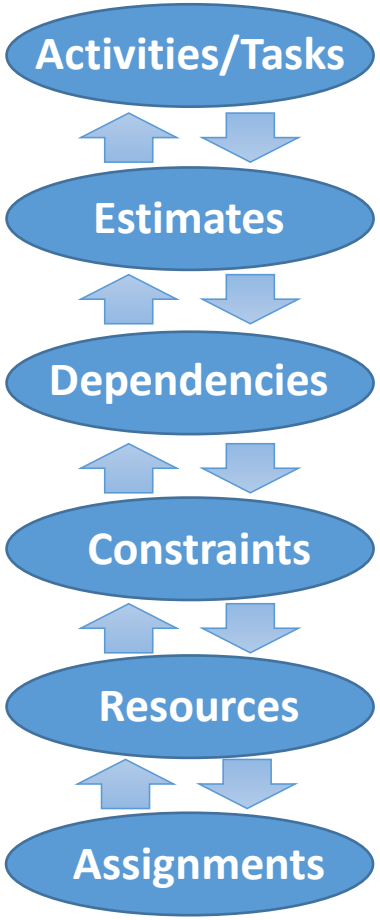
ANNEX 1 :
PROJECT SCHEDULE
With MICROSOFT PROJECT

Comments

- To build these slides, I used the tutorial available by using below link : https://www.tutorialspoint.com/ms_project/

Scheduling is Modeling

Planning



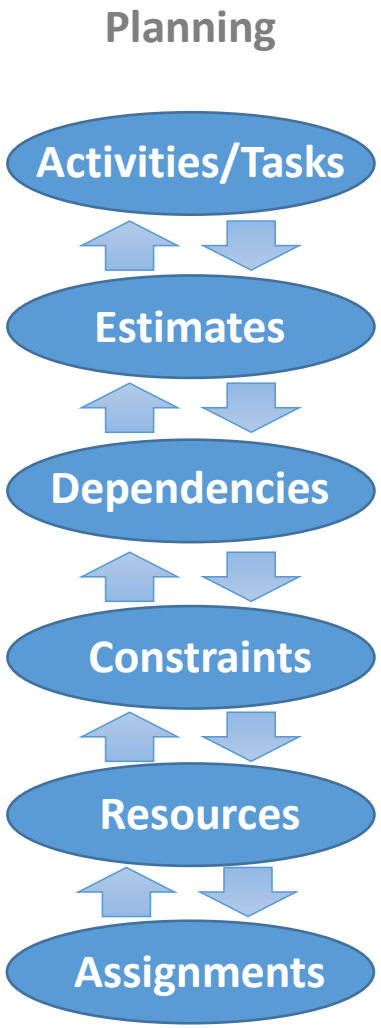
Static Chart

- ❑ A chart can be complex
- ❑ Is useless soon after it is made
- ❑ Is not responsive :
  - Few dependencies
  - Many constraints
- ❑ Has no predictive power
  - Reports status
- ❑ Executives receive a schedule on paper

Dynamic Model

- ❑ Model is a simplified reality
- ❑ Has to be kept up-to-date
- ❑ Needs to be responsive :
  - All dependencies
  - Few constraints
- ❑ Has predictive power
  - Reports forecast
- ❑ Needs to be accessible online and in real time

MS Project Basis - Introduction

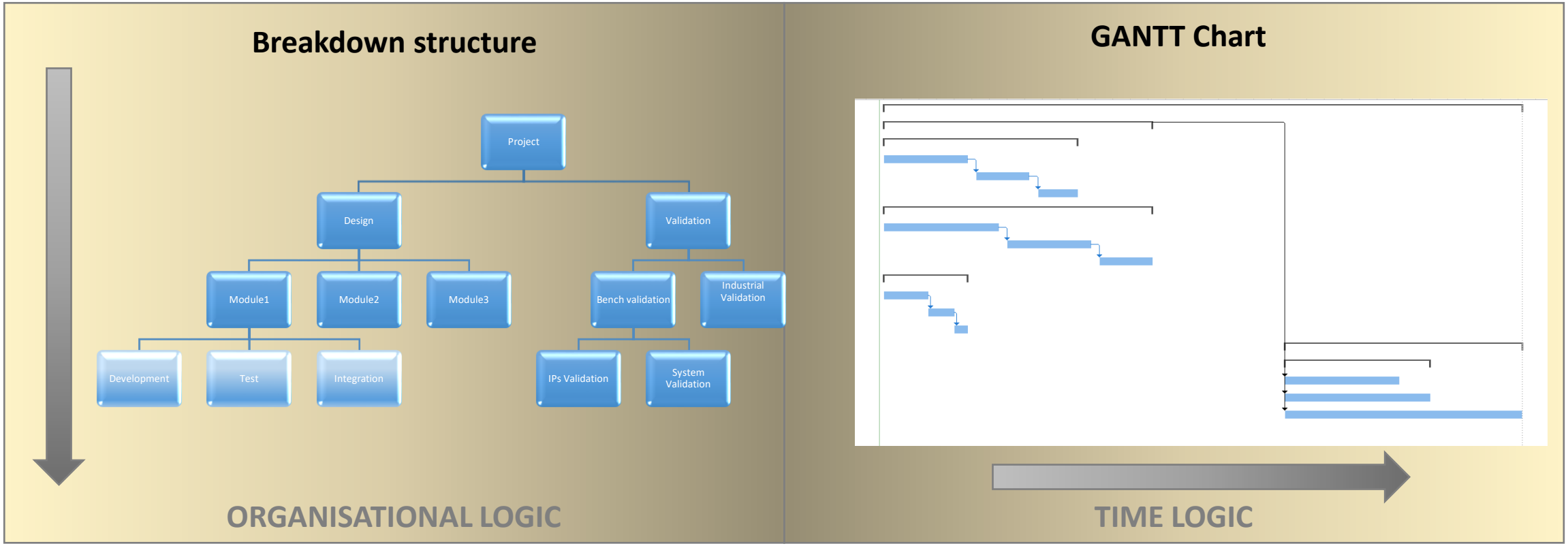


- **MS Project does more than just create a schedule**. Indeed, MS project helps the Project Manager to :
  - establish dependencies among tasks
  - create constraints
  - resolve resource conflicts
  - help in reviewing cost and schedule performance over the duration of the project.

- MS Project can help the Project Manager to :
  - **Visualize his project plan in standard defined formats.**
  - **Schedule tasks and resources consistently and effectively.**
  - **Track information about the work, duration, and resource requirements for his project.**
  - **Generate reports to share in progress meetings.**

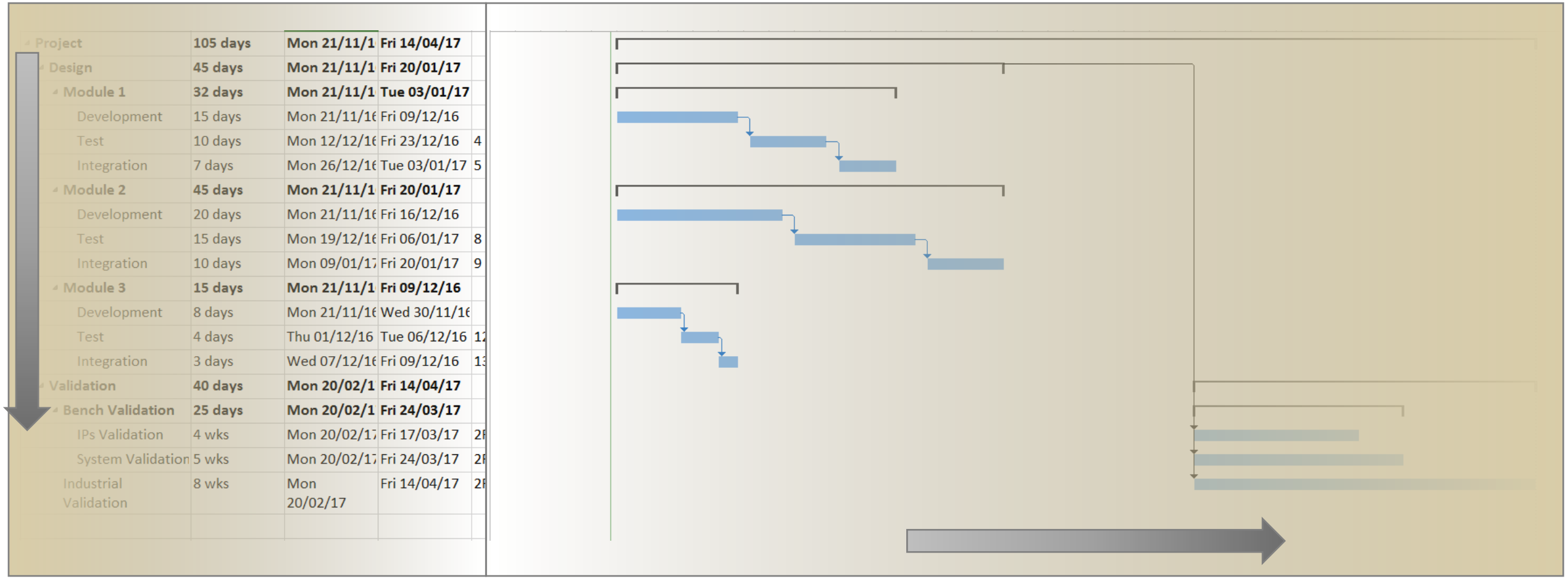
MS Project Basis - Introduction

- **Top-Down VS Bottom-up Approach :**
  - **In theory**



MS Project Basis - Introduction

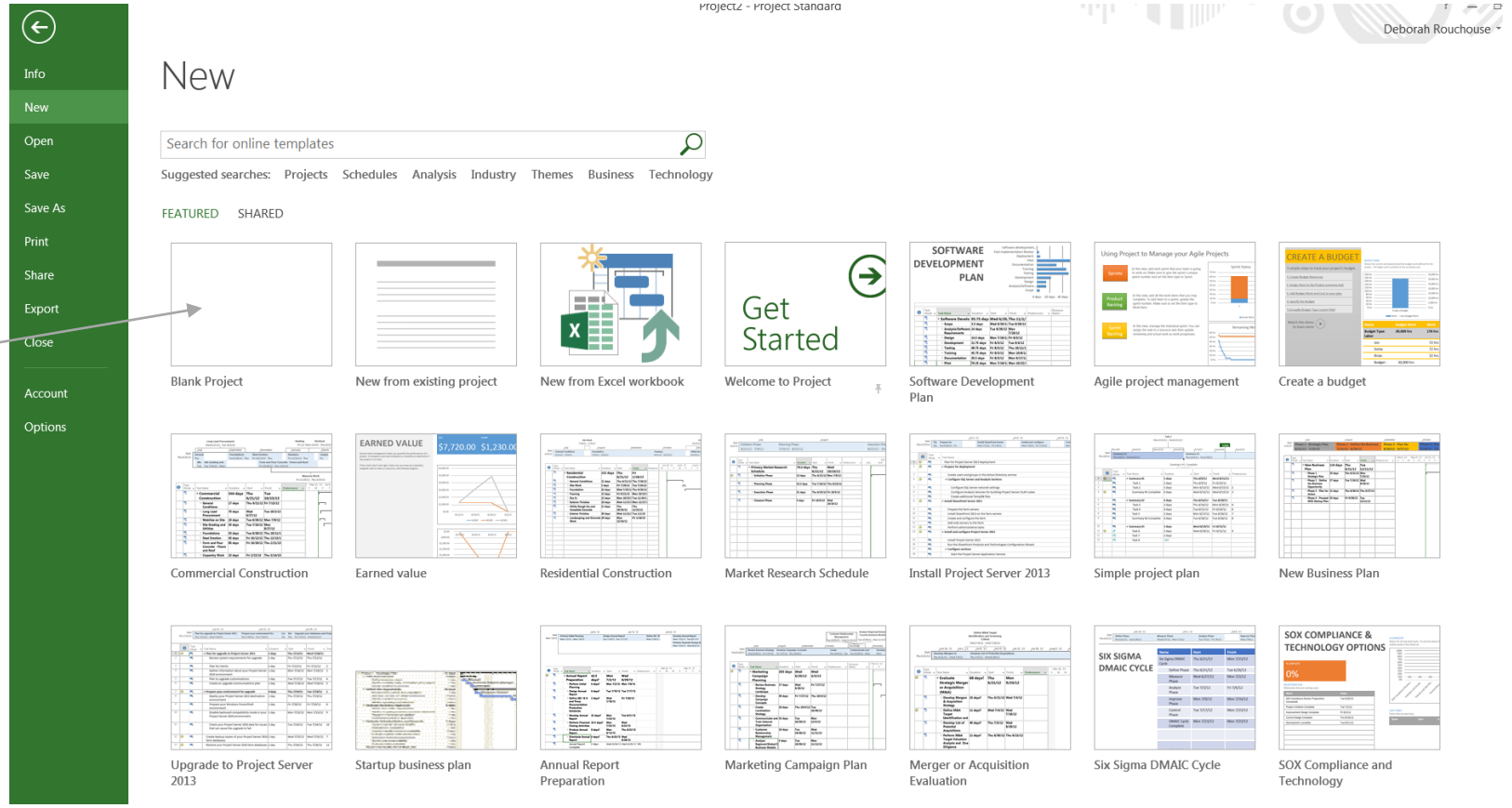
- **Top-Down VS Bottom-up Approach :**
  - **In MS Project**

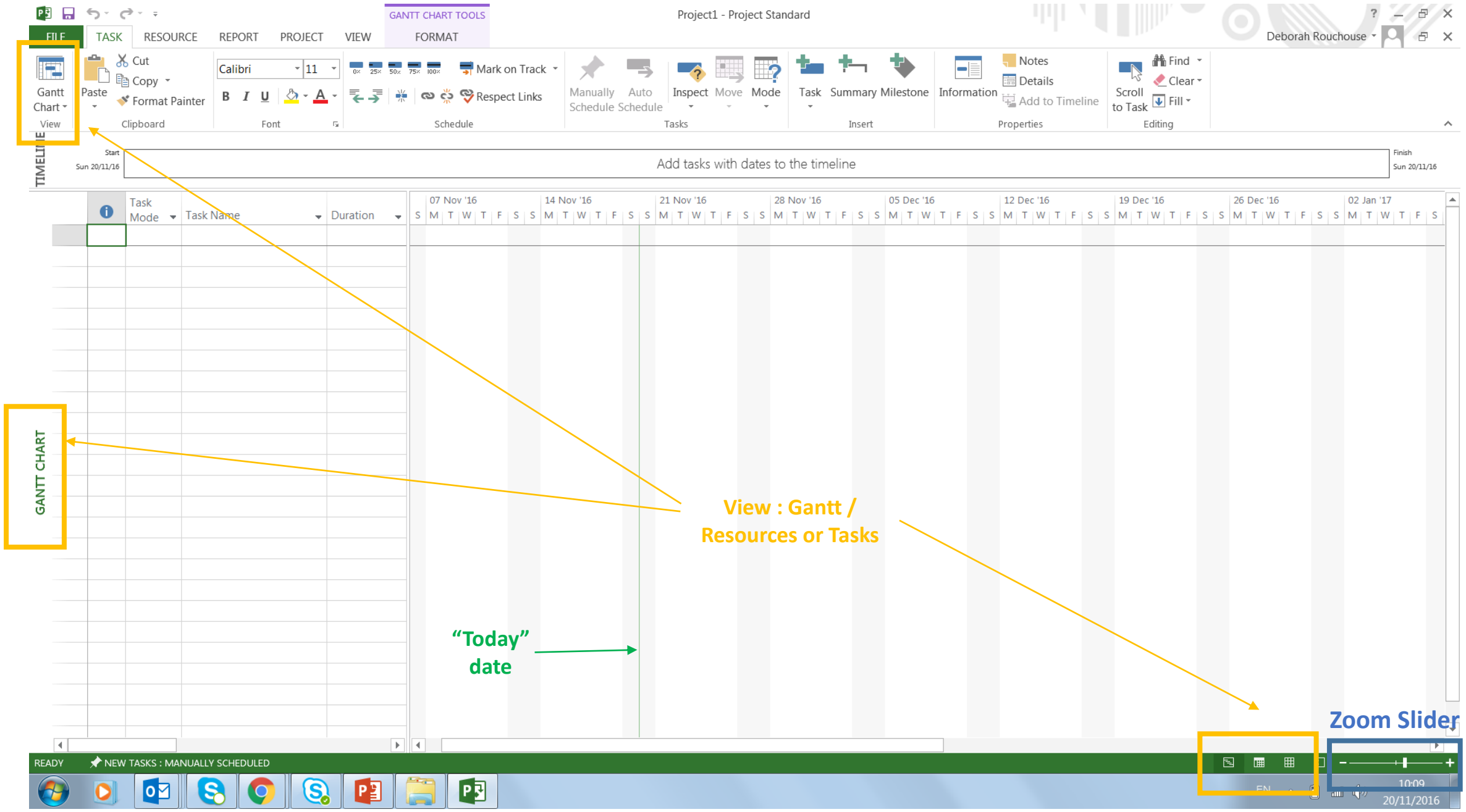


MS Project Basis – Create a new plan

❑ How to : Create a new Project

- Go to ***File / New***
- MS Project 2013 will display a list of options.
  In the list of available templates, click ***Blank Project***.

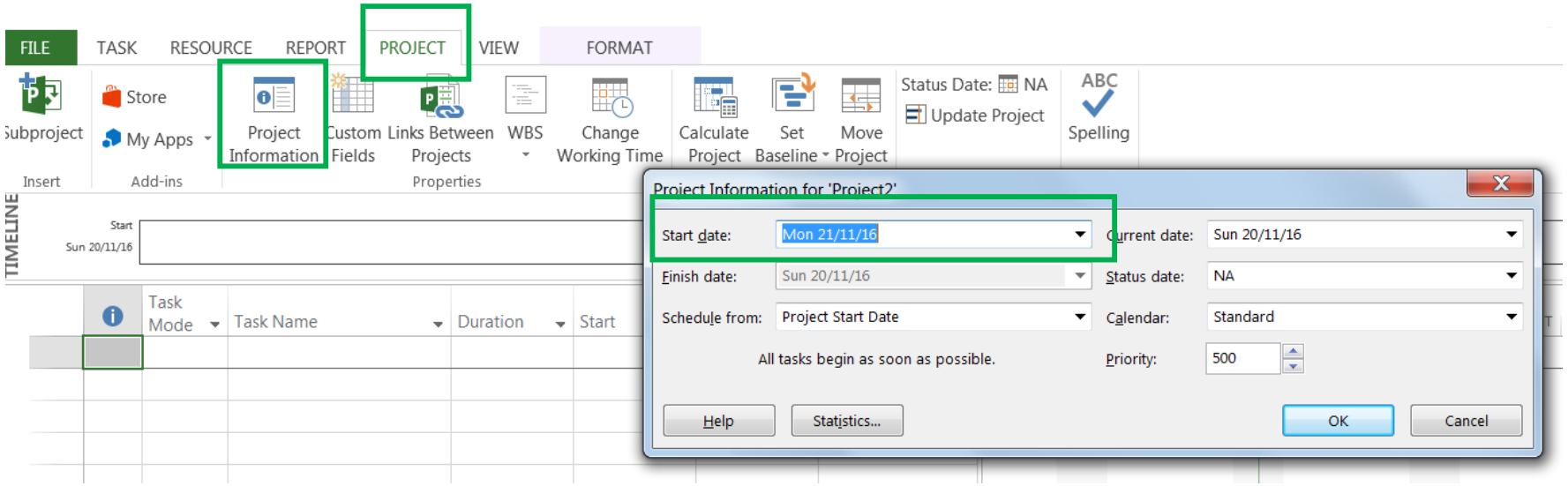



Project1 - Project Standard
GANTT CHART TOOLS
FILE
TASK
RESOURCE
REPORT
PROJECT
VIEW
FORMAT
Deborah Rouchouse
Gantt Chart
View
Paste
Cut
Copy
Format Painter
Clipboard
Calibri
11
Font
Mark on Track
Respect Links
Schedule
Manually Schedule
Auto Schedule
Inspect
Move
Mode
Tasks
Task
Summary
Milestone
Insert
Information
Notes
Details
Add to Timeline
Properties
Scroll to Task
Find
Clear
Fill
Editing
TIMELINE
Start
Sun 20/11/16
Add tasks with dates to the timeline
Finish
Sun 20/11/16
Task Mode
Task Name
Duration
07 Nov '16
14 Nov '16
21 Nov '16
28 Nov '16
05 Dec '16
12 Dec '16
19 Dec '16
26 Dec '16
02 Jan '17
GANTT CHART
View : Gantt / Resources or Tasks
"Today" date
Zoom Slider
READY
NEW TASKS : MANUALLY SCHEDULED
10:09
20/11/2016

MS Project Basis – Create a new plan

❑ Project Information

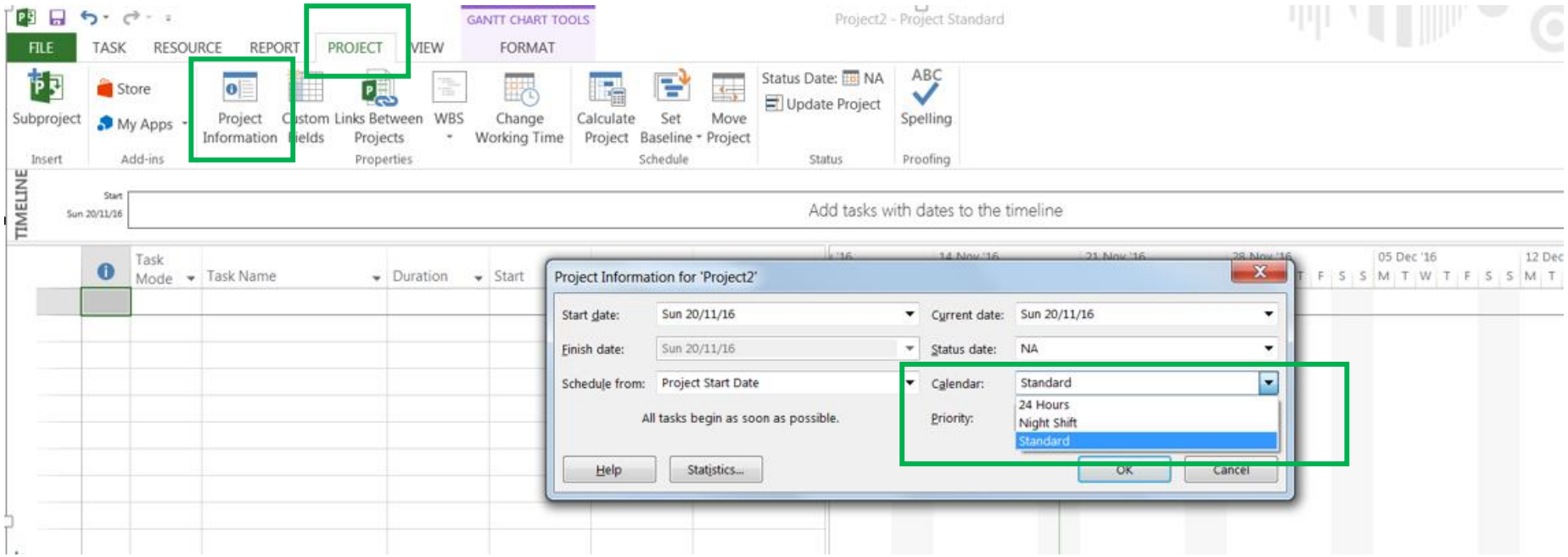
- Let us change the project start date and add some more information.
- **Step 1 – Start Date**
  - Click ***Project tab → Project Information***.
  - A dialog box appears. In the start date box, type 21/11/16, or click the down arrow to display the calendar, select November 21, 2016 (or any date of your choice).
  - Click ***OK*** to accept the start date.



MS Project Basis – Create a new plan

❑ Project Information

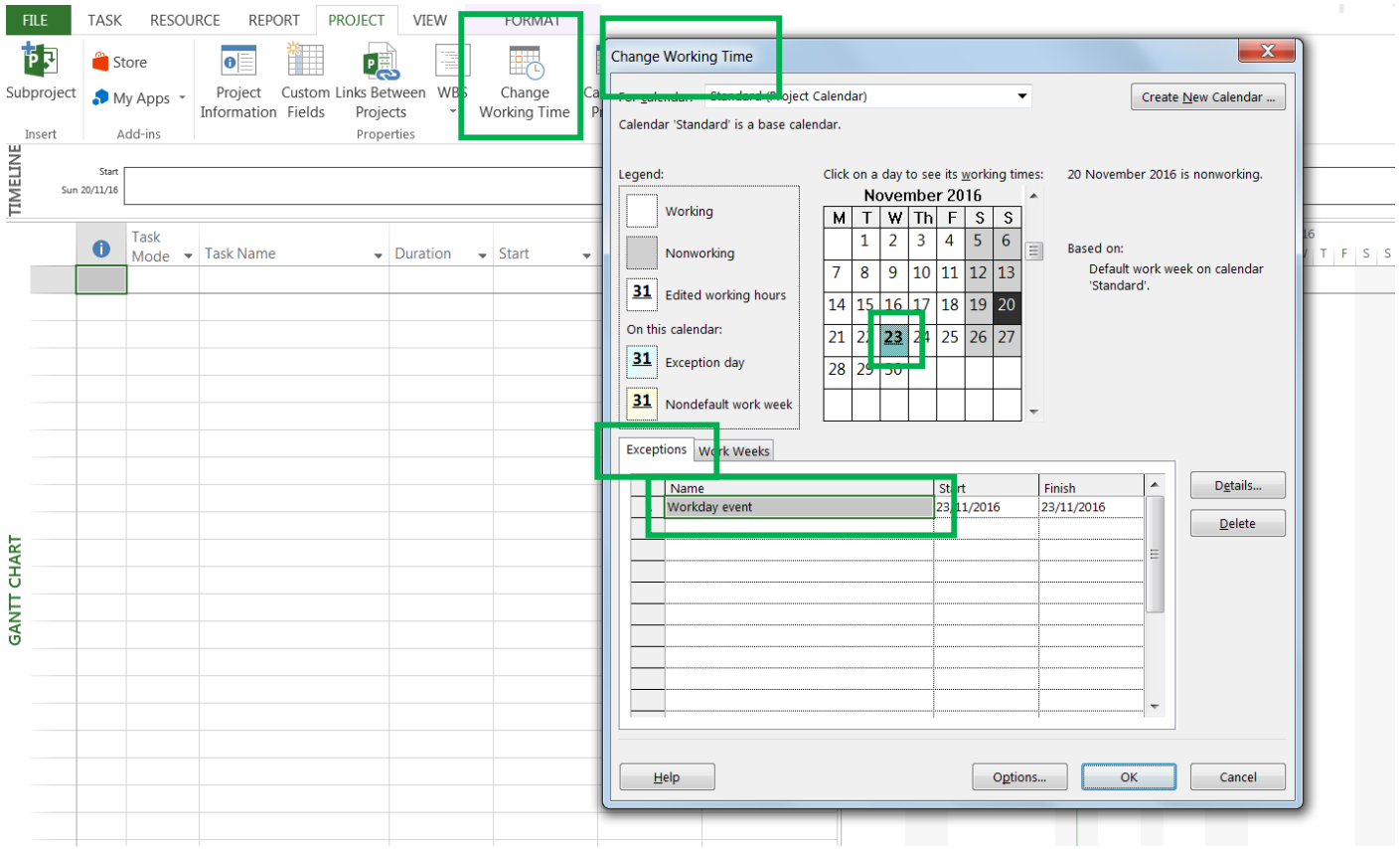
- **Step 2 – Set Up Calendar**
  - Click ***Project tab → Project Information***.
  - Click the arrow on the Current Date dropdown box. A list appears containing three base calendars :
    - **24 Hour** – A calendar with no non-working time.
    - **Night Shift** – Covers 11 PM to 8 AM, night shifts covering all nights from Monday to Friday, with one hour breaks.
    - **Standard** – Regular working hours, Monday to Friday between 8 AM to 5 PM, with one hour breaks.



MS Project Basis – Create a new plan

❑ Project Information

- **Step 3 – Calendar Customization**
  Click ***Project tab → Change Working Time***
  - Under Exceptions Tab click on the Name Field, enter event as “Workday Event”.
  - In the Start field enter 11/23/16, and then enter the same date in the Finish field.
  → This date is now scheduled as **a non-working day** for the project.
  - You can also verify the changed color indicated in the calendar within the dialog box as below.
  - Click ***Ok*** to close.



MS Project Basis – Create a new plan

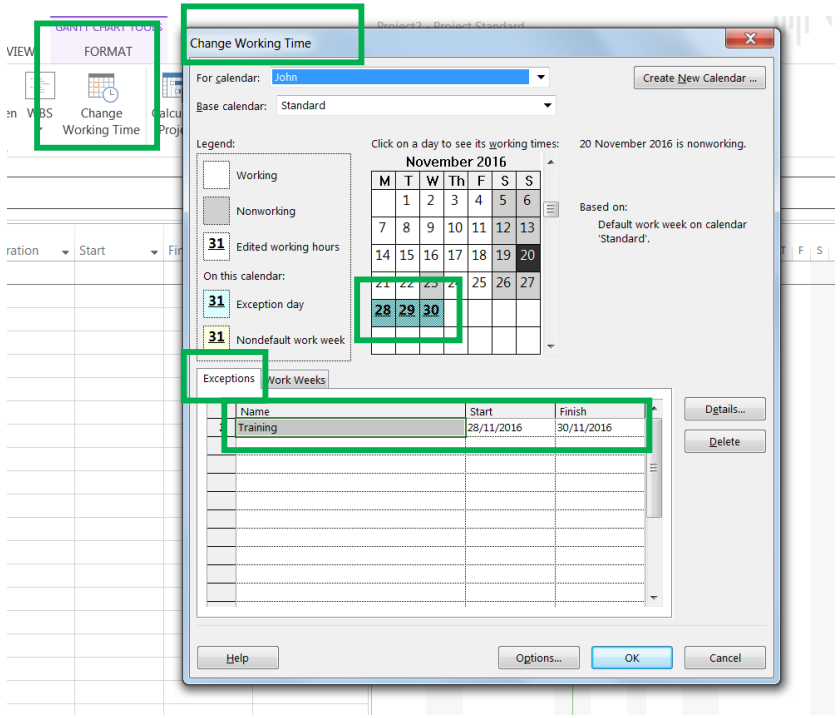
❑ Project Information

Step 4 – Setting up Resource Calendar

Comments :

- You can change the work and non-working time for each resource. You can modify the resource calendar to record vacation time, training time, etc.
- **Resource Calendar** can only be applied to work resources and not to material and cost resources.
- By default when we create the resources in a plan, the resource calendar matches the **Standard base calendar**. And any changes you make to the Project Calendar, gets reflected automatically in resource calendars

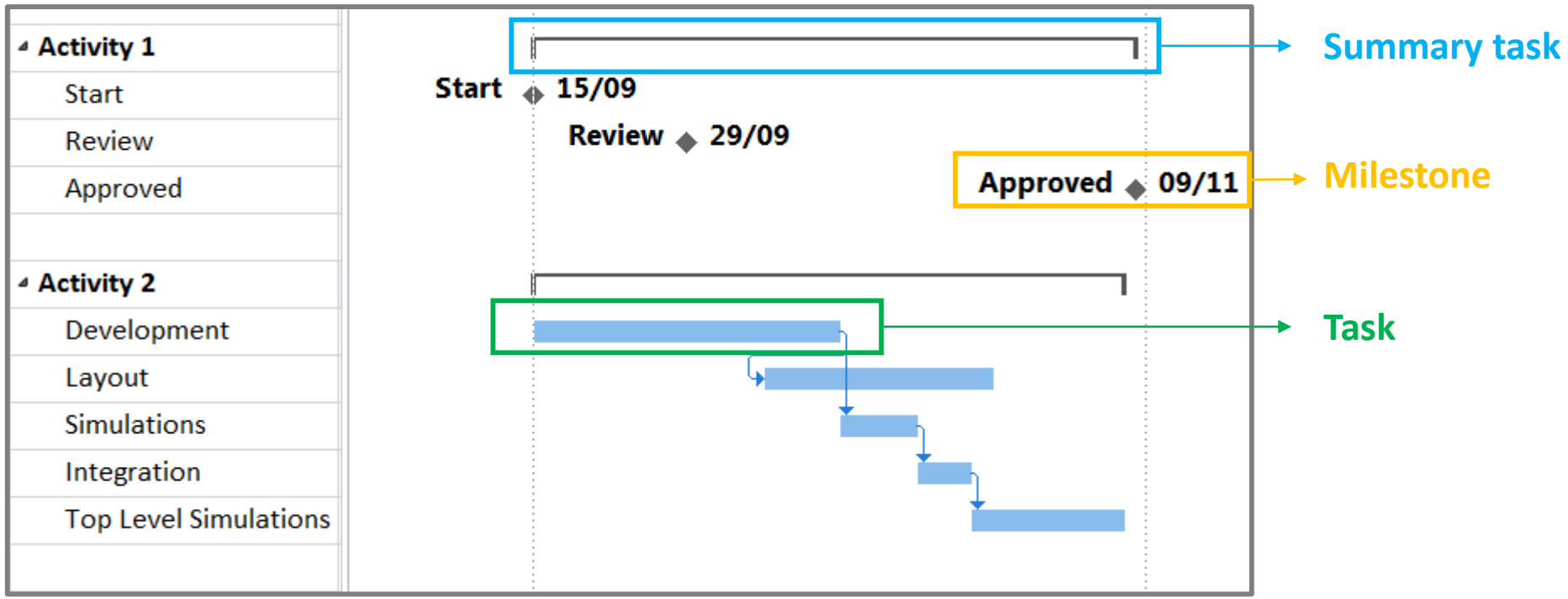
- Click ***Project tab → Change Working Time***
- Click the down arrow for the "For Calendar" dropdown box.
- Select the resource for whom you want to change work schedule. In the following screen you can see we have chosen John
- Under Exceptions Tab click on the Name Field, enter event as "training" with date of his training
- Click ***Ok*** to close.



MS Project Basis – Create a new plan

❑ **3 different types of tasks**

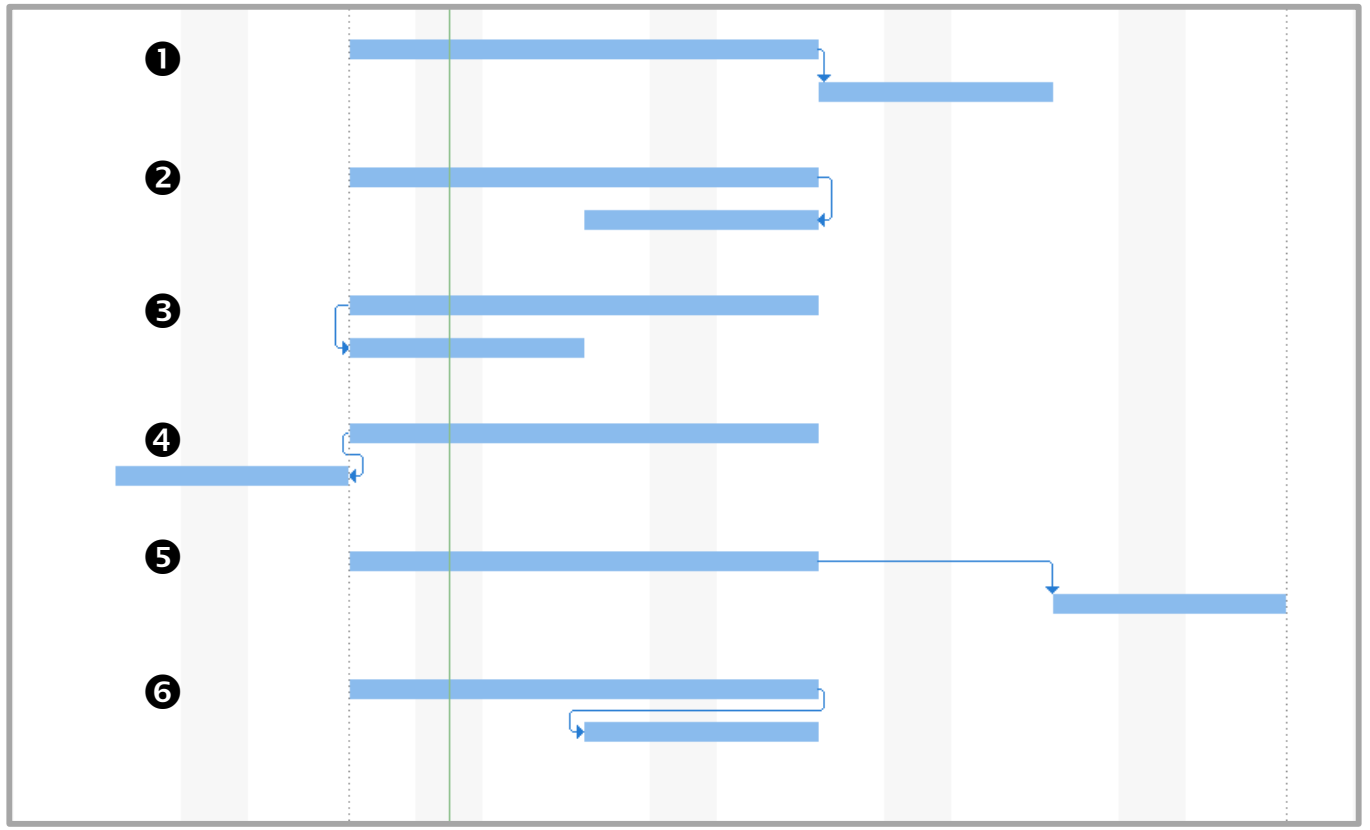
- **Task** = An activity that has a beginning and a duration
- **Summary task** = A task that summarizes the duration, work, and costs of a group of sub-tasks
- **Milestone** = A significant event in the project, usually the completion of a major deliverable.
  → Milestone = A regular Task with duration = 0



MS Project Basis– Create a new plan

- **Different relations between tasks**

1. Finish-to-start (common)
2. Finish-to-finish
3. Start-to-start
4. Start-to-finish
5. Lag = wait time
6. Lead = Acceleration time



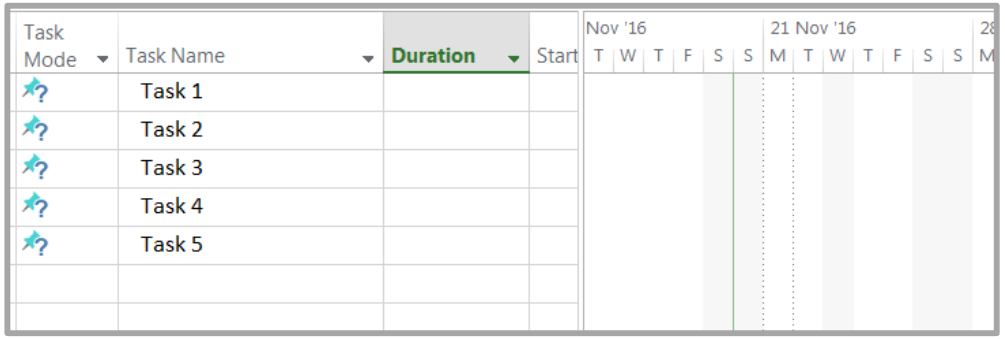
MS Project Basis – Create a new plan

❑ How to create Project Tasks

- **Step 1 - Enter Task**

This is simple. In **Gantt Chart** View, just click a cell directly below the Task Name column. Enter the task name. In the screen, we have entered 5 different tasks.

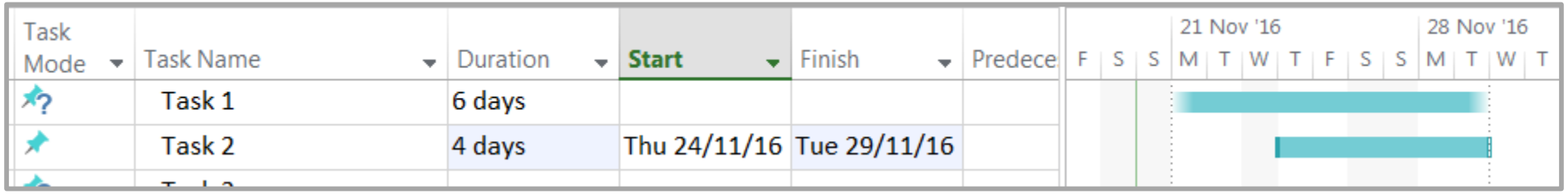
Comment : for MS Project, a task is the effort and action required to produce a particular project deliverable.



- **Step 2 - Enter duration**

Reminder of what we learn in Time Management Chapter : A duration of the task is the estimated amount of time it will take to complete a task. As a project manager you can estimate a task duration using expert judgment, historical information, analogous estimates or parametric estimates.

This is simple in **Gantt Chart** View, click the cell below Duration column heading → Enter the duration. (Task 1 in the below screenshot)
You can also enter Start and Finish date and MS Project will calculate the duration on its own. (Task 2 in the following screenshot)



MS Project Basis– Create a new plan

❑ How to create Project Tasks

- **Step 2 - Enter duration**

You can enter task duration in terms of different dimensional units of time, namely minutes, hours, days, weeks, and months. You can use abbreviations for simplicity and ease as shown in the following table.

Value you want to enter	Abbreviation	Appearance
45 minutes	45 m	45 mins
2 hours	2h	2 hrs
3 days	3d	3 days
6 weeks	6w	6 weeks
2 months	2mo	2 mons

Remember, Project default values depend on your work hours. So 1 day is not equivalent to 24 hours but has 8 hours of work for the day. Of course, you can change these defaults anytime you want.

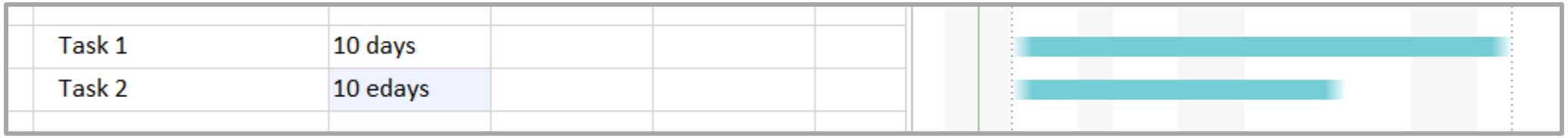
Value entered	Value	Project default Value
1 minute	60 seconds	60 seconds
1 hour	60 minutes	60 minutes
1 day	24 hours	8 hours (1 workday)
1 week	7 days	40 hours (5 workdays)
1 month	28 to 31 days	160 hours (20 workdays)

MS Project Basis– Create a new plan

❑ How to create Project Tasks

- **Step 2 - Enter duration → Elapsed Duration**

- Elapsed Duration is the time that elapses while some event is occurring which does not require any resources.
- Elapsed duration for a task can be used in instances where a task will go on round-the-clock without any stoppage.
- A normal workday has 8 hours, and an elapsed day duration will have 24 hours. The task also **continues over non-working (holidays and vacations) and working days.**



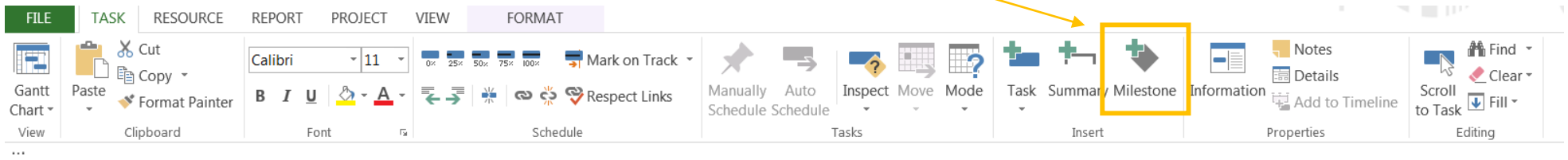
MS Project Basis– Create a new plan

❑ How to create Milestones

There are two ways you can insert a milestone.

- **Method 1 – Inserting a Milestone**

Click name of the Task which you want to insert a **Milestone** :
Click ***Task tab → Insert group → Click Milestone***.
MS Project names the new task as <New Milestone> with zero-day duration.



- **Method 2 – Converting a Task to a Milestone**

Click on any particular task or type in a new task under the Task Name Heading.
Under Duration heading type in “0 days “.
MS Project converts it to a Milestone.

MS Project Basis – Create a new plan

❑ How to create Summary Tasks

- There can be a huge number of tasks in a project schedule, it is therefore a good idea to have a bunch of related tasks rolled up into a **Summary Task** to help you organize the plan in a better way. It helps you organize your plan into phases.

- In MS Project 2013, you can have several number of sub-tasks under any higher level task. These higher level tasks are called Summary Task. At an even higher level, they are called **Phases**. The highest level of a plan's outline structure is called the **Project Summary Task**, which encompasses the entire project schedule.

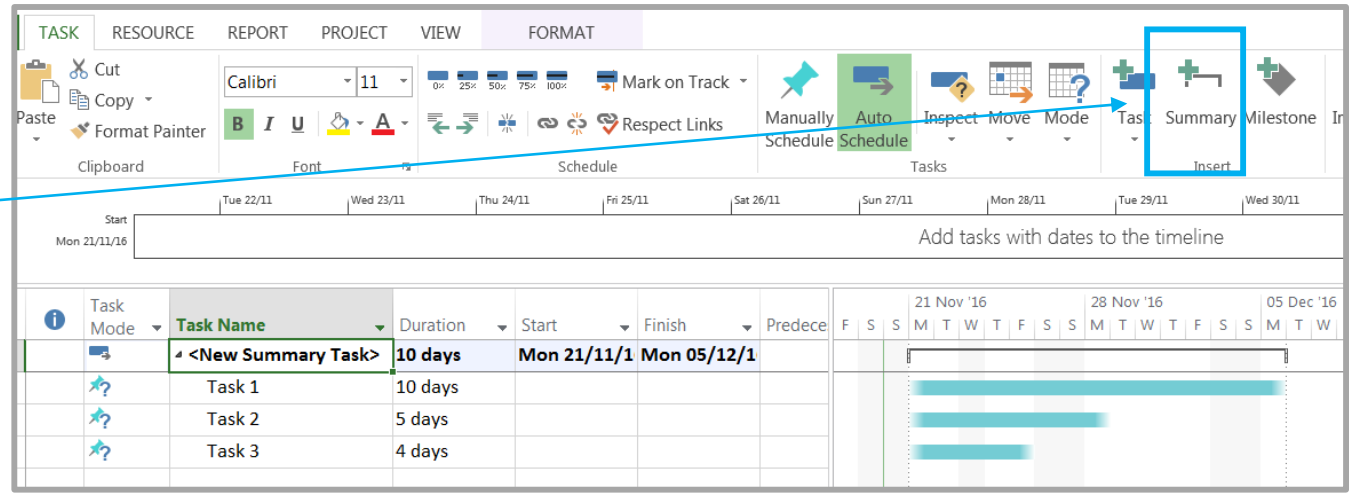
- Remember because summary task is **not a separate task entity** but **a phase of the project with several sub-tasks** in it, the **duration of the summary task is from the start of the first sub-task to the finish of the last sub-task**. This will be automatically calculated by MS Project.

MS Project Basis – Create a new plan

❑ How to create Summary Tasks

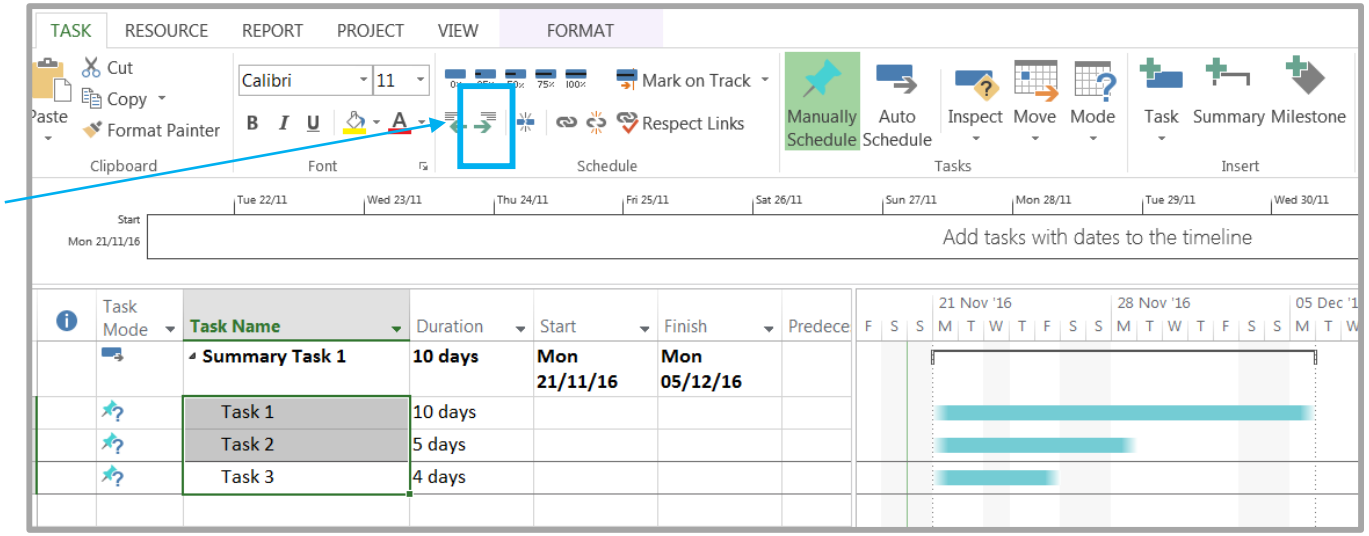
- **Method 1**

Select the names of Task1,Task2 and Task2.
Click ***Task Tab → group Insert → Click Summary***
MS Project creates a <New Summary Task>.
Rename it to Summary Task 1.



- **Method 2**

Add a task called Summary Task 1
Select the Task1, Task 2and Task3.
Click ***Task tab → Schedule group → Click Indent Task***



MS Project Basis – Create a new plan

❑ How to link Tasks

- In MS Project, the **first task** is called a **predecessor** because it precedes tasks that depend on it.
- The **following task** is called the **successor** because it succeeds, or follows tasks on which it is dependent.
- Any task can be a predecessor for one or more successor tasks. Likewise, any task can be a successor to one or more predecessor tasks

- There are four types of task dependencies:
  - **Finish to Start** (FS)
  - **Finish to Finish** (FF)
  - **Start To Start** (SS)
  - **Start to Finish** (SF)

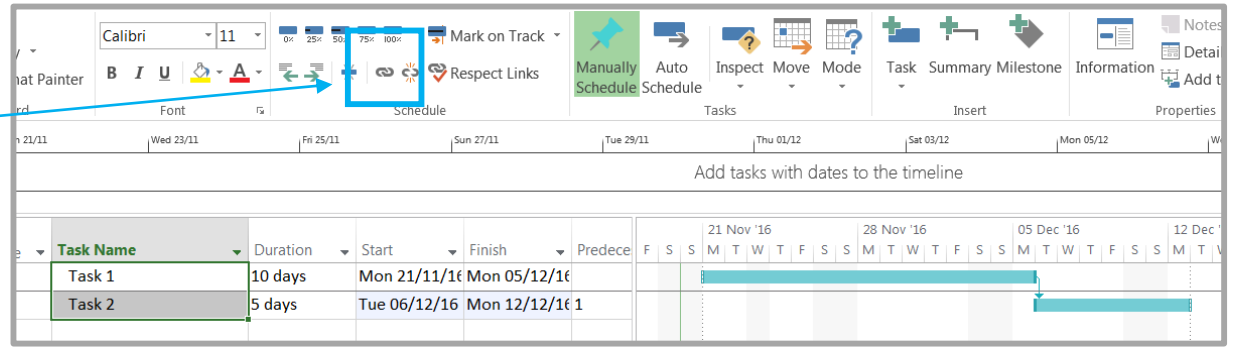
- In MS Project you can identify the Task Links :
  - **Gantt Chart** – In Gantt Chart and **Network Diagram** views, task relationships appear as the links connecting tasks.
  - **Tables** – In Tables, task ID numbers of predecessor task appear in the predecessor fields of successor tasks.

MS Project Basis – Create a new plan

❑ How to link Tasks

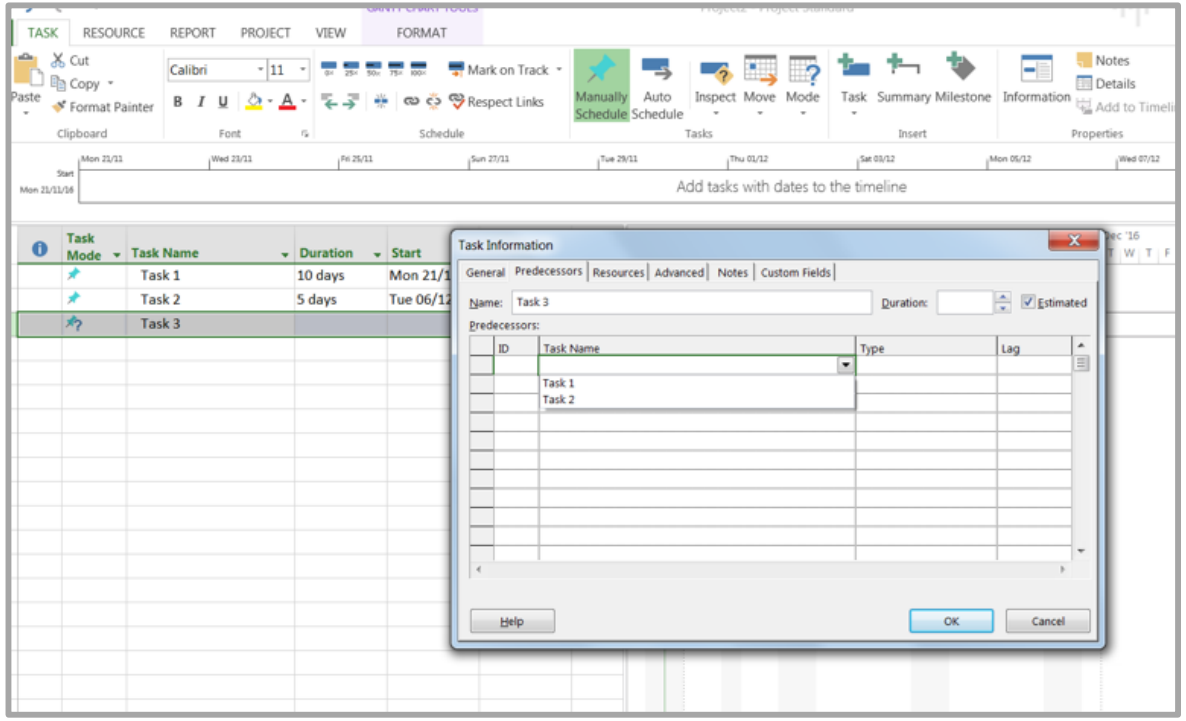
- **Method 1**

Select the names of Task1 and Task2
Click ***Task tab → Schedule group → Link the Selected Tasks***.
Task 1 and Task 2 are linked with a Finish-to-Start relationship.
Comment : Task 2 will have a Start date of the Next working day from Finish date of Task 1



- **Method 2**

Double click a successor task you would like to link, here task 3
The Task information dialog box opens
Click ***Predecessors tab***
Choose the predecessor task (Task 2)
Click ***OK***.



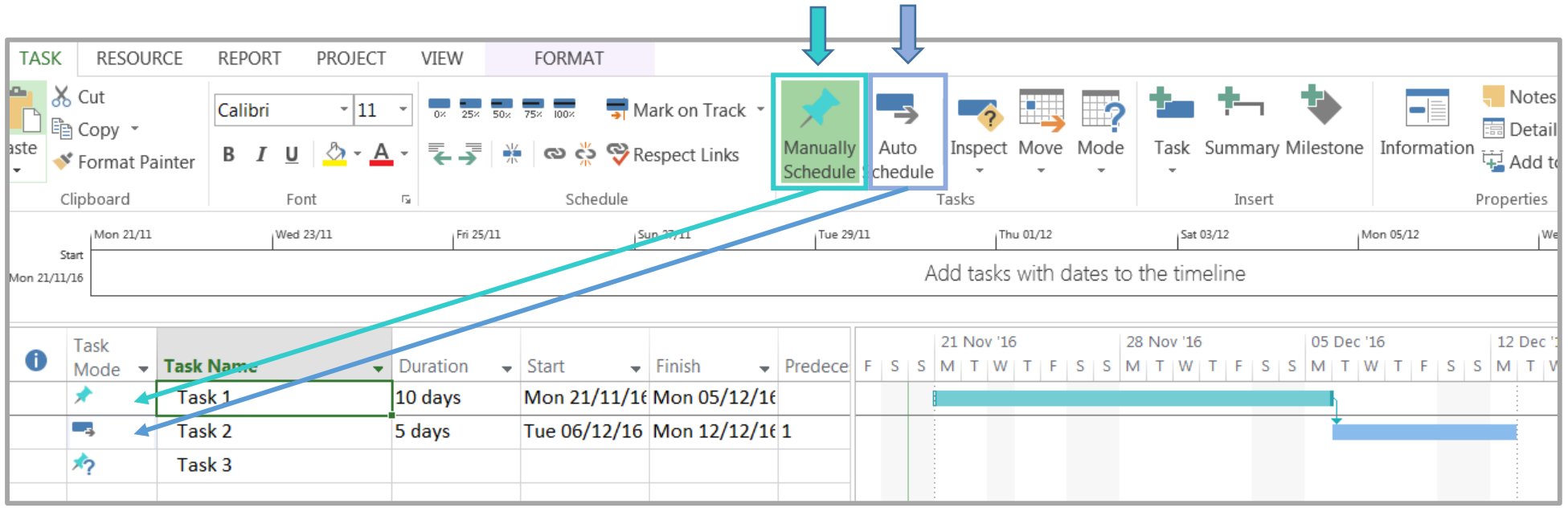
MS Project Basis – Create a new plan

❑ How to link Tasks

- **Main Highlight : Respect Links**

- If you are in **Manually Scheduled mode**, any change in duration of the predecessor task will not reflect on Start date of the successor.
- If you are in **Auto Schedule mode**, the start date will automatically updated .

  Automatic Scheduling – This uses the Scheduling engine in MS Project. It calculates values such as task durations, start dates, and finish dates automatically. It takes into accounts all constraints, links and calendars. ***Recommendation : use Automatic Scheduling***



MS Project Basis – Create a new plan

❑ How to link Tasks

- **Apply Task Constraints**

- Each task created in MS Project 2013 will be constrained as "**As Soon As Possible**" by default when Automatic Scheduling is turned ON.

As Soon As Possible means the task starts as soon as the project starts, if there are no dependencies that would delay it. So, no fixed start or end dates are imposed by this constraint type, but of course predecessor and successor dependencies are maintained.

- There are 8 Task Constraints.

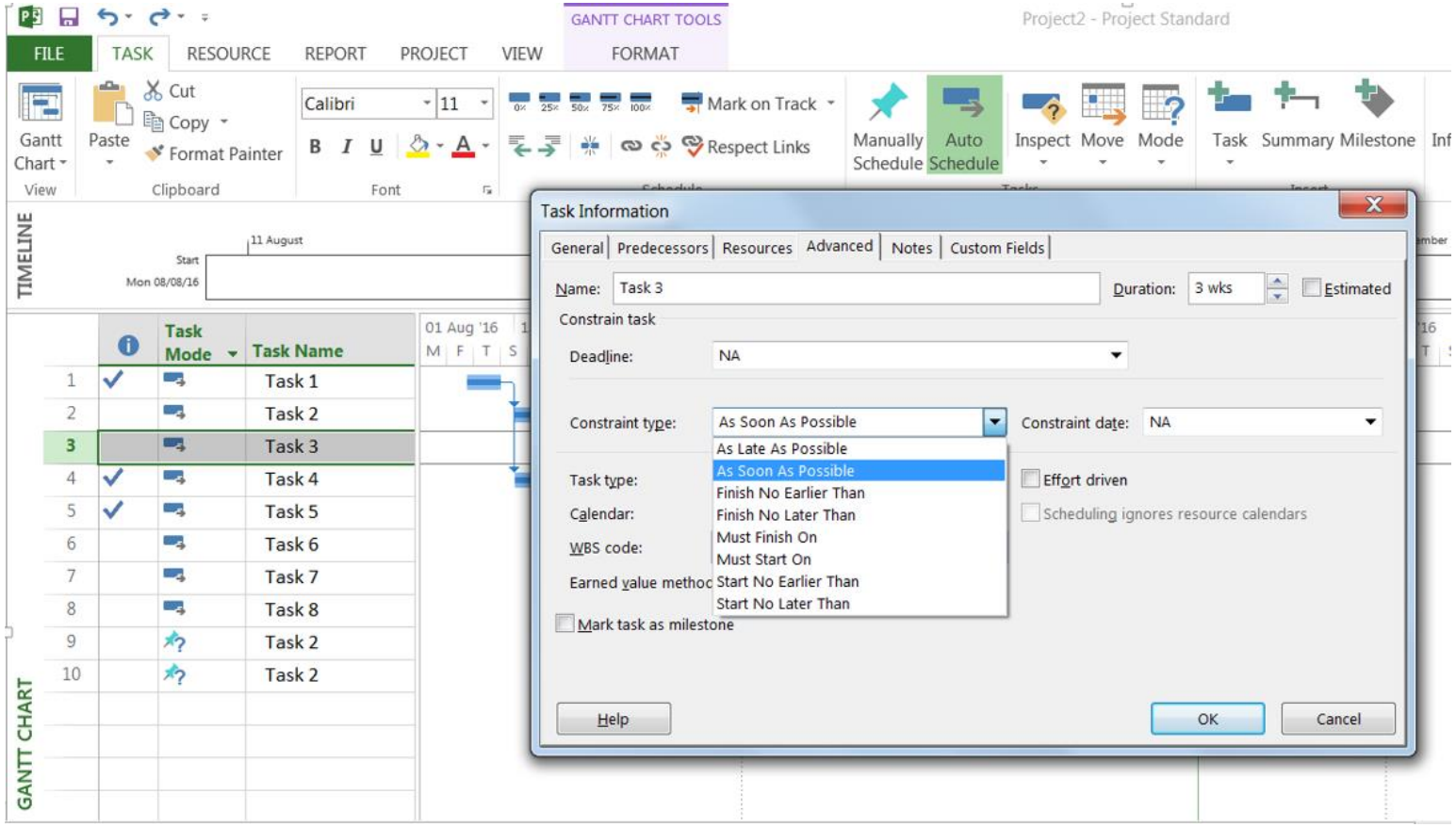
Constraint type	Constraint name	Description
Flexible	As Late As Possible (ALAP)	Task is scheduled as late as possible with the task ending before the project ends and without delaying subsequent tasks. Default constraint when you schedule from the project finish date. Do not enter a task start or finish date with this constraint.
	As Soon As Possible (ASAP)	Task is scheduled to begin as early as possible. Default constraint when you schedule from the project start date. Do not enter a start or finish date with this constraint.
Semi-Flexible	Start No Earlier Than (SNET)	Task is scheduled to start on or after a specified date.
	Finish No Earlier Than (FNET)	Task is scheduled to finish on or after a specified date.
	Start No Later Than (SNLT)	Task is scheduled to start on or before a specified date.
	Finish No Later Than (FNLT)	Task is scheduled to finish on or before a specified date.
Inflexible	Must Finish On (MFO)	Task is scheduled to finish on a specified date.
	Must Start On (MSO)	Task is scheduled to start on a specified date.

MS Project Basis – Create a new plan

❑ How to link Tasks

- **Apply Task Constraints**

- Click ***Task Tab → double-click the required Task under Task Name column***
→ Task Information dialog box opens
→ Advanced Tab.
Click dropdown box for Constraint type. Choose the constraint you would like to apply.



MS Project Basis – Set Up Resources

❑ **Introduction :**

- In project management terminology, resources are required to carry out the project tasks. They can be people, equipment, facilities, funding, or anything (except labor) required for the completion of a project task.

→ **Optimum Resource Scheduling** is the key to successful project management.

- Resource Types
  - **Work resources** − People and equipment to complete the tasks.
  - **Cost resources** − Financial cost associated with a task.
  - **Material resources** − Consumables used as project proceeds…

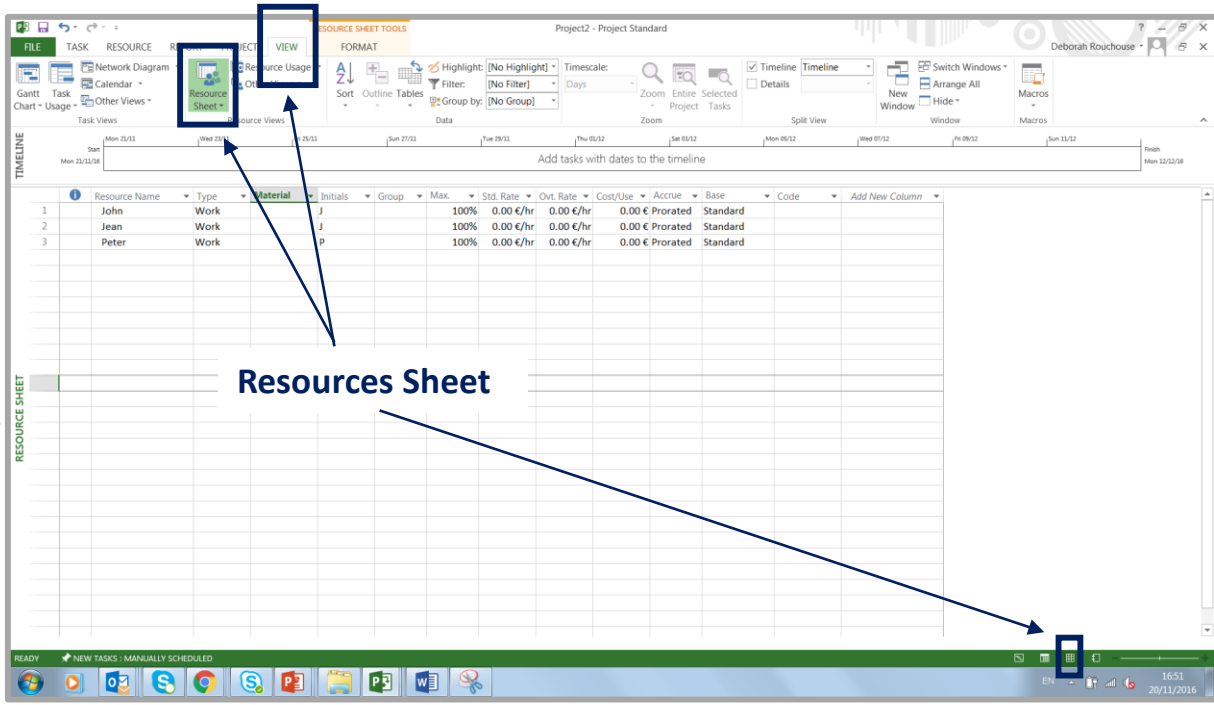
MS Project Basis – Set Up Resources

❑ How to enter Work Resource Names :

- You can enter resource names according to your convenience.

Resource	Example
Work resource as an identified person	John, Kevin, Tony, Sarah, …
Work resource as a job function or group	HW Engineer, SW Engineer, Lab Engineer
Work resource as an equipment	Industrial tester , datacenter …

- **Steps involved :**
  - Click ***View tab → Resource Views group → Click Resource Sheet.***
  - Click the cell directly below the Resource Name heading column.
  - Enter Resources as an individual person, job function or group.



MS Project Basis – Set Up Resources

❑ **How to enter Work Resource Names :**

- **Max Units** field represents the maximum capacity of a resource to work on assigned tasks.
  → 100% stands for 100 percent of resource's working time is available for work on task assigned. The resource is available full-time on each workday.
  If the resource gets allocated to task or tasks that would require more than his/its work hours, the resource is over allocated and MS Project will indicate this in red formatting.
- If a resource does not represent an individual person but a job function, where a group of people with the same skill set can work on the task, we can enter larger Max Units to represent the number of people in the group. So 400% would indicate, 4 individual people working full-time every workday.
- **Work Resource as Part-time** : Entering a value less than 100% in Max.Units would mean you expect the resource capacity to be lower than a full-time resource.
  So 80% would mean the individual works during a standard week 4 days (iso 5 days)

Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue	Base
John	Work		J		100%	0.00 €/hr	0.00 €/hr	0.00 €	Prorated	Standard
Jean	Work		J		100%	0.00 €/hr	0.00 €/hr	0.00 €	Prorated	Standard
Peter	Work		P		80%	0.00 €/hr	0.00 €/hr	0.00 €	Prorated	Standard

MS Project Basis – Set Up Resources

❑ **How to enter Resources costs :**

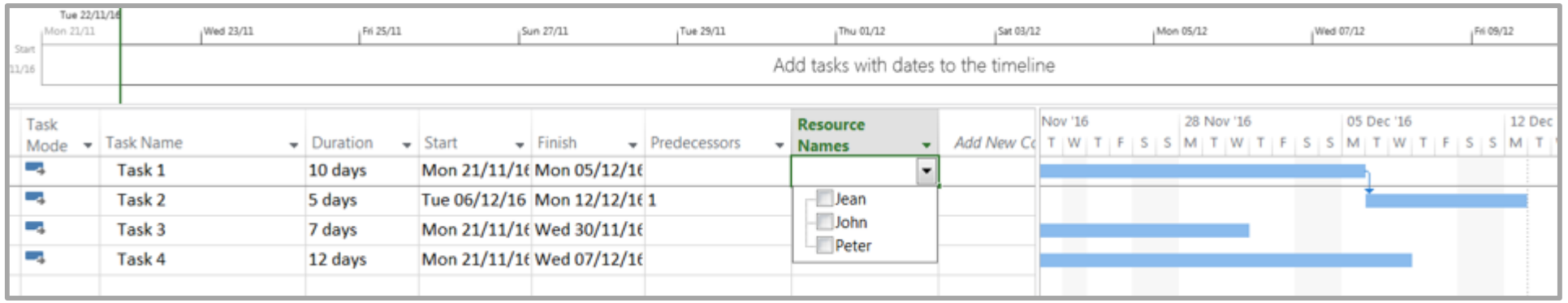
- **Steps involved** to enter standard and overtime pay rates for work resources :
  - Click ***View tab → Resource Views group → Resource Sheet***.
  - Click the cell directly below Resource Name heading column to create Resources.
  - Click the Std. Rate field for each resource to costs in hourly (default), daily, weekly, monthly and yearly rates.
    For ex : tape 600/w → 600€/week

Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue	Base
John	Work		J		100%	500.00 €/wk	50.00 €/hr	0.00 €	Prorated	Standard
Jean	Work		J		100%	600.00 €/wk	50.00 €/hr	0.00 €	Prorated	Standard
Peter	Work		P		80%	550.00 €/wk	55.00 €/hr	0.00 €	Prorated	Standard

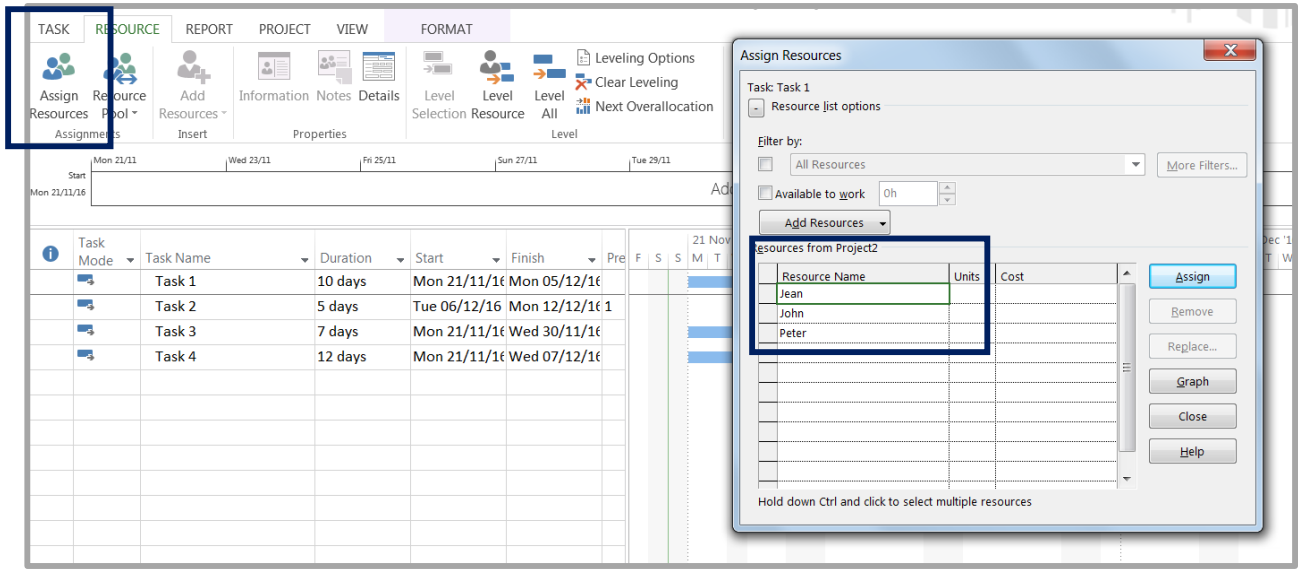
MS Project Basis – Set Up Resources

❑ How to add Resources to Tasks:

- **Method 1**
  - Click ***View Tab → Gantt Chart View → Resource Name column***.
  - Click the box below the Resource Name column for the task you need the resource to be assigned.
  - From the dropdown, choose the resource name.



- **Method 2**
  - Click ***Resource tab → Under Assignments group → Assign Resources.***
  - In the Assign Resources dialog box, click the resource name you like to assign.



MS Project Basis – Set Up Resources

❑ How to add Resources to Tasks:

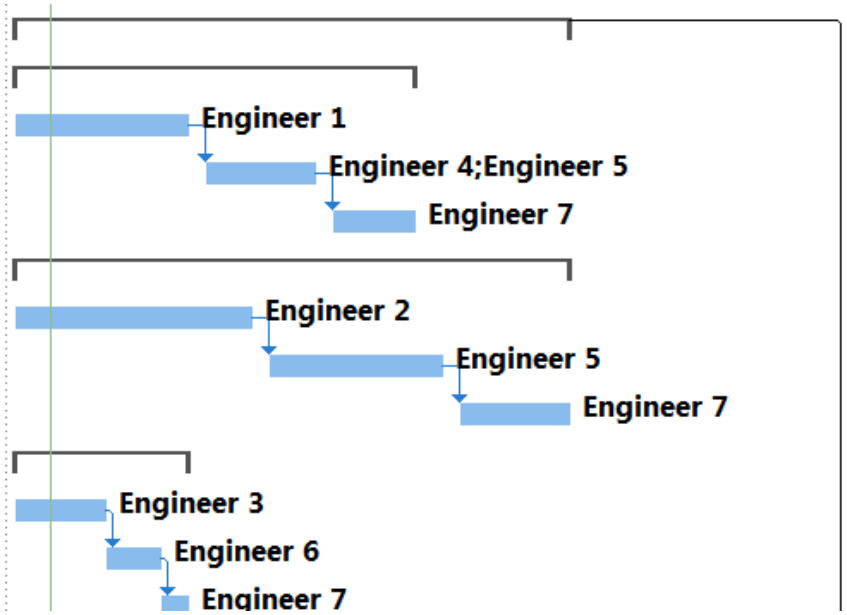
- **Check Resource Allocations**

- Relationship between a resource's capacity and task assignments is called **allocation**.
- This can defined by 3 states –
  - **Under allocated** – An Engineer who works for 40 hours a week, has work assigned for only 20 hours.
  - **Fully allocated** – An Engineer who works for 40 hours a week, is assigned 40 hours of work in that week.
  - **Over allocated** – An Engineer is assigned 65 hours of work, when he only has a 40 hour work week.

- **In Gantt Chart View** : Over-allocation is highlighted by the red over allocated icon in the indicator column.

GANTT CHART

2			**Design**	**45 days**	**Mon 21/11/1**	**Fri 20/01/17**	
3			**Module 1**	**32 days**	**Mon 21/11/1**	**Tue 03/01/17**	
4			Development	15 days	Mon 21/11/16	Fri 09/12/16	
5			Test	10 days	Mon 12/12/16	Fri 23/12/16	4
6			Integration	7 days	Mon 26/12/16	Tue 03/01/17	5
7			**Module 2**	**45 days**	**Mon 21/11/1**	**Fri 20/01/17**	
8			Development	20 days	Mon 21/11/16	Fri 16/12/16	
9			Test	15 days	Mon 19/12/16	Fri 06/01/17	8
10			Integration	10 days	Mon 09/01/17	Fri 20/01/17	9
11			**Module 3**	**15 days**	**Mon 21/11/1**	**Fri 09/12/16**	
12			Development	8 days	Mon 21/11/16	Wed 30/11/16	
13			Test	4 days	Thu 01/12/16	Tue 06/12/16	12
14			Integration	3 days	Wed 07/12/16	Fri 09/12/16	13



MS Project Basis – Set Up Resources

❑ How to add Resources to Tasks:

- **Check Resource Allocations**

- **In resources Sheet View** : it is highlighted by the red color for the over-allocated resource

Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue	Base
Engineer 1	Work		E		100%	550.00 €/wk	70.00 €/hr	0.00 €	Prorated	Standard
Engineer 2	Work		E		100%	500.00 €/wk	70.00 €/hr	0.00 €	Prorated	Standard
Engineer 3	Work		E		100%	500.00 €/wk	70.00 €/hr	0.00 €	Prorated	Standard
Engineer 4	Work		E		100%	500.00 €/wk	70.00 €/hr	0.00 €	Prorated	Standard
Engineer 5	**Work**		**E**		**100%**	**550.00 €/wk**	**70.00 €/hr**	**0.00 €**	**Prorated**	**Standard**
Engineer 6	Work		E		100%	700.00 €/wk	70.00 €/hr	0.00 €	Prorated	Standard
Engineer 7	Work		E		100%	450.00 €/wk	60.00 €/hr	0.00 €	Prorated	Standard

Comment : to resolve Resource Over Allocation

- either change the scope (reduce the amount of work),
- Or assign more resources
- or accept a longer schedule to resolve overallocation.

MS Project Basis – Set Up Resources

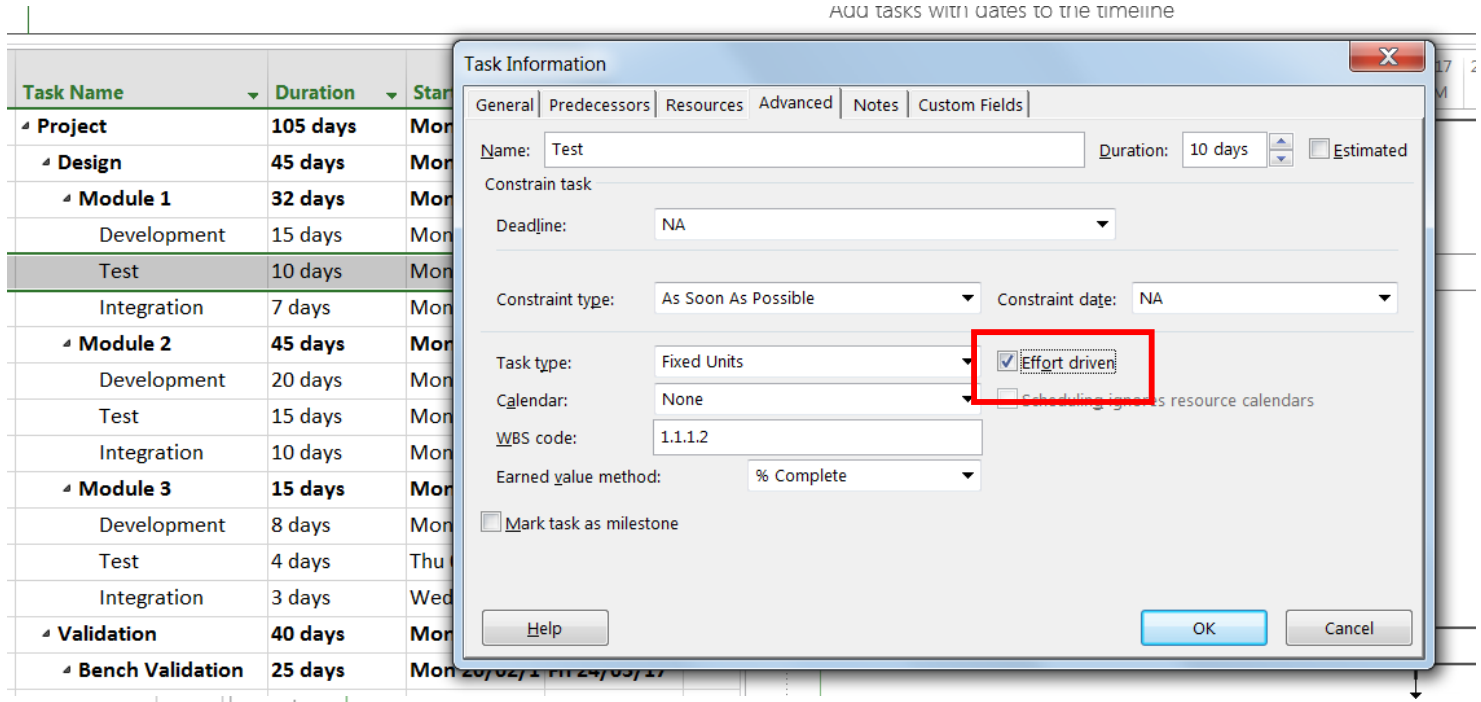
❑ How to add Resources to Tasks:

- **Main Highlight :** When you associate Resources to a task, the task can be Effort driven. That means that according the number of resources allocated to the task, **the duration will be divided by this number** .

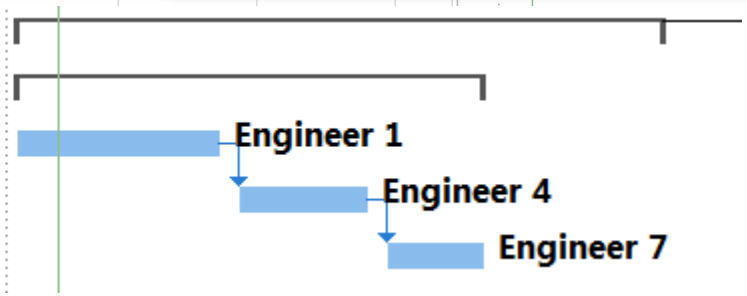
- **Apply Effort driven**

- Click ***Task Tab → double-click the required Task under Task Name column***
→ Task Information dialog box opens
→ Advanced Tab.

- ***Example :***



Design	45 days	Mon 21/11/1	Fri 20/01/17	
Module 1	32 days	Mon 21/11/1	Tue 03/01/17	
Development	15 days	Mon 21/11/16	Fri 09/12/16	
Test	10 days	Mon 12/12/16	Fri 23/12/16	4
Integration	7 days	Mon 26/12/16	Tue 03/01/17	5



MS Project Basis – Set Up Resources

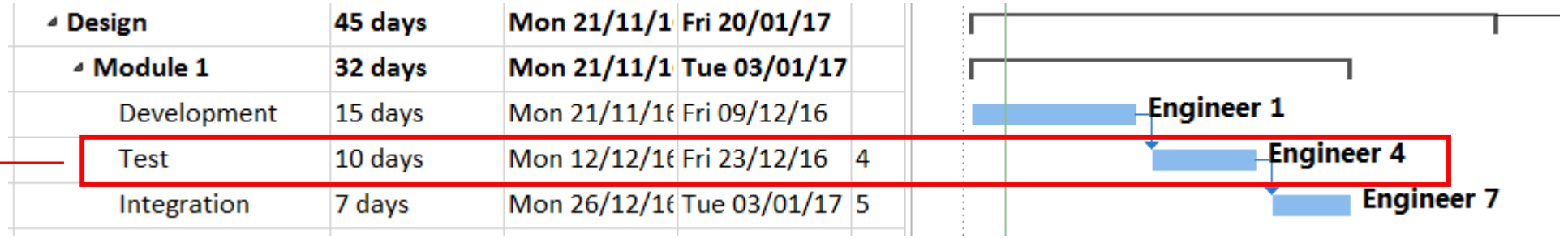
❑ How to add Resources to Tasks:

- **Main Highlight :** When you associate Resources to a task, the task can be Effort driven. That means that according the number of resources allocated to the task, **the duration will be divided by this number** .

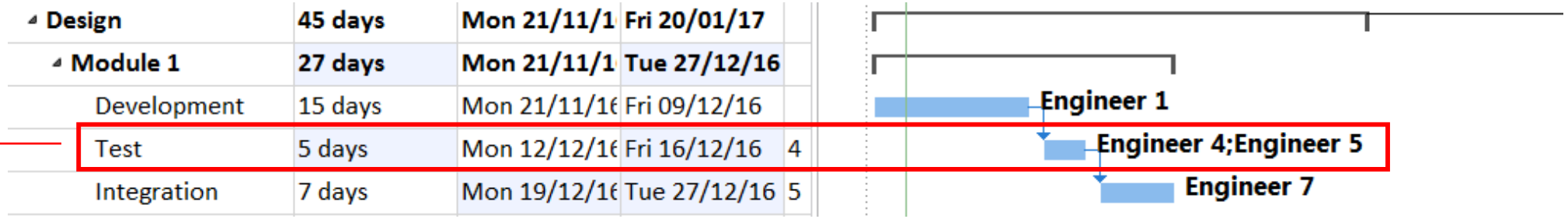
- **Apply Effort driven**

- ***Example :***

1 resource assigned to Task Test – duration: 10 days

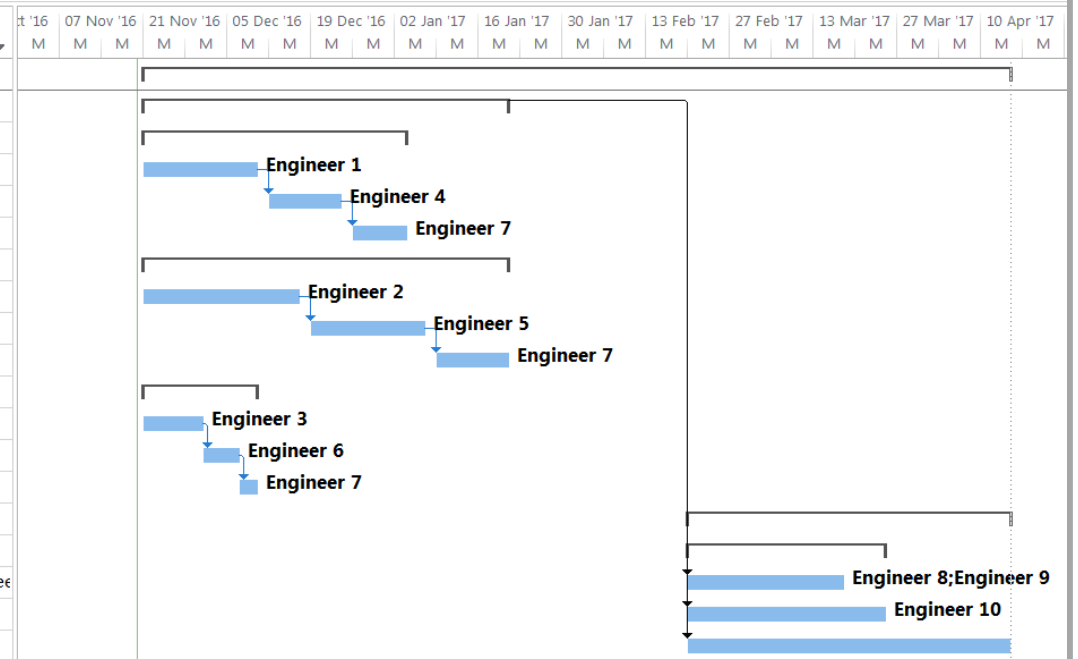


2 resources assigned to Task Test – duration: **5 days**



GANTT CHART

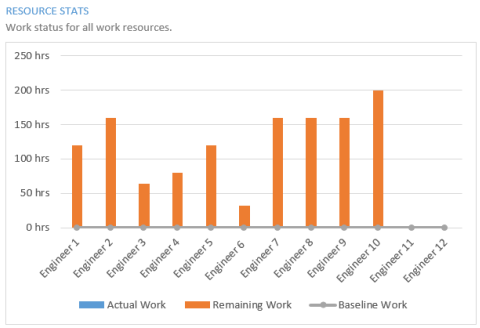
Task Mode	Task Name	Duration	Start	Finish	Predeces	Resource Names
	Project	**105 days**	**Mon 21/11/1**	**Fri 14/04/17**		
	Design	**45 days**	**Mon 21/11/1**	**Fri 20/01/17**		
	Module 1	**32 days**	**Mon 21/11/1**	**Tue 03/01/17**		
	Development	15 days	Mon 21/11/16	Fri 09/12/16		Engineer 1
	Test	10 days	Mon 12/12/16	Fri 23/12/16	4	Engineer 4
	Integration	7 days	Mon 26/12/16	Tue 03/01/17	5	Engineer 7
	Module 2	**45 days**	**Mon 21/11/1**	**Fri 20/01/17**		
	Development	20 days	Mon 21/11/16	Fri 16/12/16		Engineer 2
	Test	15 days	Mon 19/12/16	Fri 06/01/17	8	Engineer 5
	Integration	10 days	Mon 09/01/17	Fri 20/01/17	9	Engineer 7
	Module 3	**15 days**	**Mon 21/11/1**	**Fri 09/12/16**		
	Development	8 days	Mon 21/11/16	Wed 30/11/16		Engineer 3
	Test	4 days	Thu 01/12/16	Tue 06/12/16	12	Engineer 6
	Integration	3 days	Wed 07/12/16	Fri 09/12/16	13	Engineer 7
	Validation	**40 days**	**Mon 20/02/1**	**Fri 14/04/17**		
	Bench Validation	**25 days**	**Mon 20/02/1**	**Fri 24/03/17**		
	IPs Validation	4 wks	Mon 20/02/17	Fri 17/03/17	2FS+4 wks	Engineer 8;Enginee
	System Validation	5 wks	Mon 20/02/17	Fri 24/03/17	2FS+4 wks	Engineer 10
	Industrial Validation	8 wks	Mon 20/02/17	Fri 14/04/17	2FS+4 wks	



RESOURCES SHEET

				Initials	Max.	Std. Rate	Ovt. Rate		Accrue	Base
1	Engineer 1	Work		E	100%	550.00 €/wk	70.00 €/hr	0.00 €	Prorated	Standard
2	Engineer 2	Work		E	100%	500.00 €/wk	70.00 €/hr	0.00 €	Prorated	Standard
3	Engineer 3	Work		E	100%	600.00 €/wk	70.00 €/hr	0.00 €	Prorated	Standard
4	Engineer 4	Work		E	100%	500.00 €/wk	70.00 €/hr	0.00 €	Prorated	Standard
5	Engineer 5	Work		E	100%	550.00 €/wk	70.00 €/hr	0.00 €	Prorated	Standard
6	Engineer 6	Work		E	100%	700.00 €/wk	70.00 €/hr	0.00 €	Prorated	Standard
7	Engineer 7	Work		E	100%	450.00 €/wk	60.00 €/hr	0.00 €	Prorated	Standard
8	Engineer 8	Work		E	100%	600.00 €/wk	60.00 €/hr	0.00 €	Prorated	Standard
9	Engineer 9	Work		E	100%	550.00 €/wk	60.00 €/hr	0.00 €	Prorated	Standard
10	Engineer 10	Work		E	100%	500.00 €/wk	60.00 €/hr	0.00 €	Prorated	Standard
11	Engineer 11	Work		E	100%	500.00 €/wk	50.00 €/hr	0.00 €	Prorated	Standard
12	Engineer 12	Work		E	100%	500.00 €/wk	50.00 €/hr	0.00 €	Prorated	Standard

RESOURCE OVERVIEW



Click ***Report Tab → View Reports group → click Resources → click Resource overview***

MS Project Basis – Track Progress

- **Introduction :**

  - Once your project plan is ready in MS Project, it becomes essential for a project manager **to measure the actuals** (in terms of work completed, resources used and costs incurred) and **to revise and change** information about tasks and resources due to any changes to the plans.
  - A Project Manager should not assume that everything is progressing according to plan and should always keep track of each task.

- **Save a Baseline :**

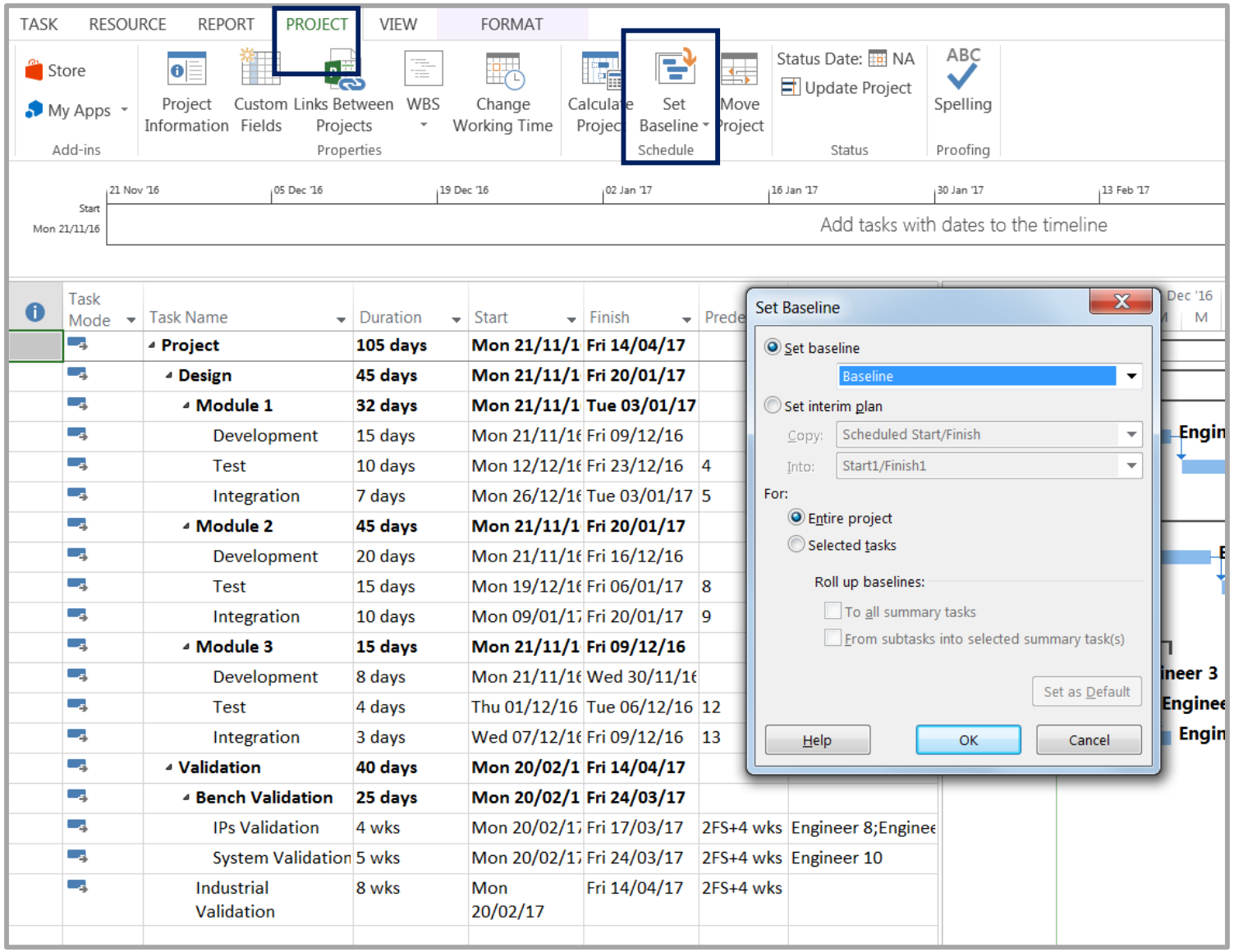
  - To evaluate project performance you need to create **a baseline against which you will compare the progress**. One needs to save the baseline, once a plan is fully developed.
  - It makes sense to save the baseline before entering any actual values such as percentage of task completion.

  - With MS Project 2013, you **can save up to 11 Baselines in a Single plan**. These multiple baselines seem contrary to the definition of baseline. You can use this flexibility when :
    - You have a baseline plan for the external customer and another for the internal team.
    - You are preparing for a risk event. You want to develop separate baseline plans for risk mitigations actions taken and track the progress.
    - You are accommodating a big change request, you might still want to keep the original plan for future reference when communicating with a stakeholder.

MS Project Basis – Track Progress

- **Create a Baseline**

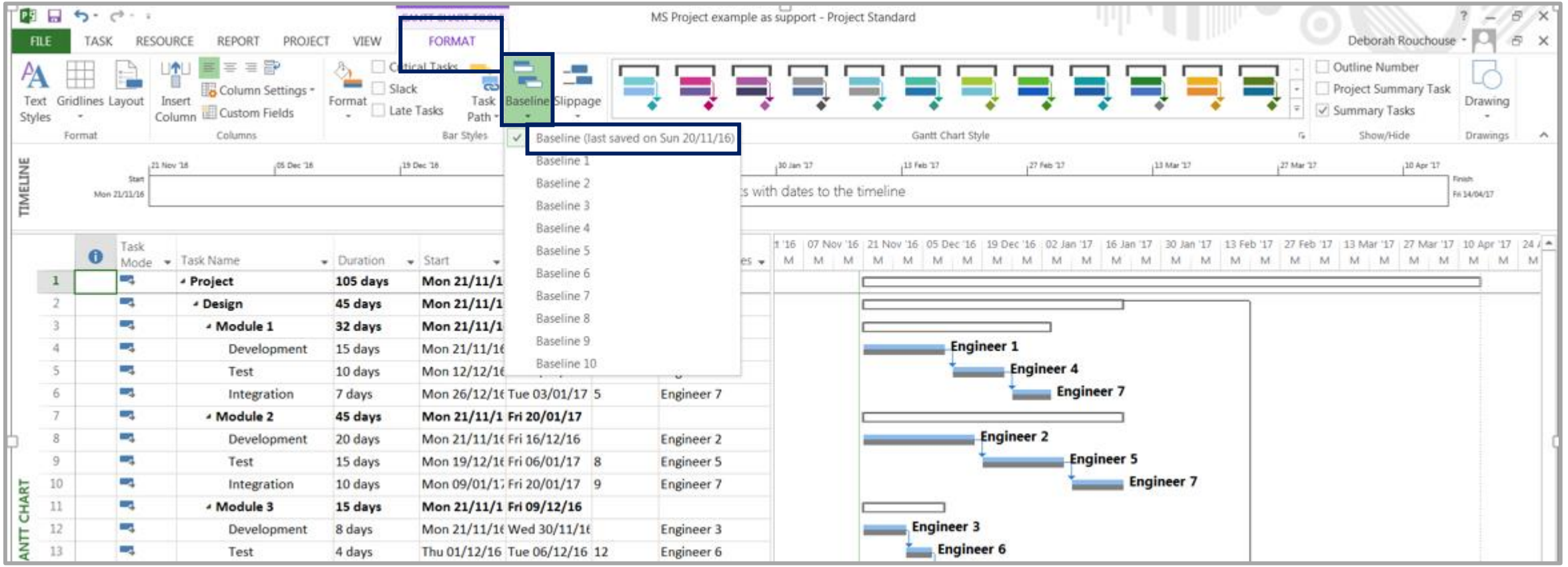
  - Click ***Project Tab → Schedule group → Set Baseline → OK***.



MS Project Basis – Track Progress

❑ **View Baseline on Gantt Chart**

- Click ***View Tab → Task Views group → Gantt Chart***.
- Click **Format Tab → Bar Styles group → Baseline** (that you want to display).



MS Project Basis – Track Progress

- **Update a Baseline**
  - As time and work progresses on a project, you might need to change the baseline as well. You have several options :
    - Update the baseline.
    - Update the baseline for selected tasks.
    - Save multiple baselines.

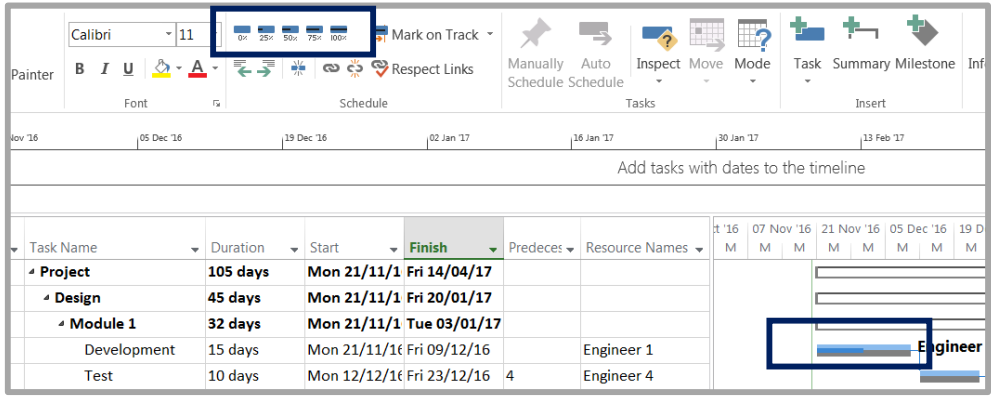
  - **Update the Baseline for the Entire Project**
    - This simply replaces the original baseline values with the currently scheduled values.
    - Click ***Project Tab → Schedule group → Set Baseline → OK***.

  - **Update the Baseline for Selected Tasks**
    - This does not affect the baseline values for other tasks or resource baseline values in the plan.
    - Click ***Project Tab → Schedule group → Set Baseline → For select Selected tasks → OK.***

  - **Save Multiple Baselines**
    - You can save up to 11 baselines in a single plan. The first one is called Baseline, and the rest are Baseline 1 through Baseline 10.
    - Click ***Project Tab → Schedule group → Set Baseline → click the dropdown box to save any baseline you like.*** Click **OK**.

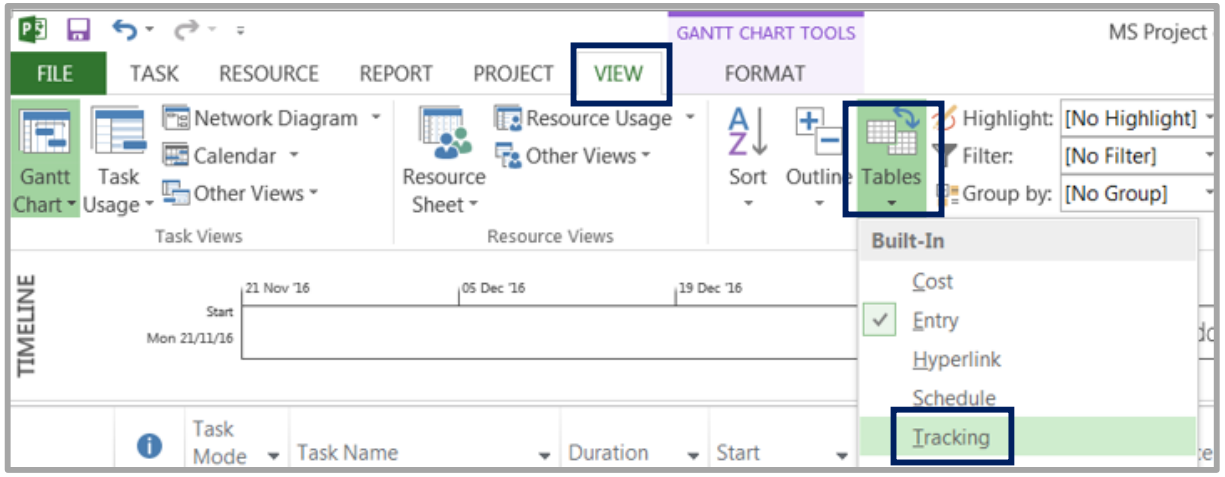
MS Project Basis – Track Progress

- **Track Plan as % Complete**
  - **Method 1** :
  - Click any Task → ***Task Tab → Schedule group → either 0%, 25%, 50%, 75% or 100%.***



  - **Method 2 :**

- Click ***View tab → Data group → Tables → Tracking***. Now for the required Task, click the corresponding % Comp column and enter the required % complete.

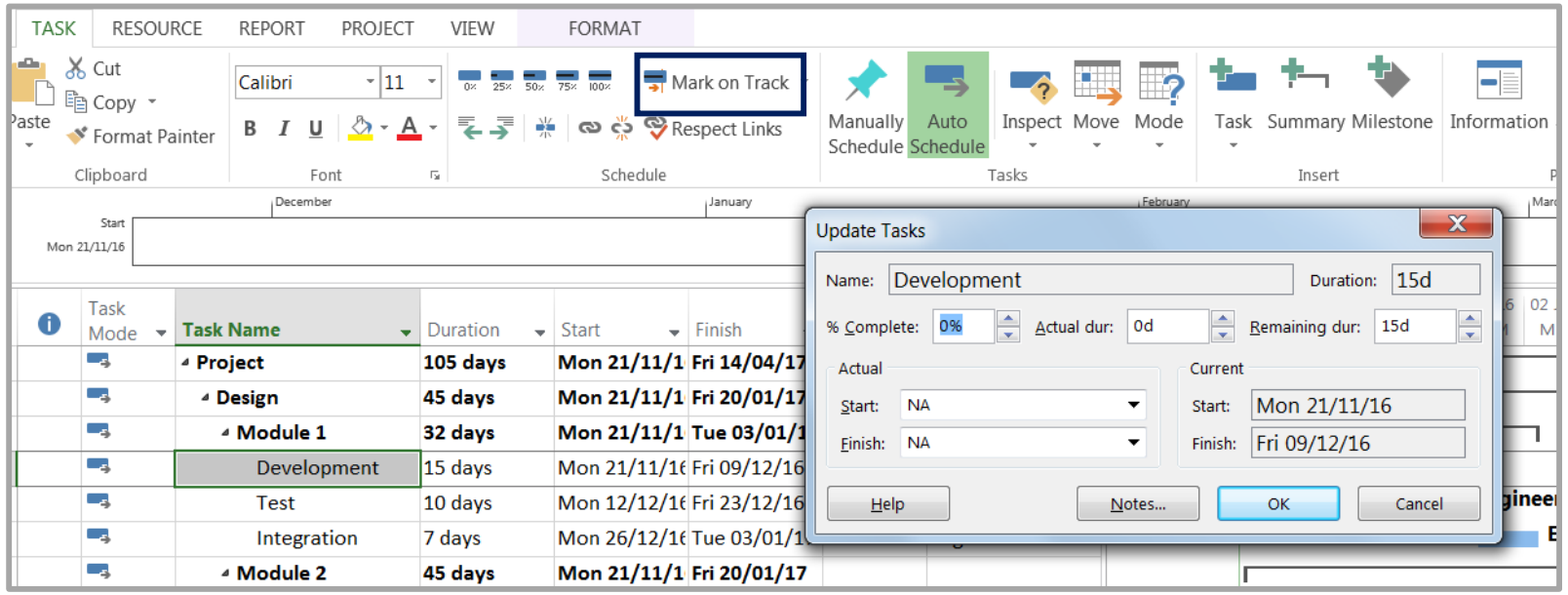


MS Project Basis – Track Progress

❑ Track Plan by Actual Values

- You can enter the following actual values for your project :
  - Actual Start and finish dates - Project moves the schedule accordingly.
  - Task's Actual duration - If equal or greater than schedule duration: task = 100% complete.

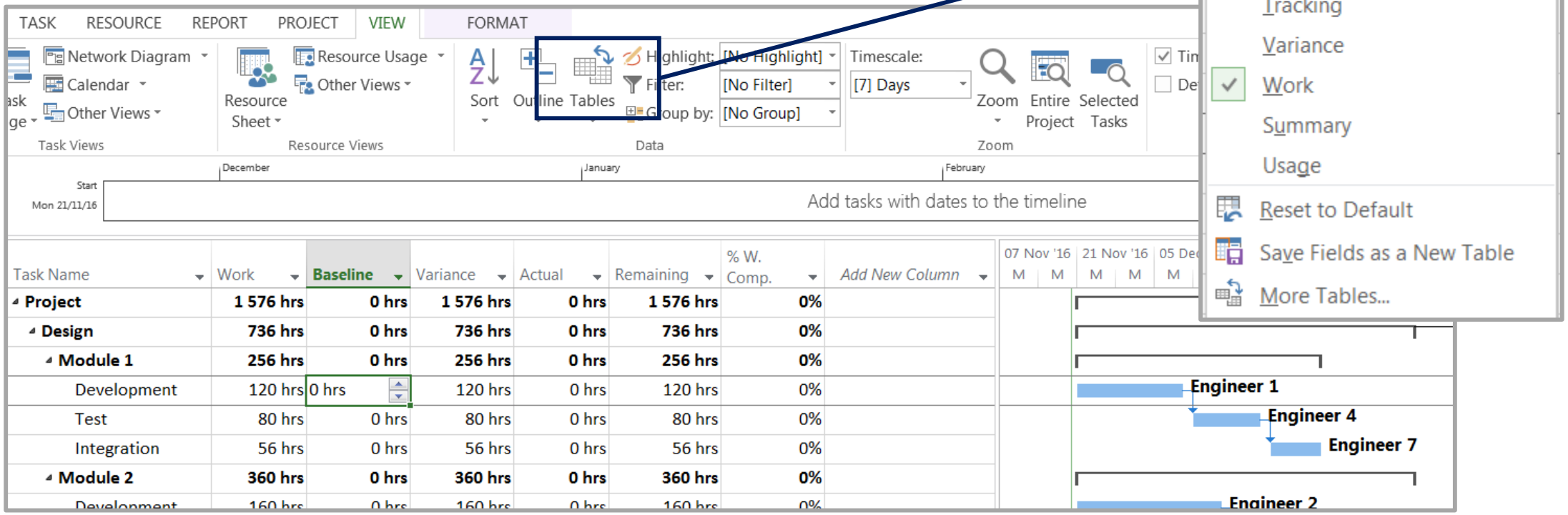
- **Actual Start and Finish Dates**
  - Click Task whose dates you would like to change.
  - Click ***Task tab → Schedule group → dropdown menu for Mark on Track → Update Tasks***.
  - Change Start or Finish field in Actual group.

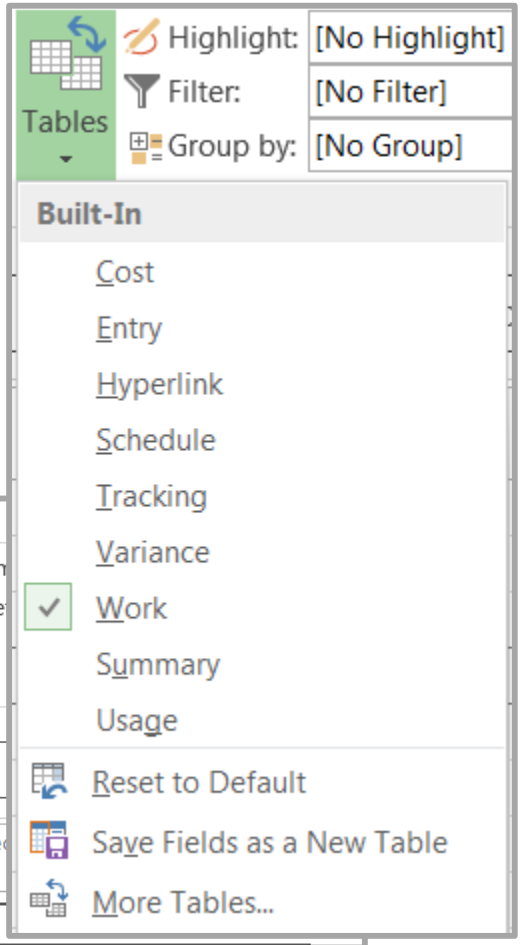


MS Project Basis – Track Progress

❑ Track Plan by Actual Values

- **Task's Actual Duration**
  - Click ***View Tab → Data group → Tables → Work.***
  - You will see the % W. Comp. (% work complete) column.
    This table includes Work (Scheduled work), Actual, and Remaining columns.

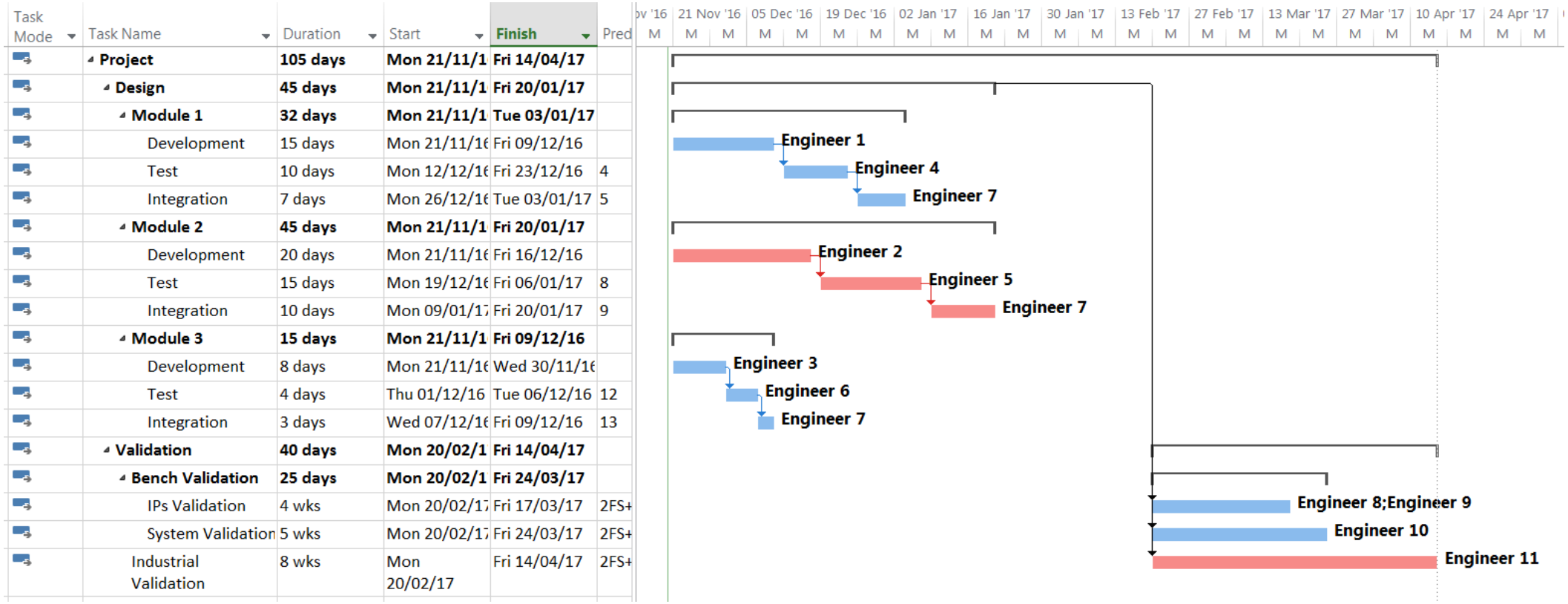




MS Project Basis – Track Progress

❑ Critical Path

- Click ***Format Tab → Bar Styles→ Select Critical Path***
- Critical Path is highlighted in red



Task Mode	Task Name	Duration	Start	Finish	Pred
	Project	**105 days**	**Mon 21/11/1**	**Fri 14/04/17**	
	Design	**45 days**	**Mon 21/11/1**	**Fri 20/01/17**	
	Module 1	**32 days**	**Mon 21/11/1**	**Tue 03/01/17**	
	Development	15 days	Mon 21/11/16	Fri 09/12/16	
	Test	10 days	Mon 12/12/16	Fri 23/12/16	4
	Integration	7 days	Mon 26/12/16	Tue 03/01/17	5
	Module 2	**45 days**	**Mon 21/11/1**	**Fri 20/01/17**	
	Development	20 days	Mon 21/11/16	Fri 16/12/16	
	Test	15 days	Mon 19/12/16	Fri 06/01/17	8
	Integration	10 days	Mon 09/01/17	Fri 20/01/17	9
	Module 3	**15 days**	**Mon 21/11/1**	**Fri 09/12/16**	
	Development	8 days	Mon 21/11/16	Wed 30/11/16	
	Test	4 days	Thu 01/12/16	Tue 06/12/16	12
	Integration	3 days	Wed 07/12/16	Fri 09/12/16	13
	Validation	**40 days**	**Mon 20/02/1**	**Fri 14/04/17**	
	Bench Validation	**25 days**	**Mon 20/02/1**	**Fri 24/03/17**	
	IPs Validation	4 wks	Mon 20/02/17	Fri 17/03/17	2FS+
	System Validation	5 wks	Mon 20/02/17	Fri 24/03/17	2FS+
	Industrial Validation	8 wks	Mon 20/02/17	Fri 14/04/17	2FS+