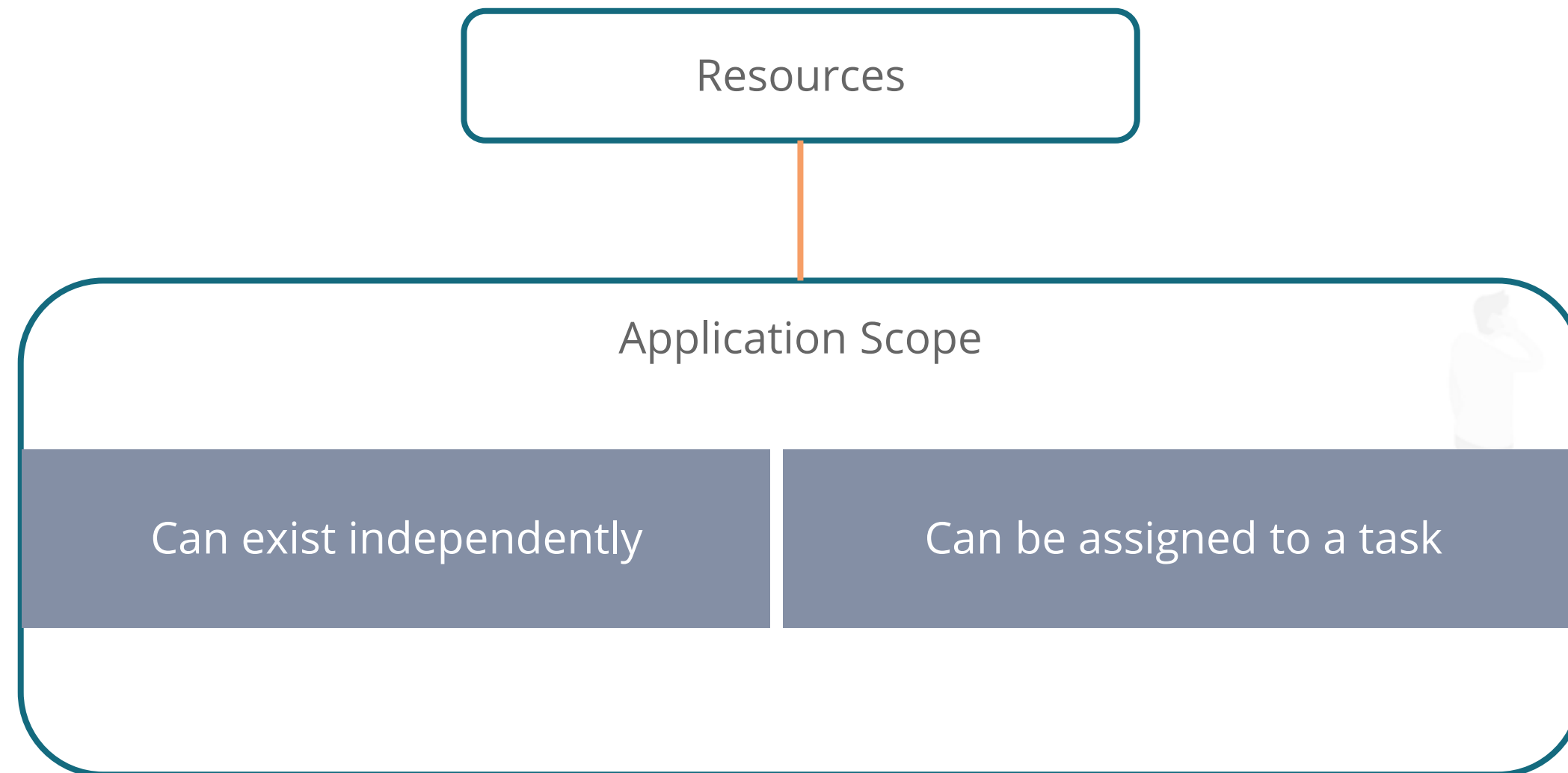
Project Summary

Project Summary summarizes the timeline of the entire project. Project summary is automatically created by Microsoft Project 2013; however, it is hidden by default.



Resources

Resource has a great impact on the timing and cost of a Project.



Responsibility Matrix

Responsibility Matrix describes the contribution of various roles in carrying out tasks for a project.

Responsibility Matrix						
Task	Responsible Party					
	Project Committee	Client POC	Project Manager	Tech Team	Finance Team	Project Coordinator
Scope analysis	✓	✓	✓			
Work breakdown pattern		✓	✓	✓		✓
Costing		✓	✓		✓	
Quality parameters		✓		✓		✓
New requests		✓	✓		✓	✓
Approval for requests		✓	✓			

Three Types of Resources

Work Resource Type

- Refers to Team Member/Entire Team/Equipment
- Is responsible for completing the tasks
- Is measured in unit of time
- Can be tracked on availability and cost

Material Resource Type

- Refers to the consumables
- Can be set up within a project and assign them to a task

Cost Resource Type

- Identifies the cost associated with a task
- Is used when a task has overhead costs

Add Resources

Adding accurate information of resources is one of the most critical steps of project planning.

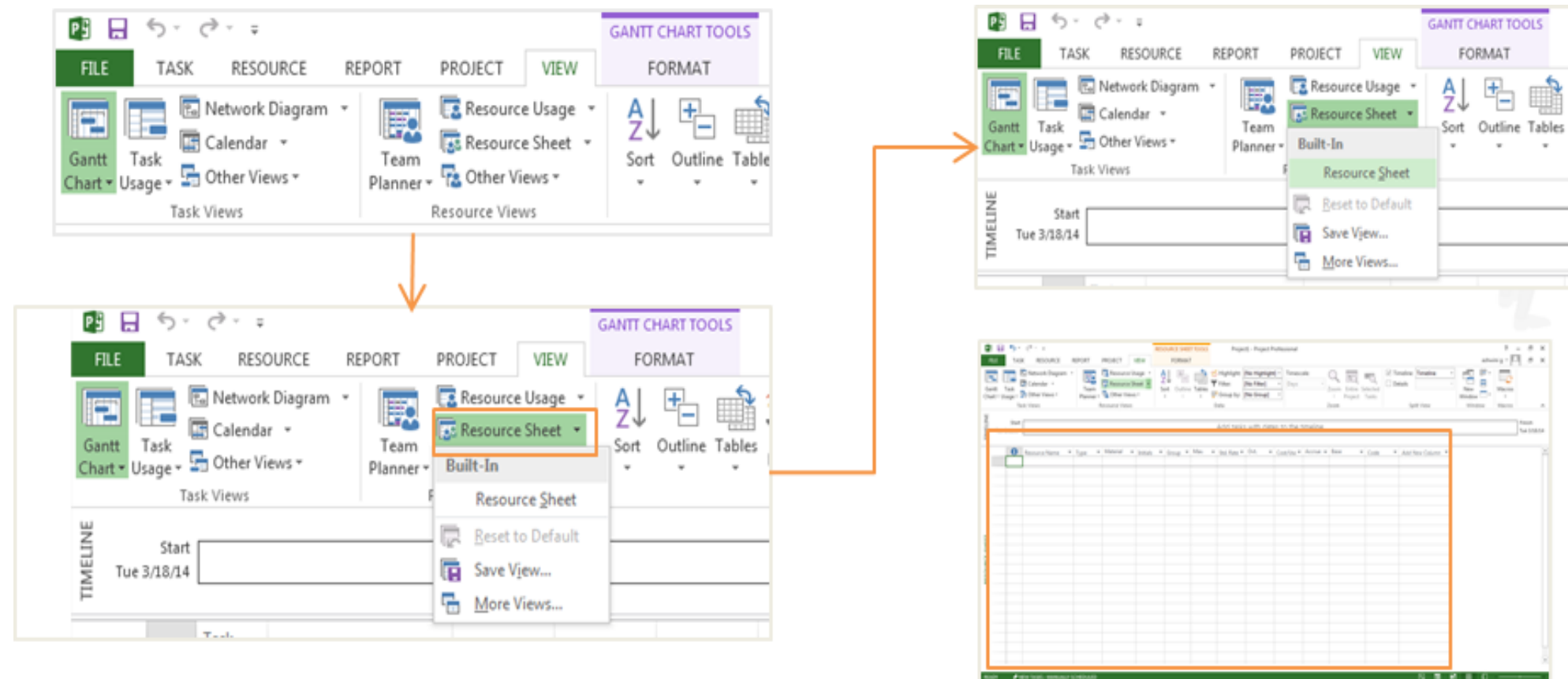
- Project managers can monitor the cost effectively during the course of the project.
- Resource sheet can be used to add or edit the resources.

Click the View
tab.

Click Resource
Sheet drop down
list.

Select Resource
Sheet.

Resource Sheet
will be displayed



Add Resources

Important components of a Resource Sheet are shown here.

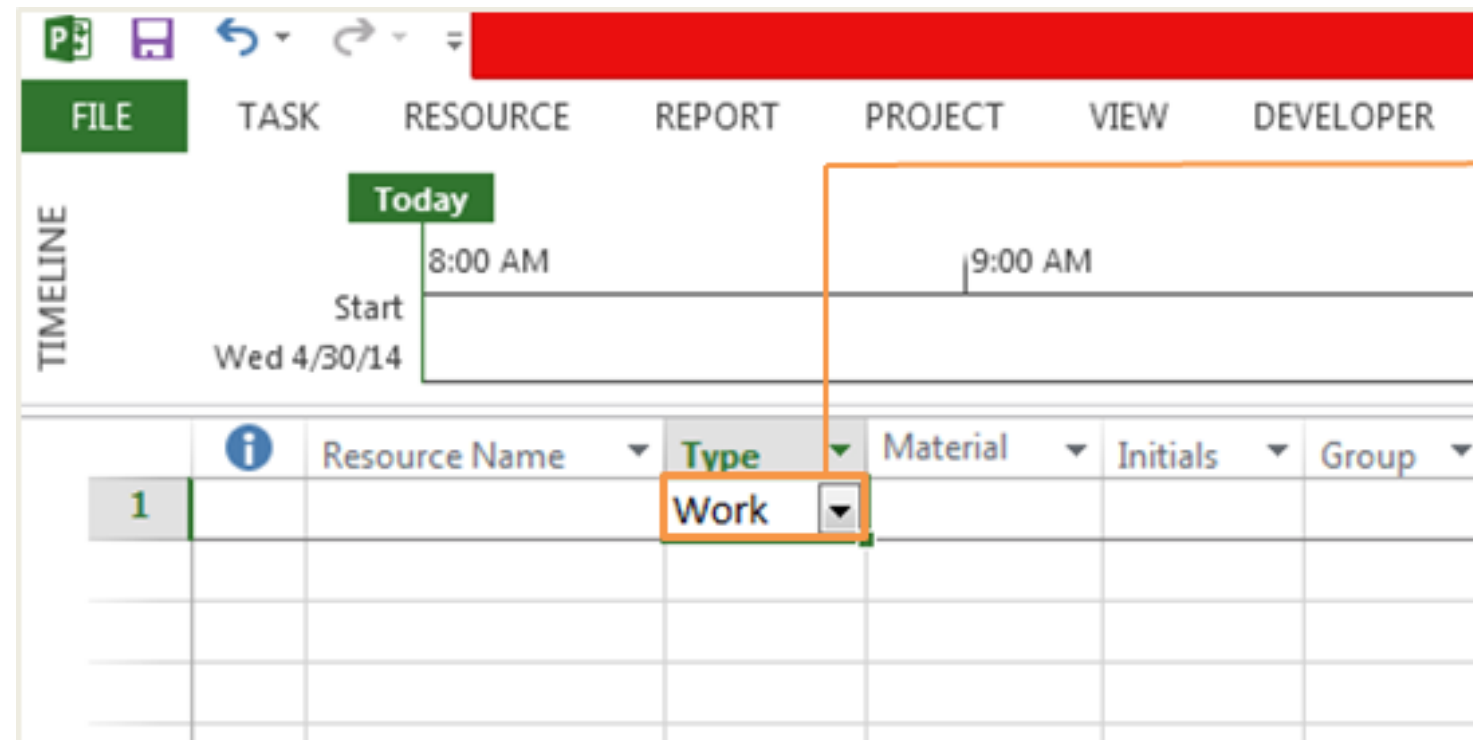
The screenshot displays the Microsoft Project Professional interface with the Resource Sheet view active. The ribbon includes FILE, TASK, RESOURCE, REPORT, PROJECT, and VIEW. The VIEW ribbon is expanded, showing options for Task Views (Gantt Chart, Task Usage, Network Diagram, Calendar, Other Views), Resource Views (Resource Usage, Resource Sheet, Team Planner, Other Views), and Data (Sort, Outline, Tables, Highlight, Filter, Group by). The Resource Sheet view shows a table with columns: Resource Name, Type, Material, Initials, Group, Max., Std. Rate, Ovt., Cost/Use, Accrue, Base, Code, and Add New Column. The 'Type' column has a dropdown menu open, showing options: Work, Material, and Cost. The 'Group' column has a dropdown menu open, showing options: [No Group] and [Group]. The 'Max.' column has a dropdown menu open, showing options: [No Max.] and [Max.]. The 'Std. Rate' column has a dropdown menu open, showing options: [No Rate] and [Rate]. The 'Ovt.' column has a dropdown menu open, showing options: [No Ovt.] and [Ovt.]. The 'Cost/Use' column has a dropdown menu open, showing options: [No Cost/Use] and [Cost/Use]. The 'Accrue' column has a dropdown menu open, showing options: [No Accrue] and [Accrue]. The 'Base' column has a dropdown menu open, showing options: [No Base] and [Base]. The 'Code' column has a dropdown menu open, showing options: [No Code] and [Code]. The 'Add New Column' button is visible at the bottom right of the table. On the left side of the screenshot, there are four orange callout boxes with arrows pointing to specific columns in the Resource Sheet table:

- Indicate the Type of resources (points to the Type column)
- Indicate the units name (points to the Material column)
- Enter the name of the resource group (points to the Group column)
- Allocate the work hours (in %) (points to the Max. column)

The bottom status bar shows 'EDIT' and 'NEW TASKS : MANUALLY SCHEDULED'.

Work Resources

Work resources refer to the people and equipment performing the tasks of a project.



The two important aspects of work resources are:

Availability

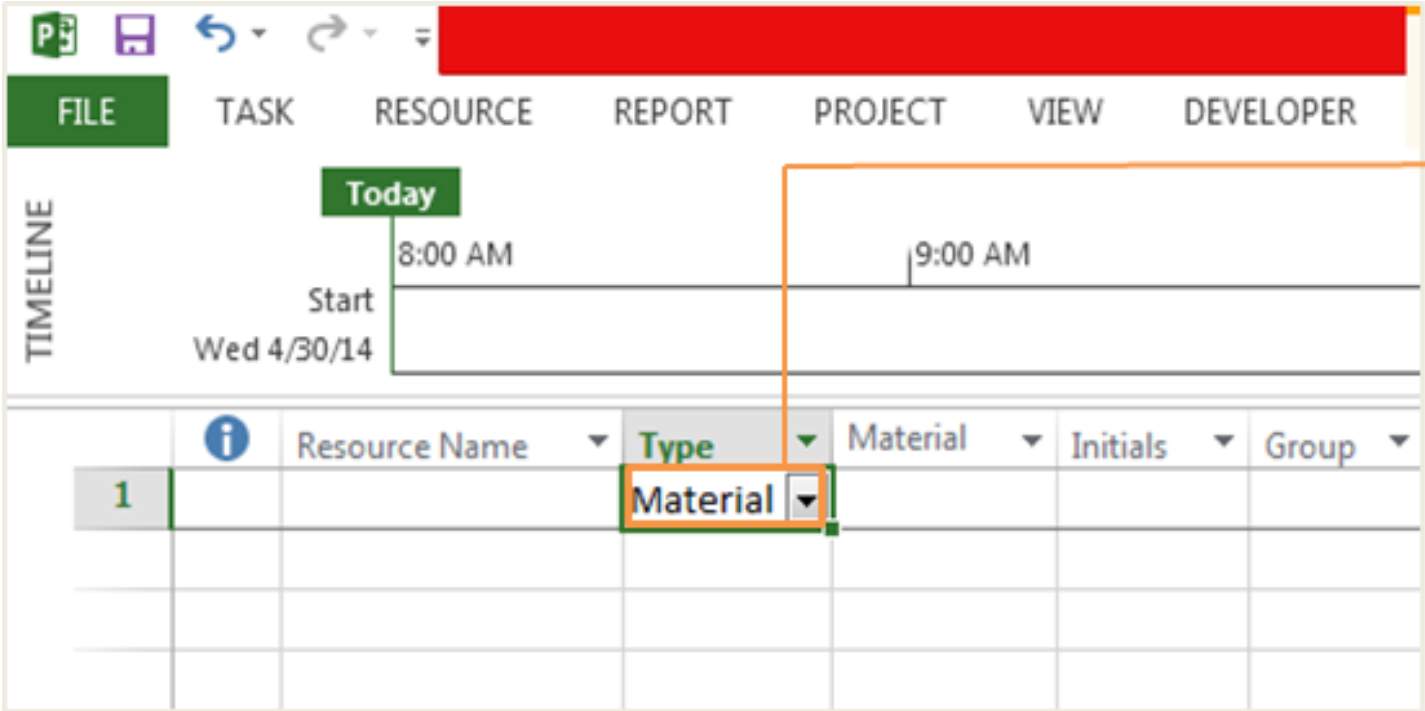
- Time when the specific resources can work on the tasks and how much work can the resources perform

Cost

- Actual cost incurred by the resources working on the project

Material Resources

Material resources refer to the consumables used in a Project.



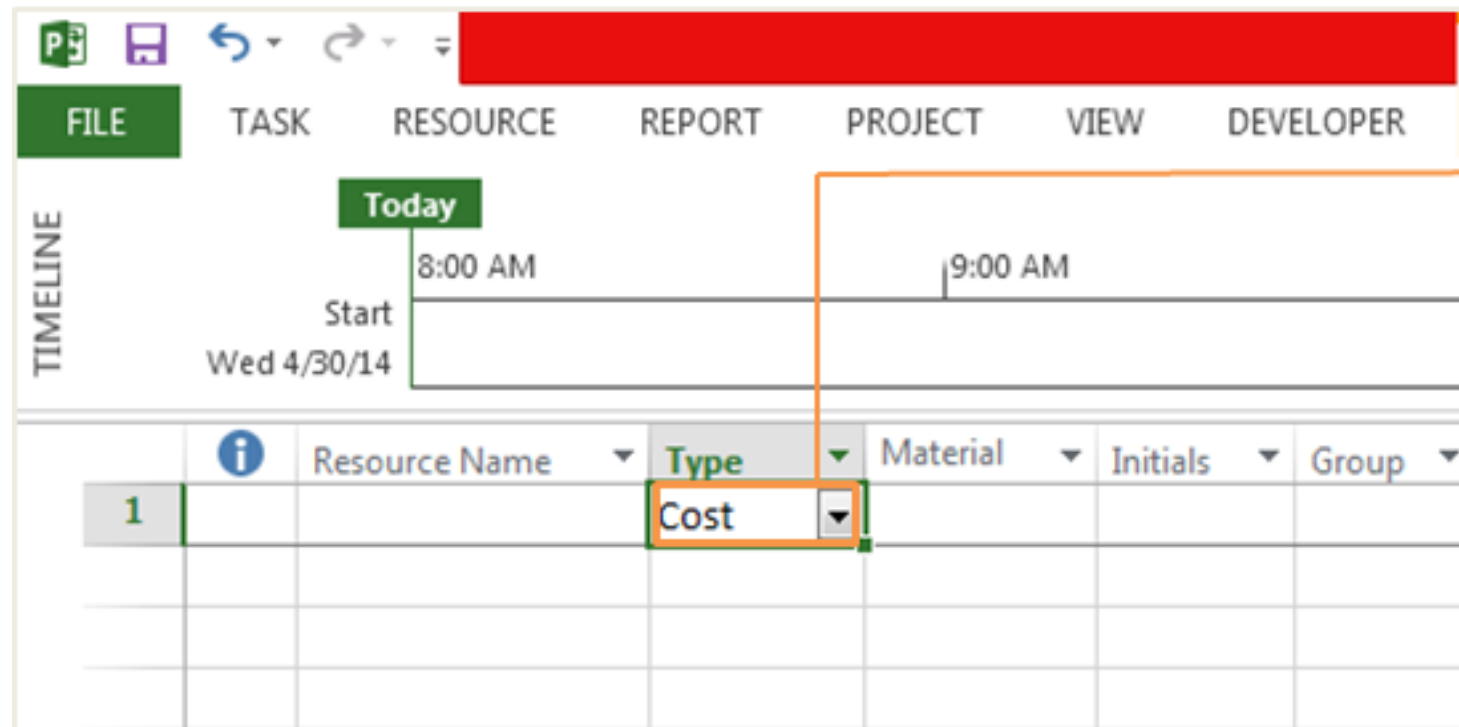
Material resources are added to track:

The rate of consumption

Associated costs

Cost Resources

Cost resources can be used to represent a financial cost associated with a task in a Project.



Specific type of cost can be associated with:

Single task

Multiple tasks

Generic Resources

Microsoft® Project Professional and Project Web App allow the usage of Generic Resource.

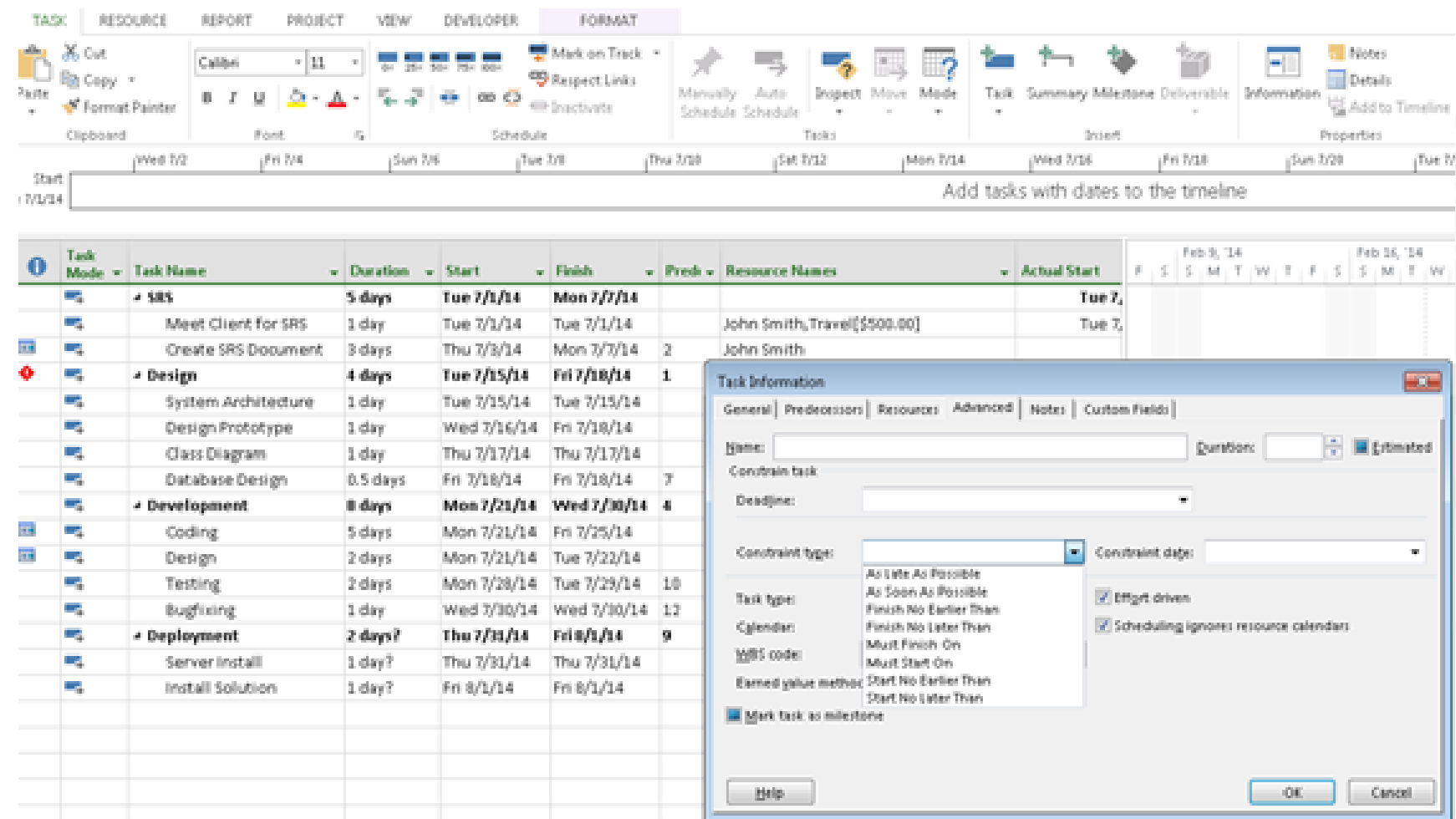
Features of generic resources are:		
They are the categories of workers.	They have to be added in the Project Web App.	They act as placeholders, which can be later allocated to a real resource.

Adding Date Constraints

If the tasks in Microsoft® Project 2013 is auto-scheduled and you enter the actual duration or start and finish dates, you can notice changes in the scheduled duration, the start and finish dates of the project, as well as the dependent tasks.

A date constraint may be:

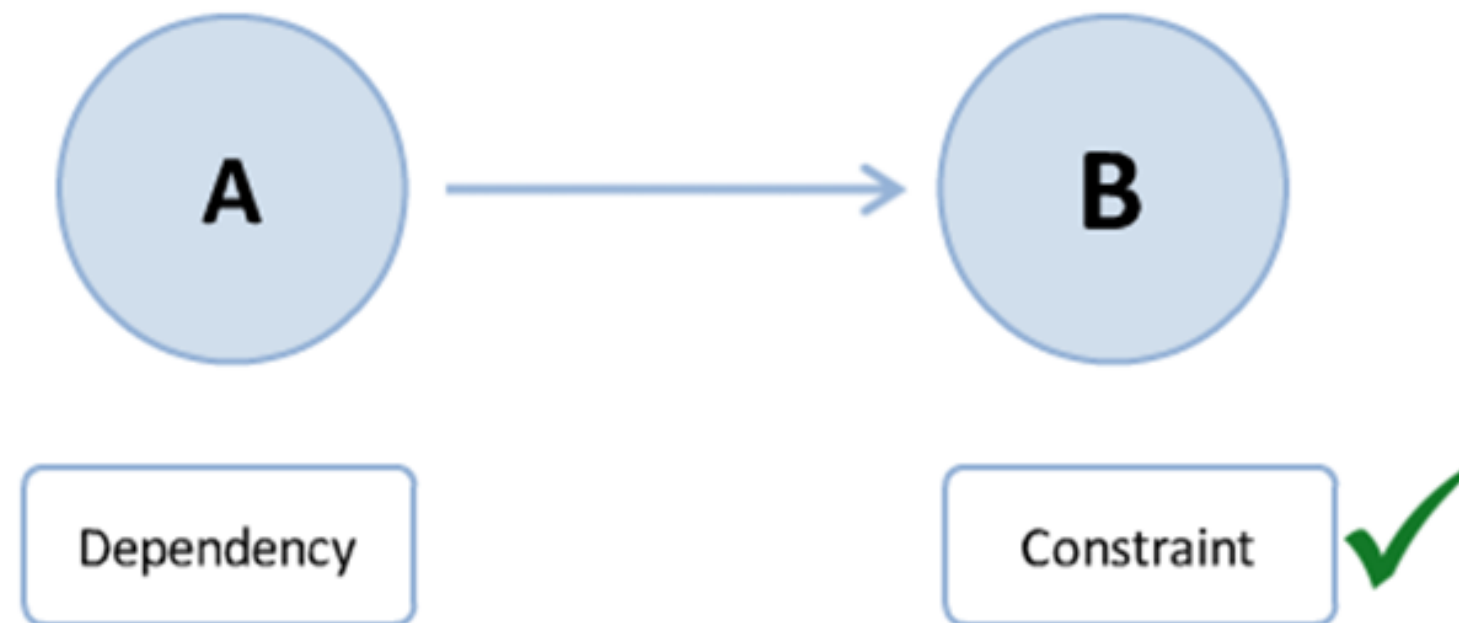
- Completely flexible
- Semi-flexible
- Completely inflexible



Setting Deadlines

Setting date constraints does not always help in meeting project deadlines.

- Date constraints can lock schedules
- They can lead to clashes as well



Adding Project Percentage

Project percentage is added to indicate how much of the tasks on the project is complete.

Click the Task tab in Microsoft Project 2013.

Click the Details icon. The Task Details Form will appear.

Click any of the buttons - 0%, 25%, 50%, 75%, and 100% from the Task ribbon.

The project percentage is entered in the Task Details Form.

The screenshot displays the Microsoft Project 2013 interface. The 'TASK' tab is selected in the ribbon. The 'TASK FORM TOOLS' ribbon is also visible, showing various task management options. The main task list is shown in a table format. The task 'SRS' is selected, and its details are shown in the 'TASK DETAILS' form at the bottom.

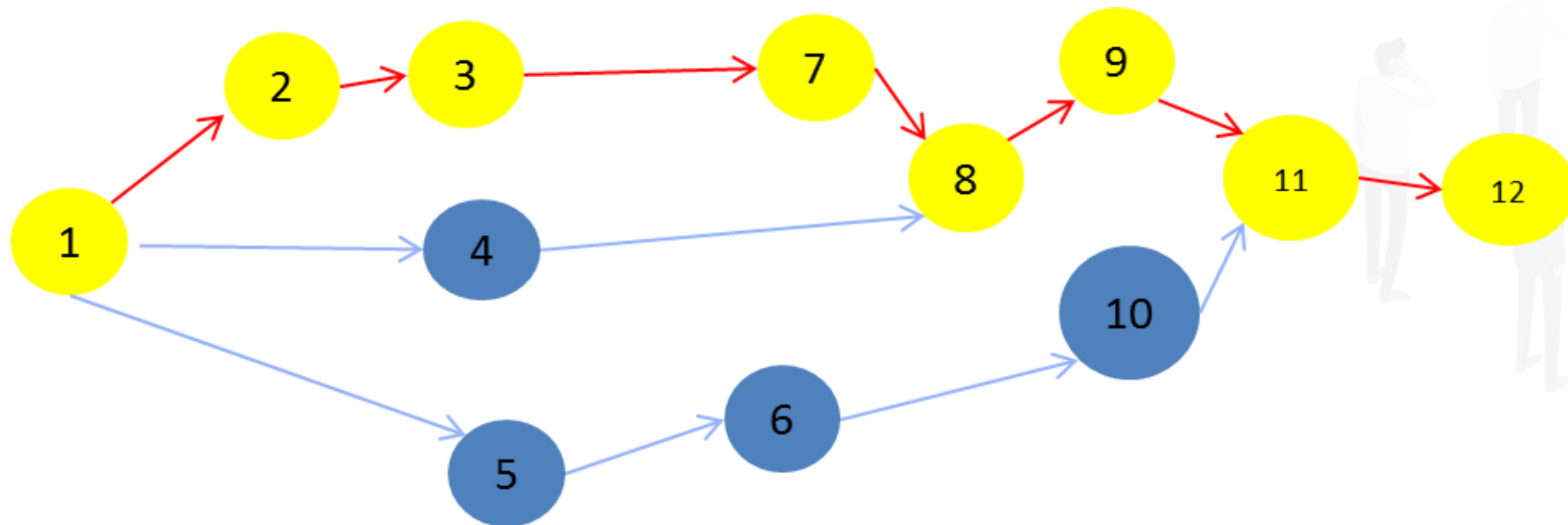
ID	Task Name	Duration	Start	Finish	Pred	Resource Names	Actual Start
1	SRS	5 days	Tue 7/1/14	Mon 7/7/14			Tue 7/1/14
2	Meet Client for SRS	1 day	Tue 7/1/14	Tue 7/1/14		John Smith,Travel[\$500.00]	Tue 7/1/14
3	Create SRS Document	3 days	Thu 7/3/14	Mon 7/7/14	2	John Smith	Tue 7/1/14
4	Design	4 days	Tue 7/15/14	Fri 7/18/14	1		Tue 7/1/14
5	System Architecture	1 day	Tue 7/15/14	Tue 7/15/14		John Smith	Tue 7/1/14
6	Design Prototype	1 day	Wed 7/16/14	Fri 7/18/14		Denise Richards,Photoshop License[1]	Wed 7/16/14
7	Class Diagram	1 day	Thu 7/17/14	Thu 7/17/14		Denise Richards	Thu 7/17/14
8	Database Design	0.5 days	Fri 7/18/14	Fri 7/18/14	7	John Smith	Fri 7/18/14
9	Development	8 days	Mon 7/21/14	Wed 7/30/14	4		
10	Coding	5 days	Mon 7/21/14	Fri 7/25/14		John Smith	
11	Design	2 days	Mon 7/21/14	Tue 7/22/14		Denise Richards	
12	Testing	2 days	Mon 7/28/14	Tue 7/29/14	10	Denise Richards,John Smith	
13	Bugfixing	1 day	Wed 7/30/14	Wed 7/30/14	12	Denise Richards,John Smith	
14	Deployment	2 days?	Thu 7/31/14	Fri 8/1/14	9		
15	Server Install	1 day?	Thu 7/31/14	Thu 7/31/14		Denise Richards,Travel[\$1,000.00]	
16	Install Solution	1 day?	Fri 8/1/14	Fri 8/1/14		Denise Richards	

The 'TASK DETAILS' form for task 'SRS' is shown at the bottom. It includes fields for Name, Duration, Start, Finish, Constraint, Task type, WBS code, Priority, and % Complete. The % Complete field is set to 25%.

Identifying Critical Path Using MS Project

The Critical Path Method is a common method used in project management, to identify the longest path in a project, to estimate project schedules.

- If any task on the Critical Path is late, the whole project is delayed.
- The Critical Path for a master project, where two or more projects are linked together, can be viewed by treating the sub projects as summary tasks of the master project.



Reports and Dashboards

Microsoft® Project 2013 also has pre-installed reports which can be generated at any time to monitor the health of the project.

Burndown report

To view the work, completed tasks, and pending work

Cost Overview report

To view the planned costs, remaining costs, actual costs, cumulative costs, baseline costs, and percentage of completion

Project Overview report

To view project status, upcoming tasks, and late tasks.

Upcoming Tasks report

To view the work that has been completed in the past week, tasks due for the present week, and upcoming tasks in the next week.

Work Overview report

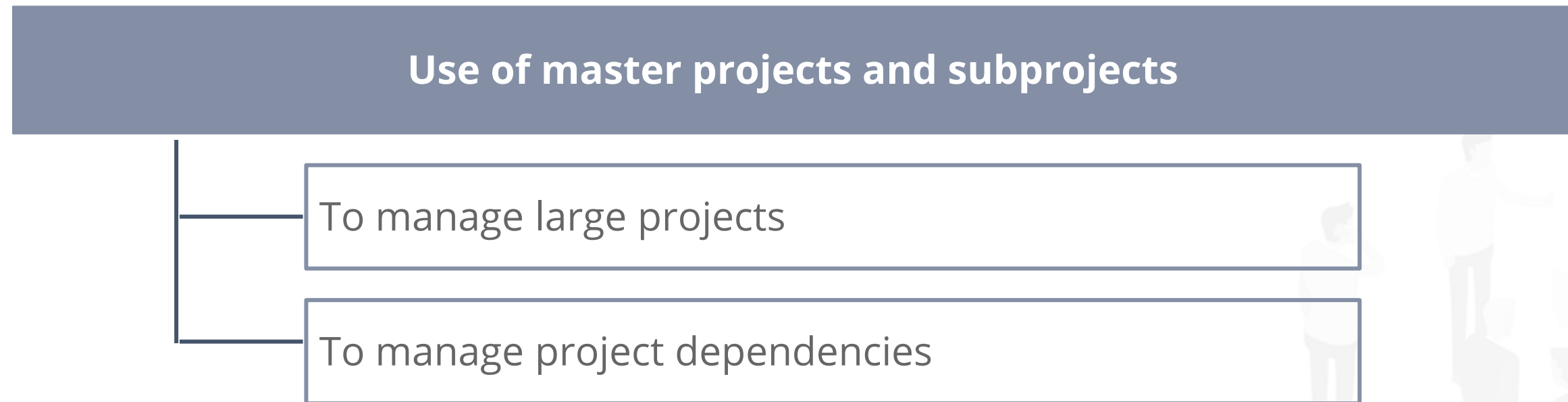
To review the work status of top-level tasks and their completion percentage.

Resource reports

To create resource-based reports like the Overallocated Resources and the Resources Overview report.

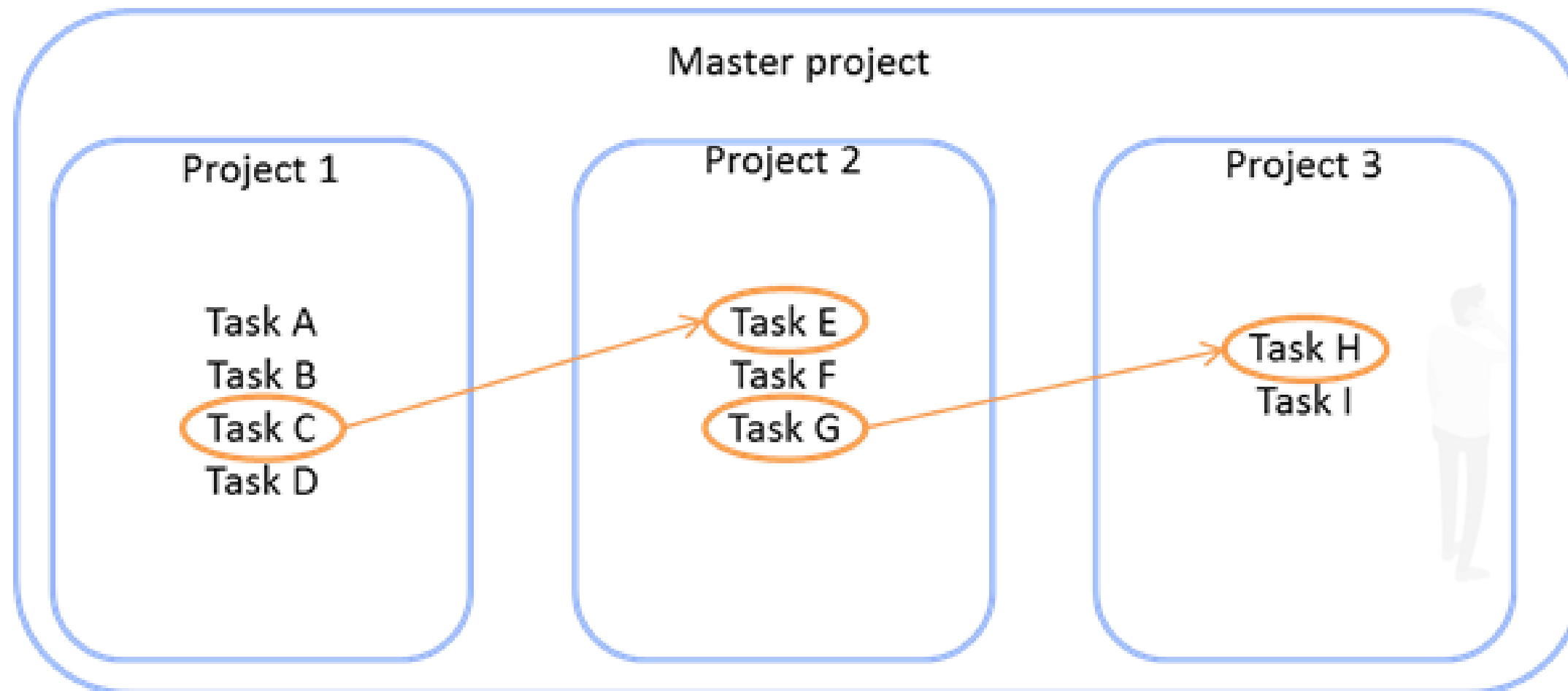
Master Projects and Subprojects

Master projects or consolidated plans and Subprojects or inserted plans are generally used under two circumstances:



Inter-Project Dependencies

Dependencies between tasks of various projects need to be linked.



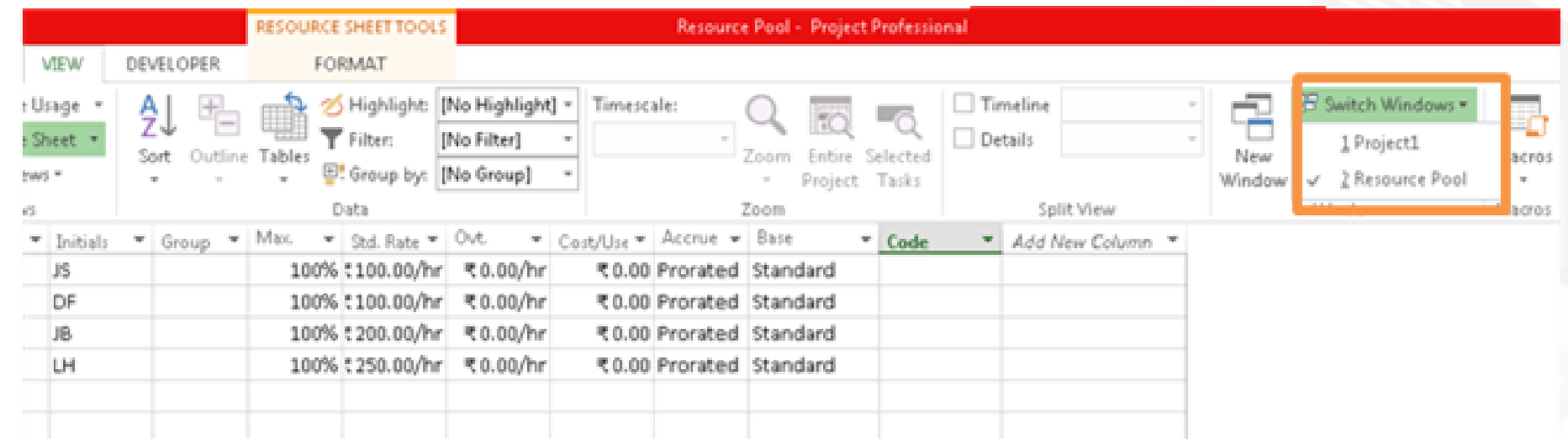
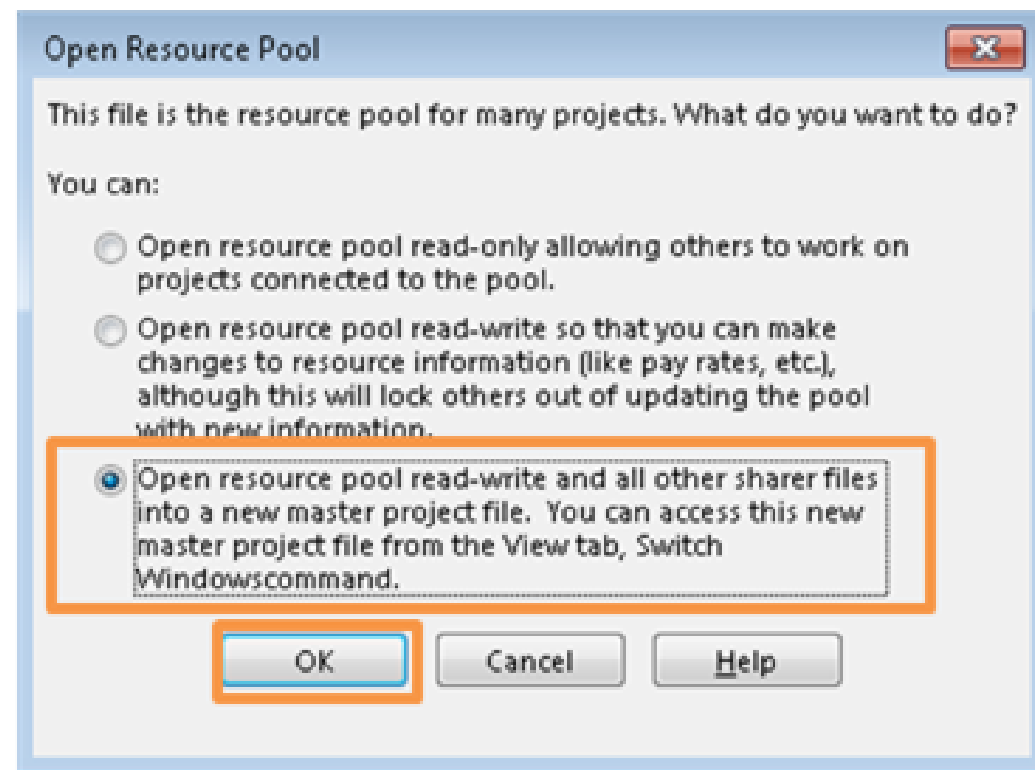
Resolve Resource Conflicts between Shared Projects

The best method to resolve resource conflict is to create a master project, which includes all projects that share the resource pool as subprojects.

Access read-write version of resource pool.

Use **Switch Windows** option in **View** tab.

Resolve the conflicts as explained in **Resolve Resource Conflicts** slide.





Knowledge Check

**Knowledge
Check
1**

Which of the following provides option to create benchmarks to compare project performance?

- A. Gantt Charts
- B. Project Schedule
- C. Set Baseline
- D. Standard Calendar



**Knowledge
Check
1**

Which of the following provides option to create benchmarks to compare project performance?

- A. Gantt Charts
- B. Project Schedule
- C. Set Baseline
- D. Standard Calendar



The correct answer is **C**

Set Baseline command is used to create a base point, which acts as a benchmark to compare the project performance.

**Knowledge
Check**

2

Which of the following calendars is used from 8:00 a.m. to 5:00 p.m.?

- A. Base Calendar
- B. Standard Calendar
- C. Night Shift Calendar
- D. 24-Hour Calendar



**Knowledge
Check**

2

Which of the following calendars is used from 8:00 a.m. to 5:00 p.m.?

- A. Base Calendar
- B. Standard Calendar
- C. Night Shift Calendar
- D. 24-Hour Calendar



The correct answer is **B**

***Standard Calendar* is the type of calendar which is used from 8.00 AM to 5.00 PM.**

**Knowledge
Check**

3

Which of the following is a named object within the application scope of a project?

- A. Resource
- B. Management
- C. Task
- D. Cost



**Knowledge
Check**

3

Which of the following is a named object within the application scope of a project?

- A. Resource
- B. Management
- C. Task
- D. Cost



The correct answer is **A**

Resource is a named object within the application scope that can exist independently or be assigned to a task.

Key Takeaways

- Microsoft Project 2013 is an application that enables you to plan and manage multiple projects effectively.
- A project manager can initiate a project in Microsoft Project 2013 by using the “Blank Template” option.
- A new project can be initiated in Microsoft Project 2013 by creating a blank project and then adding project details into it.
- A project summary summarizes the timeline of the entire project. The project summary is automatically created by Microsoft Project 2013.



Key Takeaways

- A resource is a named object within the application scope that can exist independently or be assigned to a task.
- The Critical Path Method is a common method used in project management to identify the longest path in a project and hence estimate project schedules.

