

MS Project Professional 2021

Tutorial #2 - Demo

CS 587 – Software Project Management

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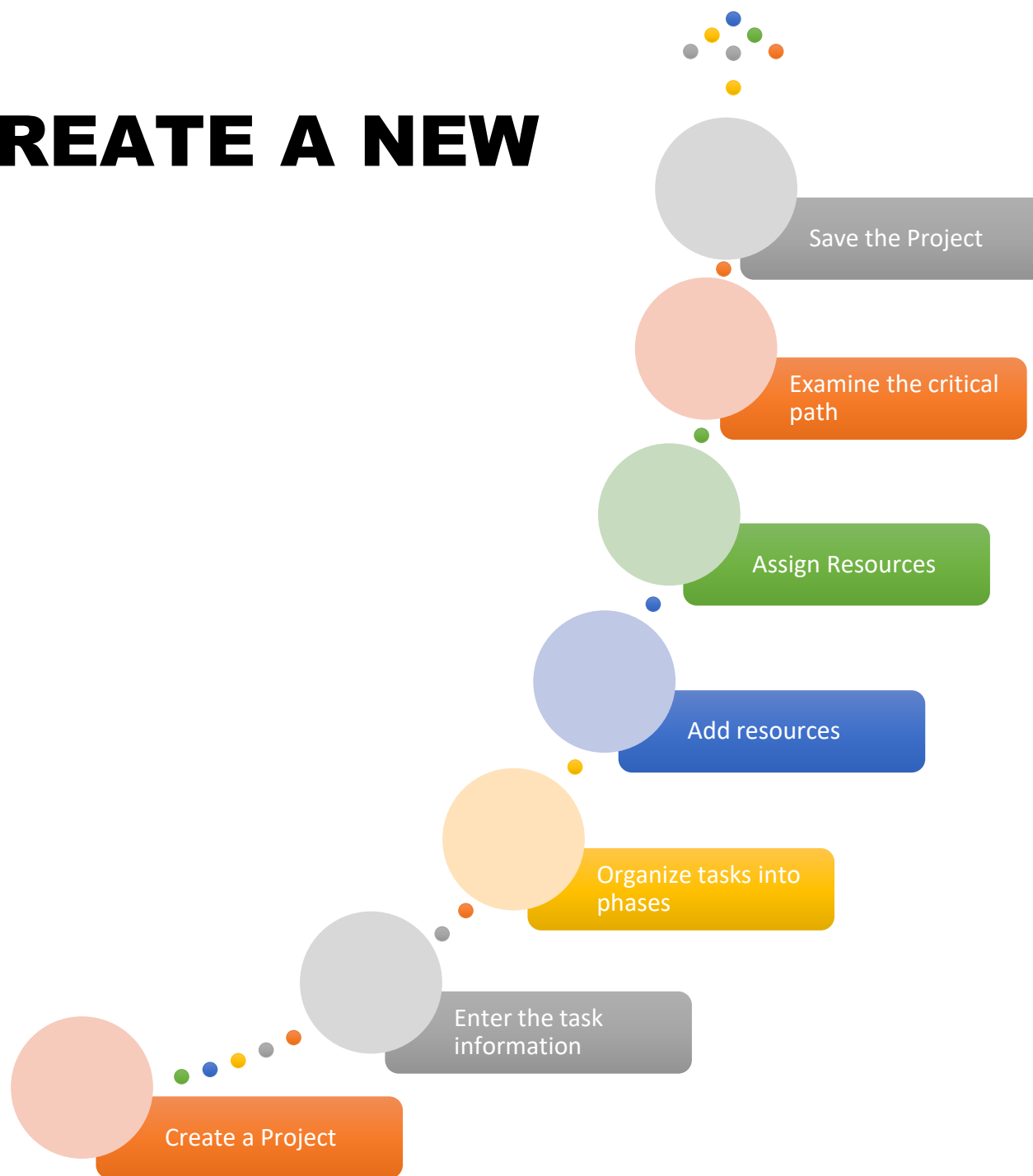
Illinois Institute of Technology



Develop the Following Development Project

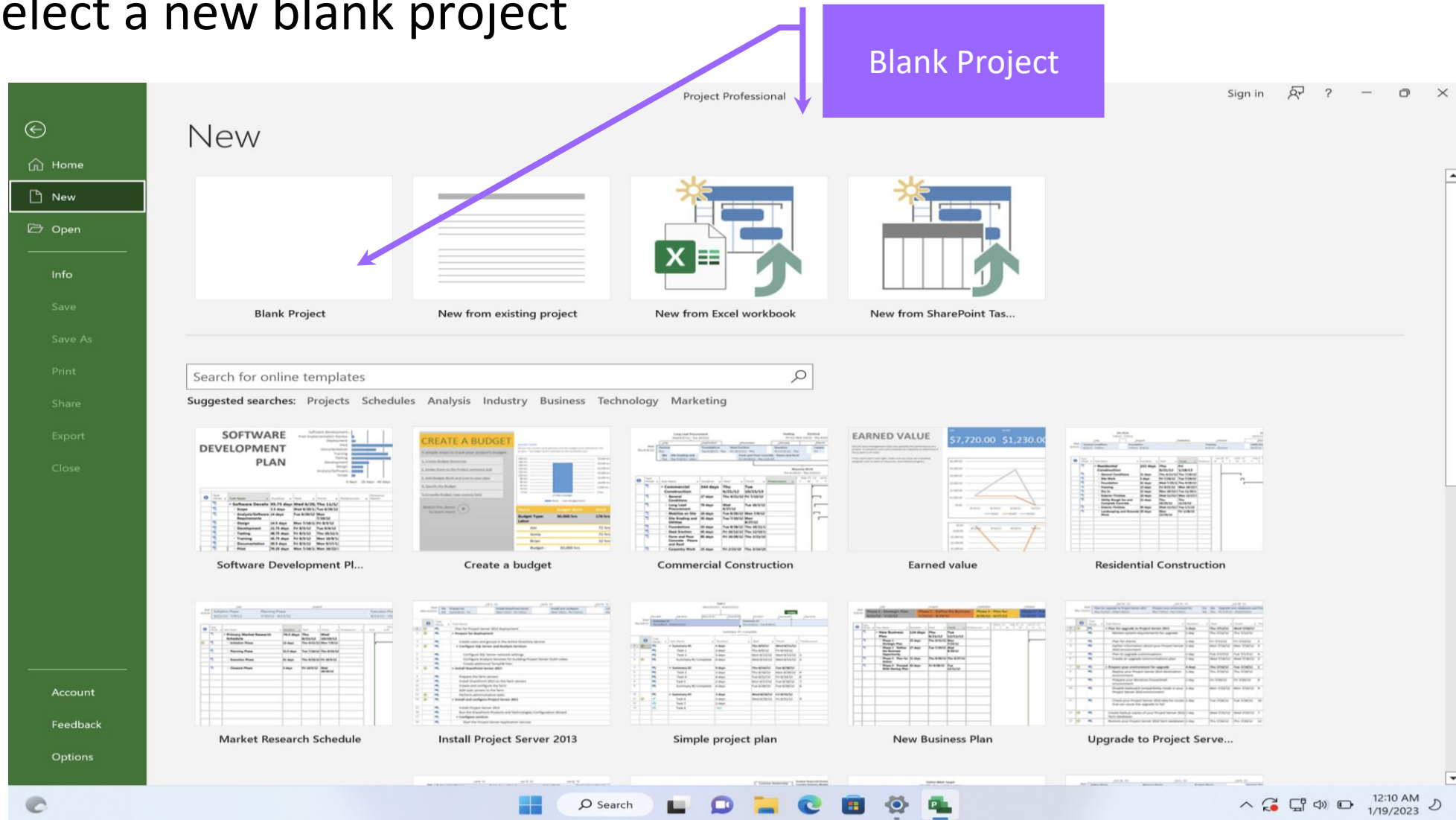
Activity	Predecessor	Human Resources	Duration
1. Requirement definition and analysis		<ul style="list-style-type: none"> •Requirement Engineer •Team Leader •Project Manager 	3 Days
2. Requirement Review	1	<ul style="list-style-type: none"> •Business Analyst •Team Leader •Project Manager 	1 Day
3. Analysis	2	<ul style="list-style-type: none"> •Designer •Team Leader 	6 Days
4. Analysis Review	3	<ul style="list-style-type: none"> •Team Leader •Project Manager •Designer 	1 Day
5. Design	4	<ul style="list-style-type: none"> •Designer •Team Leader 	4 Days
6. Design Review	5	<ul style="list-style-type: none"> •Team Leader •Project Manager •Designer 	1 Day
7. Programming	6	<ul style="list-style-type: none"> •Programmer 	4 Days
8. Code Review	7	<ul style="list-style-type: none"> •Programmer •Team Leader •Tester •Requirement Engineer 	3 Days
9. Testing	8	<ul style="list-style-type: none"> •Testers •Requirement Engineer 	6 Days
10. Installation	9	<ul style="list-style-type: none"> •Programmer •Team Leader •Program Manager 	2 Days

STEPS TO CREATE A NEW PROJECT

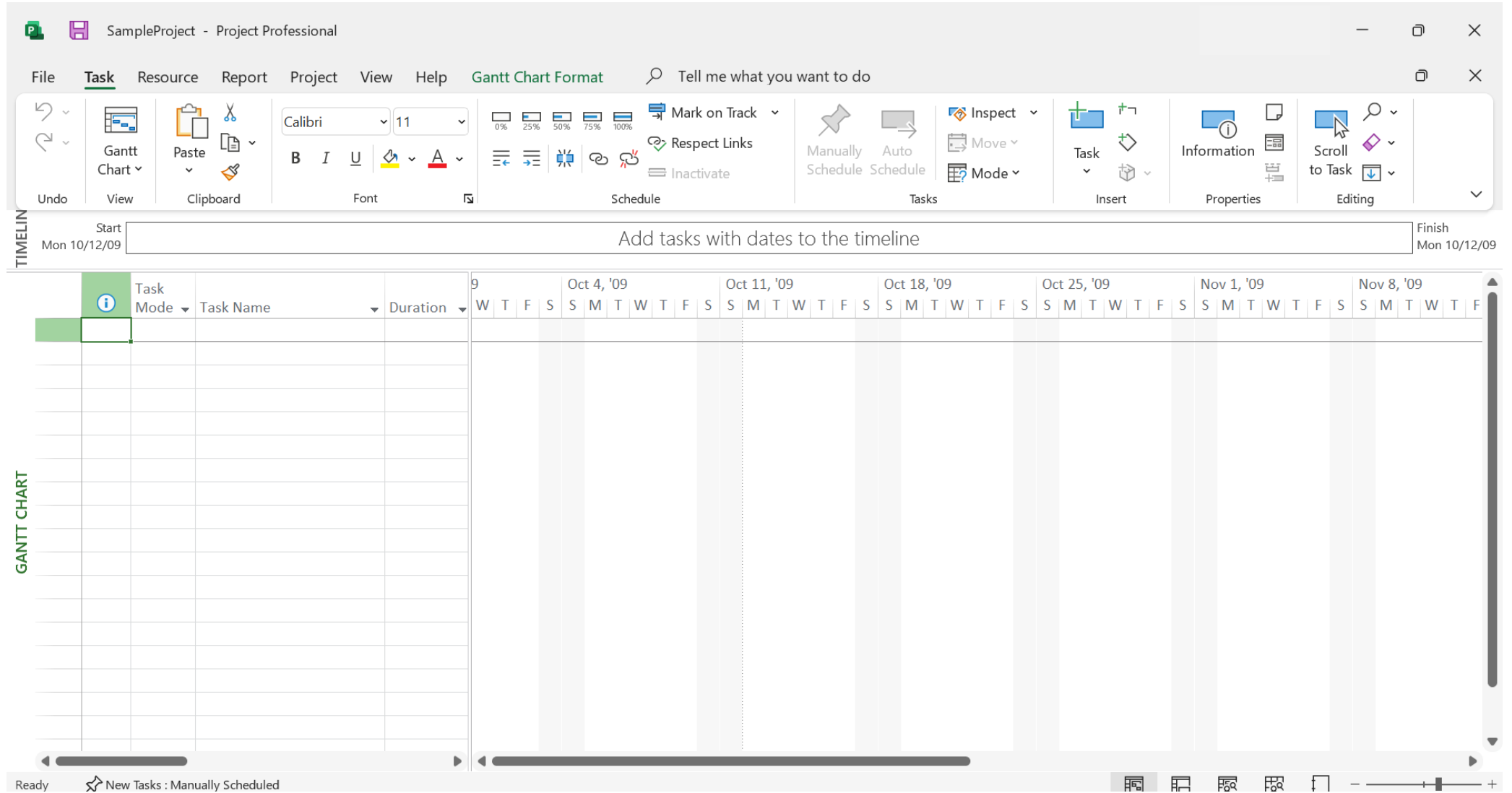


Step 1: Creating a new project

➤ Select a new blank project



- Create a new project called “SampleProject”



Step 2: Entering the Task Information

- Write the name of each task in the spreadsheet using the column “*Task Name*”.
- Write the duration in days of each task in the spreadsheet using the column “*Duration*”.
- Write the predecessors of each task in the spreadsheet using the column “*Predecessors*” (If you can’t see the column, try to expand the vertical bar that divides the spreadsheet to the Gantt Chart).

➤ Entering Task Name, Duration and Predecessors

TIMELINE

Start

Fri 1/21/22

Add tasks with dates

	<div><div><div></div><div></div><div></div></div><div>Task Mode ▾</div></div>	<div><div><div></div><div></div><div></div></div><div>Task Name ▾</div></div>	<div><div><div></div><div></div><div></div></div><div>Duration ▾</div></div>	<div><div><div></div><div></div><div></div></div><div>Start ▾</div></div>	<div><div><div></div><div></div><div></div></div><div>Finish ▾</div></div>	<div><div><div></div><div></div><div></div></div><div>Predecessors ▾</div></div>	<div><div><div></div><div></div><div></div></div><div>Resource Names ▾</div></div>
1	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Sample Project</div></div>	<div><div><div></div><div></div><div></div></div><div>15.33 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Fri 1/21/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Fri 2/11/22</div></div>		
2	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Requirements</div></div>	<div><div><div></div><div></div><div></div></div><div>1.33 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Fri 1/21/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Mon 1/24/22</div></div>		
3	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Requirements Definition</div></div>	<div><div><div></div><div></div><div></div></div><div>1 day</div></div>	<div><div><div></div><div></div><div></div></div><div>Fri 1/21/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Fri 1/21/22</div></div>		<div>Requirement Engineer,Project Manager, Team Leader</div>
4	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Requirements Review</div></div>	<div><div><div></div><div></div><div></div></div><div>0.33 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Mon 1/24/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Mon 1/24/22</div></div>	<div>3</div>	<div>Business Analyst,Project Manager, Team Leader</div>
5	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Analysis</div></div>	<div><div><div></div><div></div><div></div></div><div>3.5 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Mon 1/24/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Thu 1/27/22</div></div>		
6	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Detailed Analysis</div></div>	<div><div><div></div><div></div><div></div></div><div>3 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Mon 1/24/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Thu 1/27/22</div></div>	<div>4</div>	<div>Designer,Team Leader</div>
7	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Analysis Review</div></div>	<div><div><div></div><div></div><div></div></div><div>0.5 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Thu 1/27/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Thu 1/27/22</div></div>	<div>6</div>	<div>Designer,Project Manager</div>
8	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Design</div></div>	<div><div><div></div><div></div><div></div></div><div>2.5 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Thu 1/27/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Tue 2/1/22</div></div>		
9	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Detailed Design</div></div>	<div><div><div></div><div></div><div></div></div><div>2 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Thu 1/27/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Mon 1/31/22</div></div>	<div>7</div>	<div>Designer,Team Leader</div>
10	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Design Review</div></div>	<div><div><div></div><div></div><div></div></div><div>0.5 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Mon 1/31/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Tue 2/1/22</div></div>	<div>9</div>	<div>Designer,Project Manager</div>
11	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Coding</div></div>	<div><div><div></div><div></div><div></div></div><div>5.5 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Tue 2/1/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Tue 2/8/22</div></div>		
12	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Programming</div></div>	<div><div><div></div><div></div><div></div></div><div>4 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Tue 2/1/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Mon 2/7/22</div></div>	<div>10</div>	<div>Programmer</div>
13	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Code Review</div></div>	<div><div><div></div><div></div><div></div></div><div>1.5 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Mon 2/7/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Tue 2/8/22</div></div>	<div>12</div>	<div>Requirement Engineer,Project Manager</div>
14	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Testing</div></div>	<div><div><div></div><div></div><div></div></div><div>14.33 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Fri 1/21/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Thu 2/10/22</div></div>		
15	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Test Plan</div></div>	<div><div><div></div><div></div><div></div></div><div>3 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Fri 1/21/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Tue 1/25/22</div></div>		<div>Tester</div>
16	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Testing</div></div>	<div><div><div></div><div></div><div></div></div><div>1.5 days</div></div>	<div><div><div></div><div></div><div></div></div><div>Tue 2/8/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Thu 2/10/22</div></div>	<div>13</div>	<div>Tester,Requirement Engineer</div>
17	<div><div><div></div><div></div><div></div></div></div>	<div><div><div></div><div></div><div></div></div><div>Installation</div></div>	<div><div><div></div><div></div><div></div></div><div>1 day</div></div>	<div><div><div></div><div></div><div></div></div><div>Thu 2/10/22</div></div>	<div><div><div></div><div></div><div></div></div><div>Fri 2/11/22</div></div>	<div>16</div>	<div>Project Manager,Team Leader</div>

GANTT CHART

Step 3: Organize Tasks into Phases

- Before

Task Name	Duration
Requirement definition and analysis	3 days
Requirement Review	1 day
Analysis	6 days
Analysis Review	1 day
Design	4 days
Design Review	1 day
Programming	4 days
Code Review	3 days
Testing	6 days
Installation	2 days

- After

Task Name	Duration
▾ SampleProject	31 days
▾ Requirements	4 days
Requirement definition and analysis	3 days
Requirement Review	1 day
▾ Analysis	7 days
Analysis	6 days
Analysis Review	1 day
▾ Design	5 days
Design	4 days
Design Review	1 day
▾ Coding	7 days
Programming	4 days
Code Review	3 days
Testing	6 days
Installation	2 days

Step 3: Organize Tasks into Phases

- Group the tasks by the Phase according to the table of tasks shown before, and add a group that encloses the phases named “**SampleProject**”, and this will represent the plan as a whole.
- You may do this by:
 - Adding a new task “**SampleProject**”
 - Highlight the task you want to indent
 - Click the indent icon.
- Insert a new task at the beginning that will group everything. Here we insert “Requirements Phase” first.

➤ Highlight the tasks that are going to be added as sub tasks and click “*Indent*” icon.

Indent Task

This task becomes a subtask.
Creating a hierarchy will help you better organize your tasks.

Task List:

Task ID	Task Name	Duration	Start	Finish	Resource Names
1	Sample Project	15.33 days	Fri 1/21/22	Fri 2/11/22	
2	Requirements	1.33 days	Fri 1/21/22	Mon 1/24/22	
3	Requirements Definition	1 day	Fri 1/21/22	Fri 1/21/22	Requirement Engineer, Project Manager, Team Leader
4	Requirements Review	0.33 days	Mon 1/24/22	Mon 1/24/22	3 Business Analyst, Project Manager, Team Leader
5	Analysis	3.5 days	Mon 1/24/22	Thu 1/27/22	
6	Detailed Analysis	3 days	Mon 1/24/22	Thu 1/27/22	4 Designer, Team Leader
7	Analysis Review	0.5 days	Thu 1/27/22	Thu 1/27/22	6 Designer, Project Manager
8	Design	2.5 days	Thu 1/27/22	Tue 2/1/22	
9	Detailed Design	2 days	Thu 1/27/22	Mon 1/31/22	7 Designer, Team Leader
10	Design Review	0.5 days	Mon 1/31/22	Tue 2/1/22	9 Designer, Project Manager
11	Coding	5.5 days	Tue 2/1/22	Tue 2/8/22	
12	Programming	4 days	Tue 2/1/22	Mon 2/7/22	10 Programmer
13	Code Review	1.5 days	Mon 2/7/22	Tue 2/8/22	12 Requirement Engineer, Project Manager
14	Testing	14.33 days	Fri 1/21/22	Thu 2/10/22	
15	Test Plan	3 days	Fri 1/21/22	Tue 1/25/22	Tester
16	Testing	1.5 days	Tue 2/8/22	Thu 2/10/22	13 Tester, Requirement Engineer
17	Installation	1 day	Thu 2/10/22	Fri 2/11/22	16 Project Manager, Team Leader

➤ Now repeat these steps to create the Subgroup that will represent the Analysis, Design and Coding phases.

Start
Fri 1/21/22

Sat Jan 22

Sun Jan 23

Mon Jan 24

Tue Jan 25

Wed Jan 26

Thu Jan 27

Fri Jan 28

Sat Jan 29

Sun Jan 30

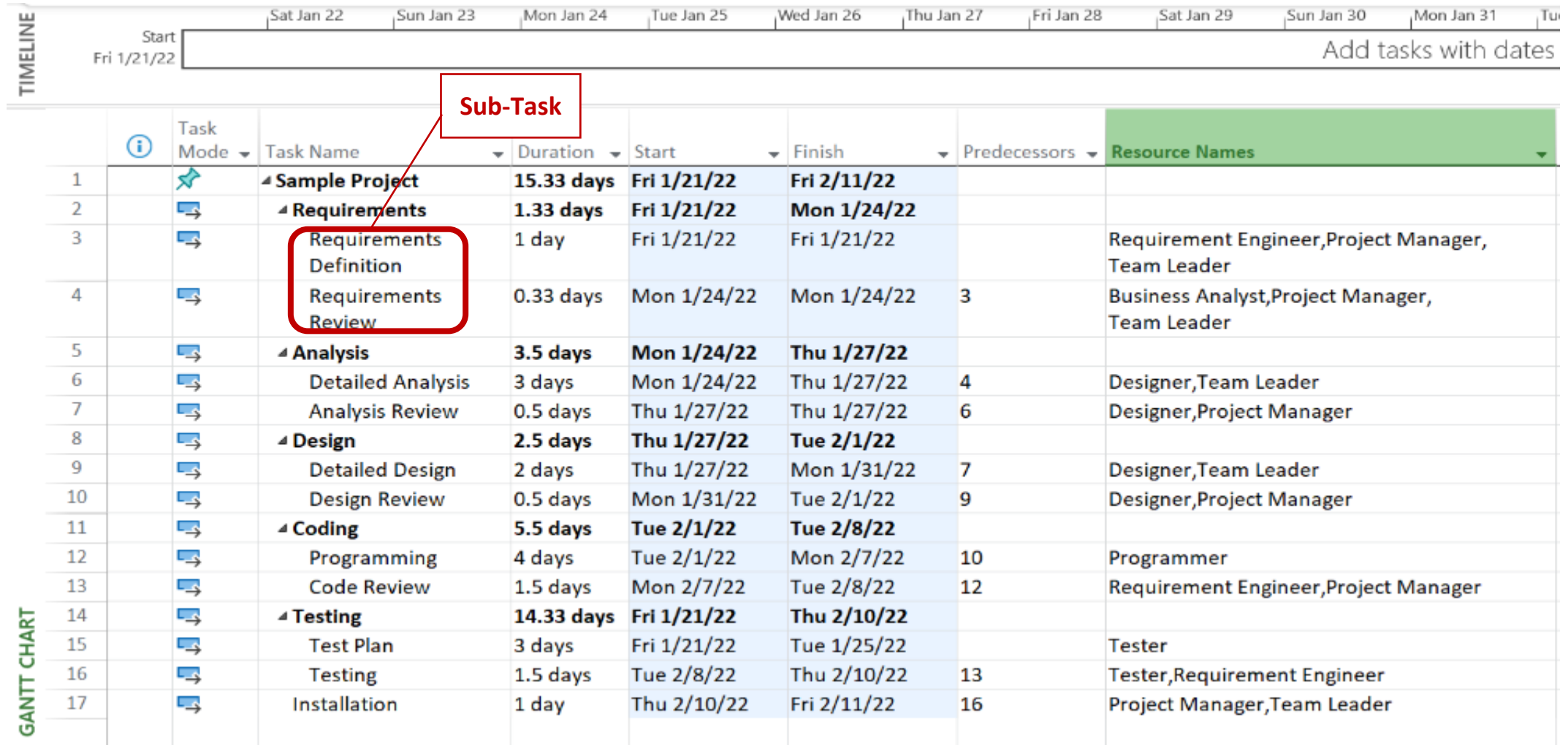
Mon Jan 31

Tue

Add tasks with dates

		Task Mode ▾	Task Name	Summary Task ▾	Start ▾	Finish ▾	Predecessors ▾	Resource Names ▾
1			Sample Project	15.33 days	Fri 1/21/22	Fri 2/11/22		
2			Requirements	1.33 days	Fri 1/21/22	Mon 1/24/22		
3			Requirements Definition	1 day	Fri 1/21/22	Fri 1/21/22		Requirement Engineer, Project Manager, Team Leader
4			Requirements Review	0.33 days	Mon 1/24/22	Mon 1/24/22	3	Business Analyst, Project Manager, Team Leader
5			Analysis	3.5 days	Mon 1/24/22	Thu 1/27/22		
6			Detailed Analysis	3 days	Mon 1/24/22	Thu 1/27/22	4	Designer, Team Leader
7			Analysis Review	0.5 days	Thu 1/27/22	Thu 1/27/22	6	Designer, Project Manager
8			Design	2.5 days	Thu 1/27/22	Tue 2/1/22		
9			Detailed Design	2 days	Thu 1/27/22	Mon 1/31/22	7	Designer, Team Leader
10			Design Review	0.5 days	Mon 1/31/22	Tue 2/1/22	9	Designer, Project Manager
11			Coding	5.5 days	Tue 2/1/22	Tue 2/8/22		
12			Programming	4 days	Tue 2/1/22	Mon 2/7/22	10	Programmer
13			Code Review	1.5 days	Mon 2/7/22	Tue 2/8/22	12	Requirement Engineer, Project Manager
14			Testing	14.33 days	Fri 1/21/22	Thu 2/10/22		
15			Test Plan	3 days	Fri 1/21/22	Tue 1/25/22		Tester
16			Testing	1.5 days	Tue 2/8/22	Thu 2/10/22	13	Tester, Requirement Engineer
17			Installation	1 day	Thu 2/10/22	Fri 2/11/22	16	Project Manager, Team Leader

- Now repeat these steps to create the Subgroup that will represent the Analysis, Design and Coding phases.



Step 4: Add Resources

- Go to the view “Resource Sheet”.
- Add the necessary resources to the “Resources Sheet”, we are going to use only the Name, Initials and Standard rate in \$/hr The resources are going to be taken from the table showed at the beginning of the example, more specifically from the column “Human Resource”.
- Now, with the Resources already registered in the project file, go back to the View “Gantt Chart”.

SampleProject - Project Professional

File Task Resource Report Project **View** Help Resource Sheet Format Tell me what you want to do

Gantt Chart Task Usage Other Views Network Diagram Calendar Team Planner Resource Usage Resource Sheet Other Views

Sort Outline Tables Highlight: [No Highlight] Filter: [No Filter] Group by: [No Group] Timescale: Days Zoom Entire Project Selected Tasks

☒ Timeline Timeline Details New Window Switch Windows Arrange All Hide Macros

TIMELINE

Start Fri 1/21/22 Sat Jan 22 Sun Jan 23 Mon Jan 24 Tue Jan 25 Wed Jan 26 Thu Jan 27 Fri Jan 28 Sat Jan 29 Sun Jan 30 Mon Jan 31 Tue Feb 1 Wed Feb 2 Thu Feb 3 Fri Feb 4 Sat Feb 5 Sun Feb 6 Mon Feb 7 Tue Feb 8 Wed Feb 9 Thu Feb 10 Fri Feb 11 Finish Fri 2/11/22

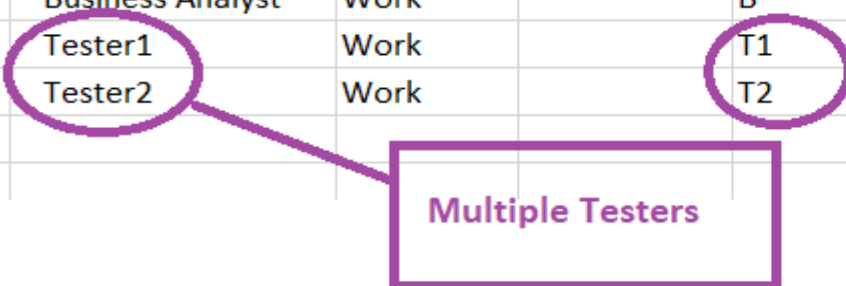
Add tasks with dates to the timeline

	i	Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue	Base Calendar	Code	Add New Column
1		Requirement Engineer	Work		R		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
2		Team Leader	Work		T		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
3		Project Manager	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
4		Designer	Work		D		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
5		Programmer	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
6		Tester	Work		T		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
7		Business Analyst	Work		B		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		

Adding Multiple Resources of Same Type

- Go to the view “Resource Sheet”.
- Add the resources, differentiating them by numbering it.
- You can change the initials to reflect different resources of same type.
- In our example. we add two more testers as follows:

i	Resource Name ▼	Type ▼	Material ▼	Initials ▼	Group ▼	Max. ▼	Std. Rate ▼	Ovt. Rate ▼	Cost/Use ▼	Accrue ▼
	Requirement Engineer	Work		R		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated
	Team Leader	Work		T		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated
	Project Manager	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated
	Designer	Work		D		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated
	Programmer	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated
	Tester	Work		T		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated
	Business Analyst	Work		B		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated
	Tester1	Work		T1		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated
	Tester2	Work		T2		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated



Multiple Testers

Step 5: Assign Resources

- Go to “Resource” tab.
- Then click “Assign resources” icon. A “Assign Resources” window appears.
- Click the resource to be assigned in the window, and then click the task in the spreadsheet behind.
- Then click the button “assign”.
- Repeat step 3 till all resources are assigned to the tasks.

Method 1: Drop down list.

SampleProject - Project Professional

File Task Resource Report Project View Help Gantt Chart Format Tell me what you want to do

Task Views: Gantt Chart, Task Usage, Network Diagram, Calendar, Other Views

Resource Views: Resource Usage, Resource Sheet, Other Views

Timeline: Start Fri 1/21/22, Finish Fri 2/11/22, Add tasks with dates to the timeline

Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1	Sample Project	15.33 days	Fri 1/21/22	Fri 2/11/22		
2	Requirements	1.33 days	Fri 1/21/22	Mon 1/24/22		
3	Requirements Definition	1 day	Fri 1/21/22	Fri 1/21/22		
4	Requirements Review	0.33 days	Mon 1/24/22	Mon 1/24/22	3	
5	Analysis	3.5 days	Mon 1/24/22	Thu 1/27/22		
6	Detailed Analysis	3 days	Mon 1/24/22	Thu 1/27/22	4	
7	Analysis Review	0.5 days	Thu 1/27/22	Thu 1/27/22	6	
8	Design	2.5 days	Thu 1/27/22	Tue 2/1/22		
9	Detailed Design	2 days	Thu 1/27/22	Mon 1/31/22	7	
10	Design Review	0.5 days	Mon 1/31/22	Tue 2/1/22	9	
11	Coding	5.5 days	Tue 2/1/22	Tue 2/8/22		
12	Programming	4 days	Tue 2/1/22	Mon 2/7/22	10	
13	Code Review	1.5 days	Mon 2/7/22	Tue 2/8/22	12	
14	Testing	14.33 days	Fri 1/21/22	Thu 2/10/22		
15	Test Plan	3 days	Fri 1/21/22	Tue 1/25/22		
16	Testing	1.5 days	Tue 2/8/22	Thu 2/10/22	13	
17	Installation	1 day	Thu 2/10/22	Fri 2/11/22	16	

Resource Names dropdown menu:

- Sort A to Z
- Sort Z to A
- Group on this field
- No Group
- Clear Filter from Resource Names
- Filters: (Select All), (blank), Business Analyst, Designer, Programmer, Project Manager, Requirement Engineer, Team Leader, Tester

Assign Resources

Method 2: Choosing “Assign Resources” option.

The screenshot displays the Microsoft Project Professional interface. The 'Resource' tab is selected in the ribbon, and the 'Assign Resources' button is highlighted with a red box. A red callout box labeled 'Assign Resources Options' points to this button. The 'Assign Resources (Alt+F10)' dropdown menu is open, showing options like 'Assign Resources to the project' and 'Add tasks with dates to the timeline'. The 'GANTT CHART' view is active, showing a task list with columns for Task Name, Duration, Start, Finish, Predecessors, and Resource Names. The 'Assign Resources' dialog box is open, showing the task 'Requirements Definition' and a list of resources from 'SampleProject' with columns for Resource Name, R/D, Units, and Cost. The resources listed are Project Manager, Requirement Engineer, Team Leader, Business Analyst, Designer, Programmer, and Tester. The 'Assign' button is highlighted in the dialog box.

Assign Resources Options

Assign Resources (Alt+F10)

Assign resources to the tasks in the project.

Add tasks with dates to the timeline

Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1	Sample Project	15.33 days	Fri 1/21/22	Fri 2/11/22		
2	Requirements	1.33 days	Fri 1/21/22	Mon 1/24/22		
3	Requirements Definition	1 day	Fri 1/21/22	Fri 1/21/22		Requirement Engineer, Project Manager, Team Leader
4	Requirements Review	0.33 days	Mon 1/24/22	Mon 1/24/22	3	Business Analyst, Project Manager, Team Leader
5	Analysis	3.5 days	Mon 1/24/22	Thu 1/27/22		
6	Detailed Analysis	3 days	Mon 1/24/22	Thu 1/27/22	4	Designer, Team Leader
7	Analysis Review	0.5 days	Thu 1/27/22	Thu 1/27/22	6	Designer, Project Manager
8	Design	2.5 days	Thu 1/27/22	Tue 2/1/22		
9	Detailed Design	2 days	Thu 1/27/22	Mon 1/31/22	7	Designer, Team Leader
10	Design Review	0.5 days	Mon 1/31/22	Tue 2/1/22	9	Designer, Project Manager
11	Coding	5.5 days	Tue 2/1/22	Tue 2/8/22		
12	Programming	4 days	Tue 2/1/22	Mon 2/7/22	10	Programmer
13	Code Review	1.5 days	Mon 2/7/22	Tue 2/8/22	12	Requirement Engineer, Project Manager
14	Testing	14.33 days	Fri 1/21/22	Thu 2/10/22		
15	Test Plan	3 days	Fri 1/21/22	Tue 1/25/22		Tester
16	Testing	1.5 days	Tue 2/8/22	Thu 2/10/22	13	Tester, Requirement Engineer
17	Installation	1 day	Thu 2/10/22	Fri 2/11/22	16	Project Manager, Team Leader

Assign Resources

Task: Requirements Definition

Resource list options

Resources from SampleProject

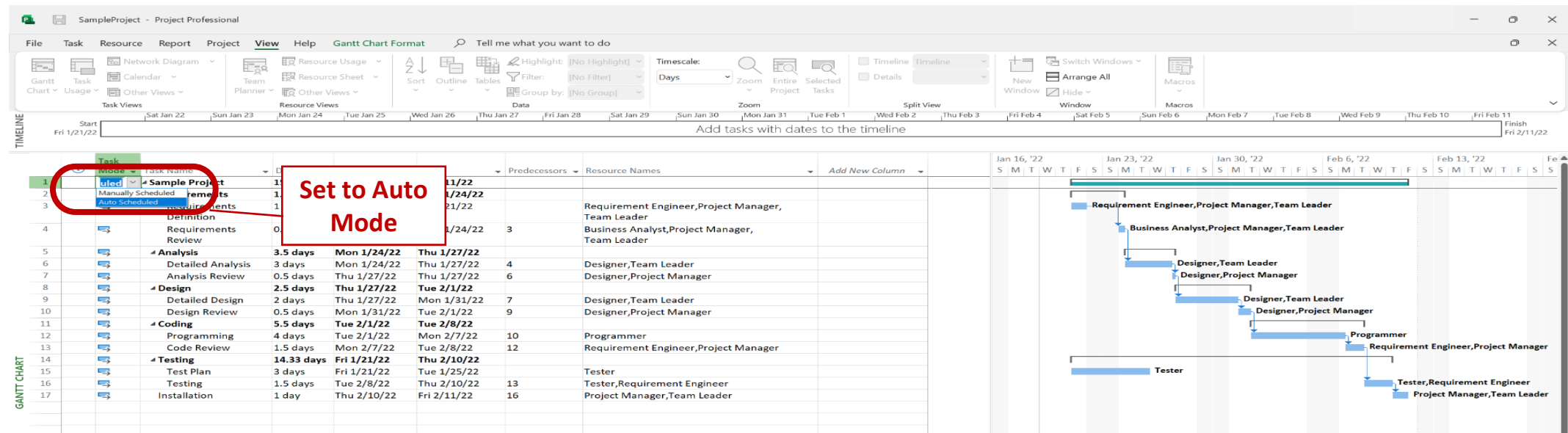
Resource Name	R/D	Units	Cost
Project Manager		100%	\$0.00
Requirement Engineer		100%	\$0.00
Team Leader		100%	\$0.00
Business Analyst			
Designer			
Programmer			
Tester			

Hold down Ctrl and click to select multiple resources

Assign Remove Replace... Graph Close Help

Detailed steps for assigning multiple resources

1. If you have assigned multiple resources to the task, first remove all the resources that you have assigned for the task. If you have not assigned resources yet, please move to Step 2 below.
2. Change the mode of the task to “Auto Scheduled” as shown below in screenshot.

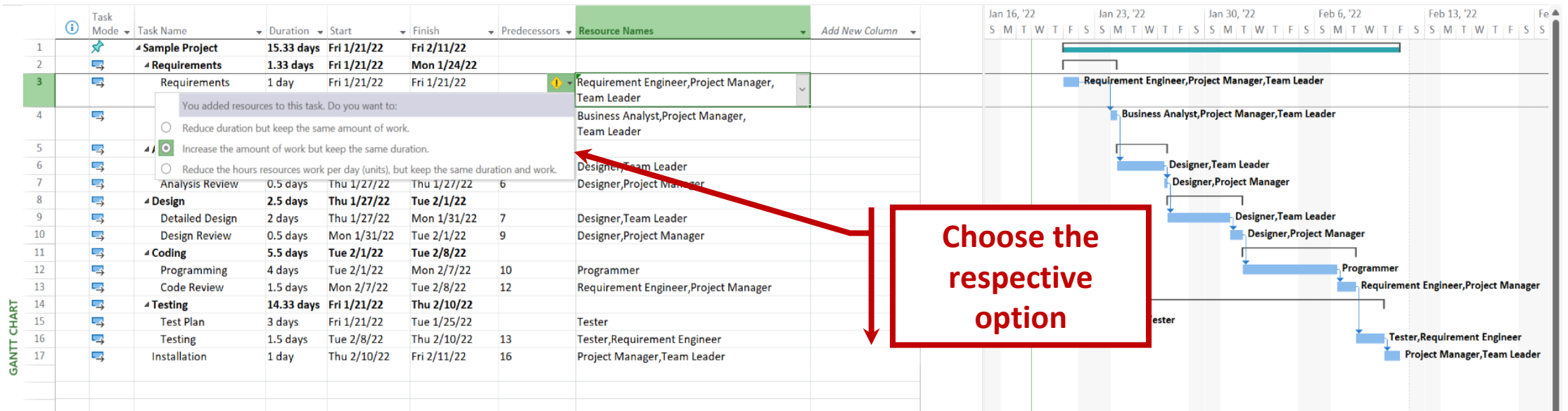


3. Assign the resources that you want to the task. Once you assign resources, you will see a yellow

Detailed steps for assigning multiple resources

4. Click on the yellow warning sign and you will see three options. Select the option “Reduce duration but keep the amount of work” to handle this warning.

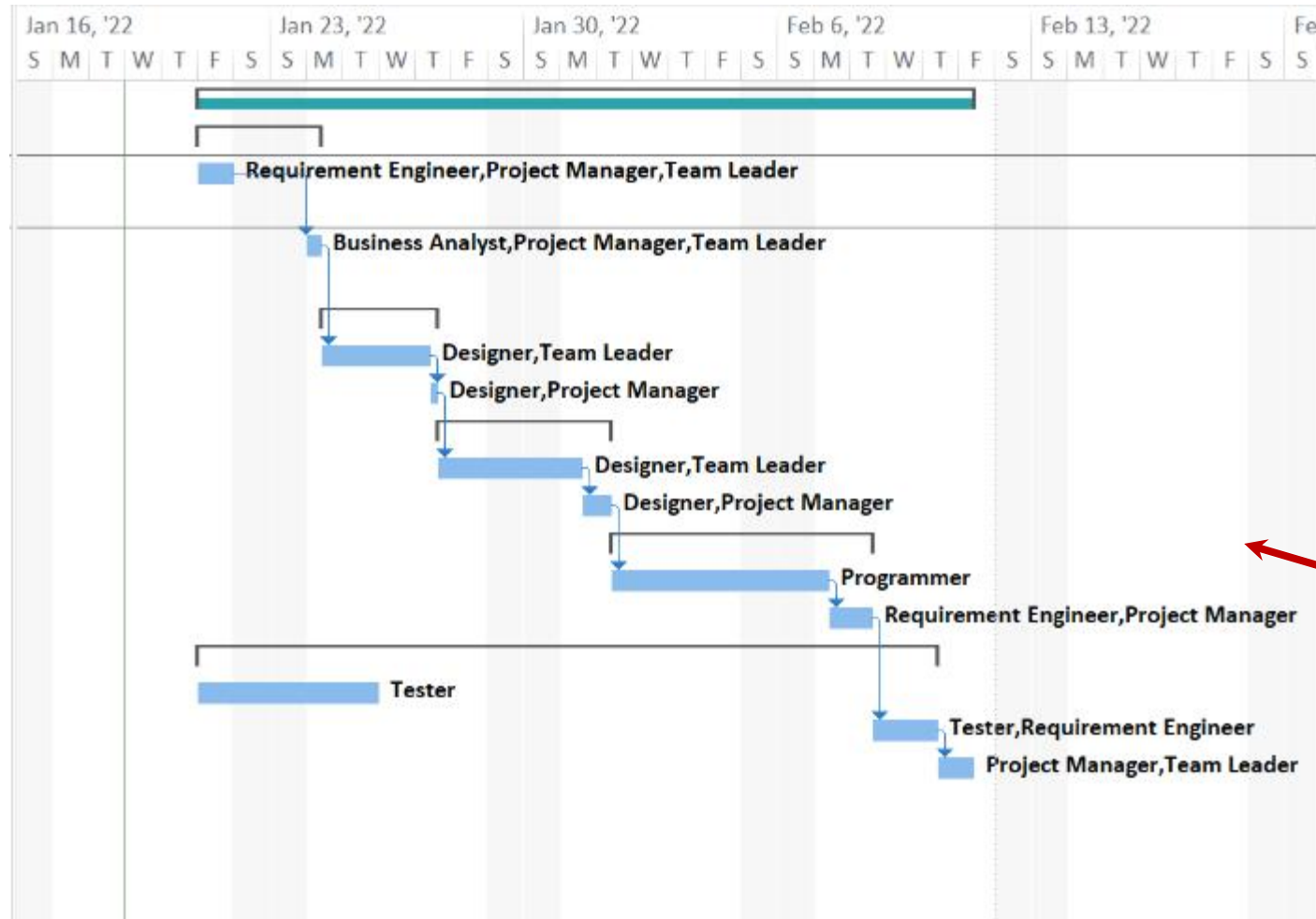
5. Note: If you fail to click on one of the options, the duration will still not change. In that case, repeat again from Step 1.



Step 6: Examine the critical Path

- For the example, we are going to use the Detailed Gantt Chart to view the Critical Path, because this option also shows the **Slack Time** of the activities that don't belong to the critical path, therefore first we must select the option “More Views”.
- Then we must select the Detail Gantt to obtain the view desired.
- The View should look like this (If the Gantt Chart doesn't appear check that you are in the right date on the Gantt Chart).

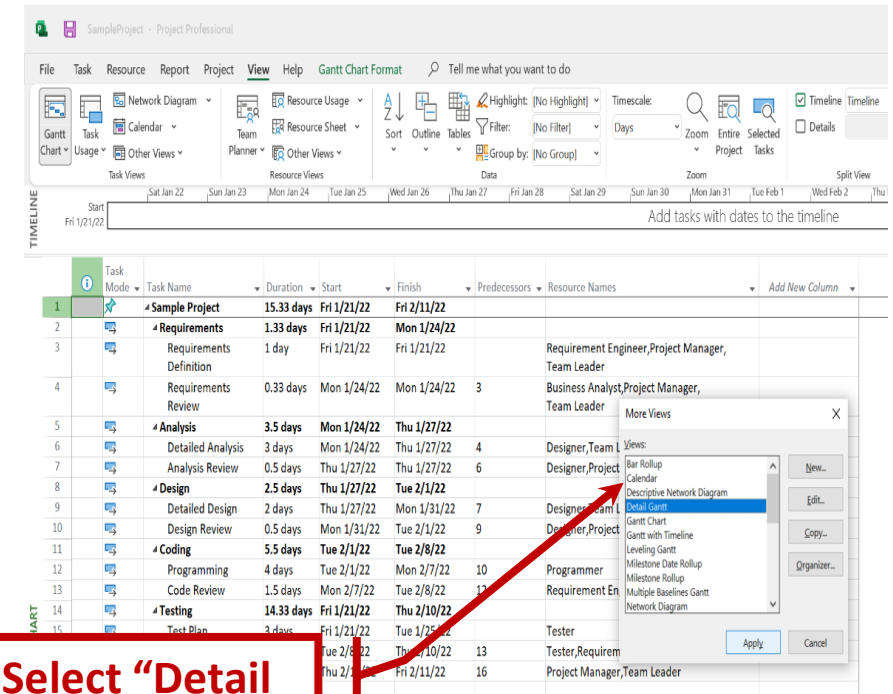
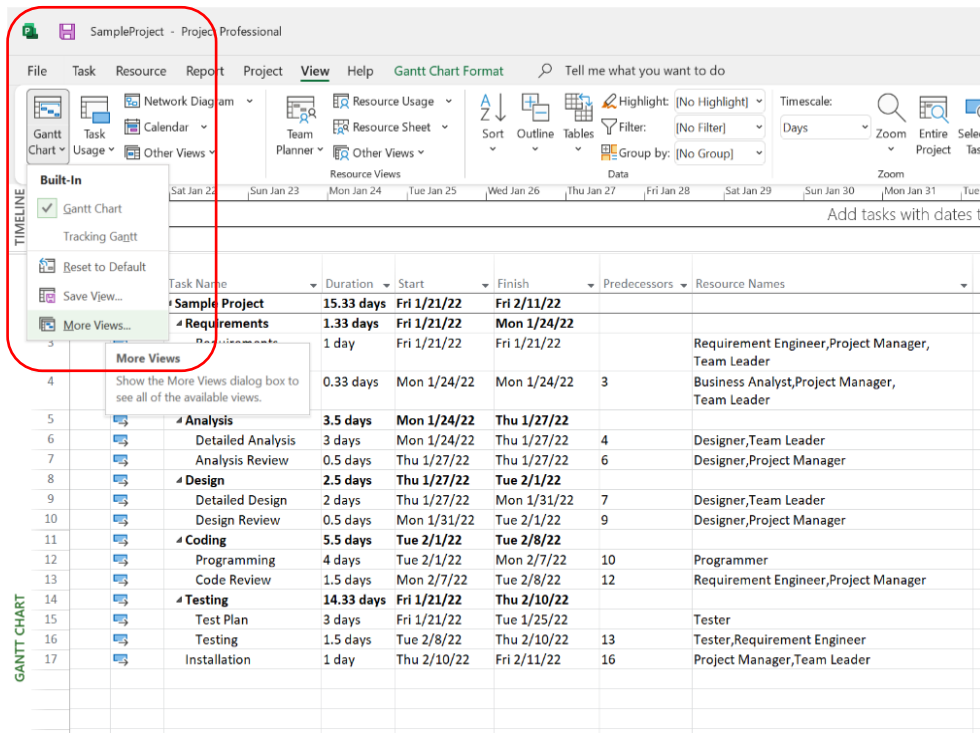
➤ Gantt Chart



The Gantt Chart

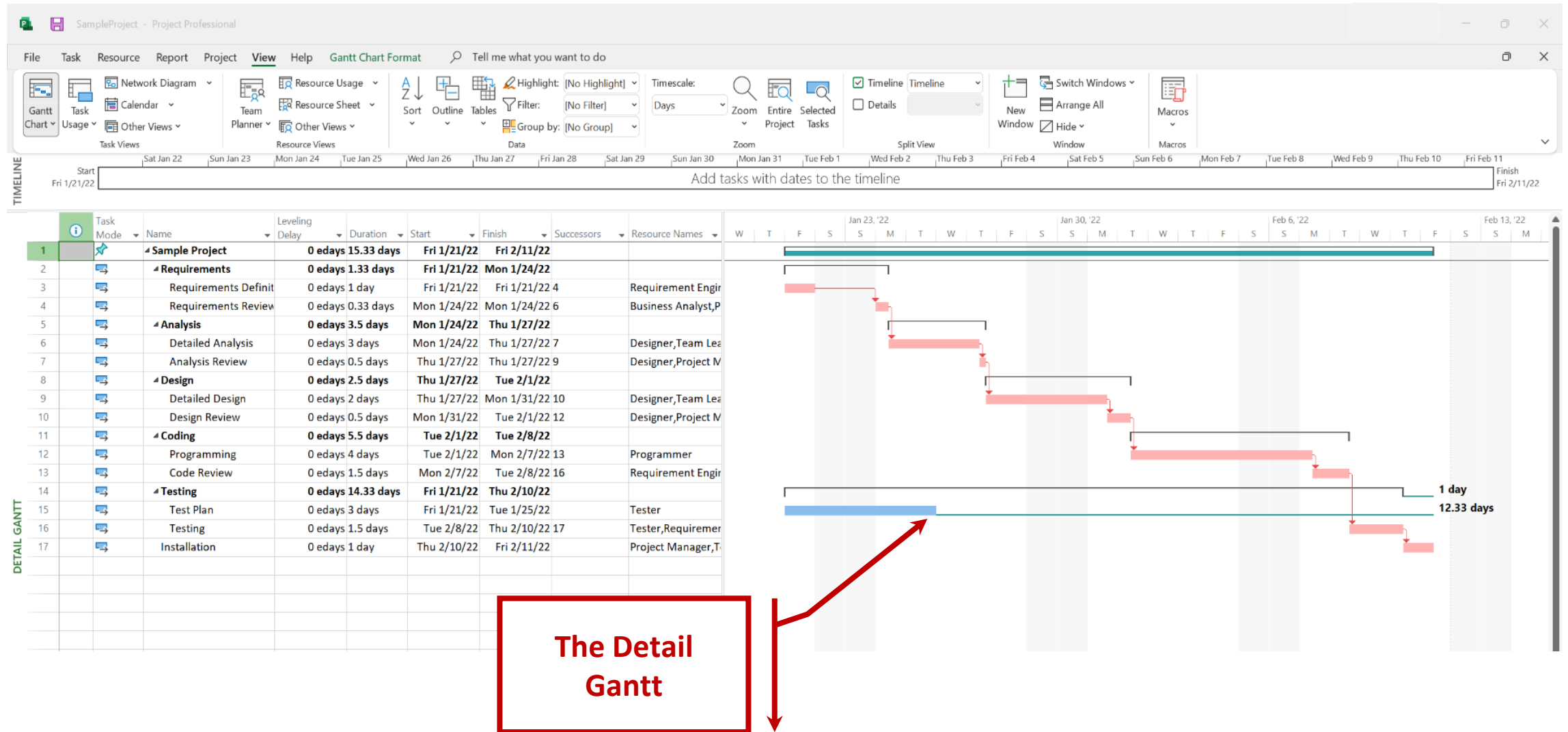
Viewing The Critical Path

- To see the critical path, click on Gantt Chart, and select “More Views” to open up a pop-up. Here choose “Detail Gantt”.



Select “Detail Gantt” from Gantt Chart

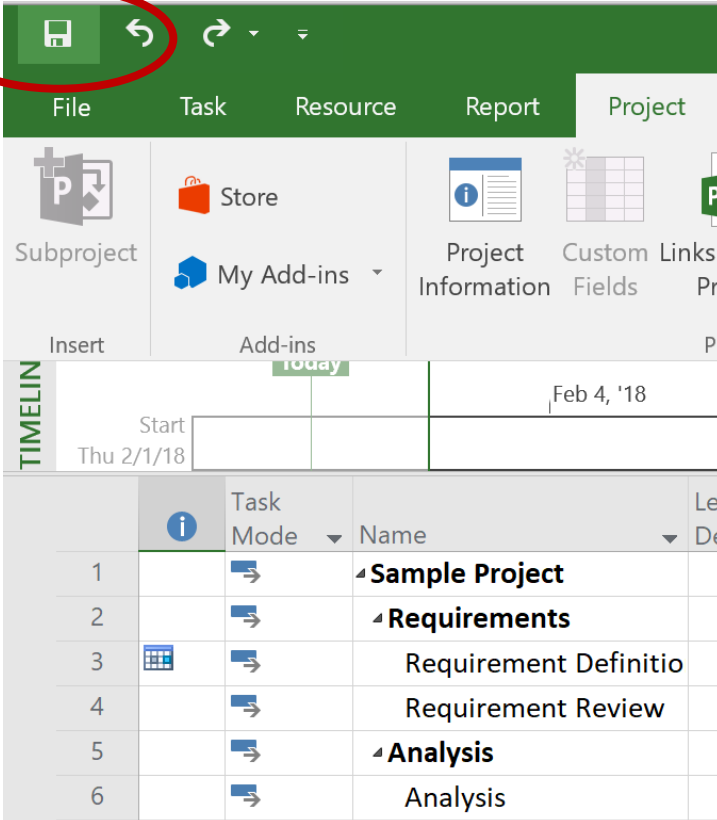
➤ Detail Gantt



Step 7: Save the Project

For this example, we are saving the file at the end, but it is recommended that you save the file frequently while you are working to avoid losing data as a result of problems such as a Power Failure for instance.

Save the Project



	Task Mode	Name	Level
1	→	Sample Project	
2	→	Requirements	
3	→	Requirement Definition	
4	→	Requirement Review	
5	→	Analysis	
6	→	Analysis	

NOTE:

Microsoft Project Schedules

- Microsoft Project schedules each task according to the formula:

$$\textit{Effort} = \textit{Amount of work} / \textit{Productivity Rate}$$

$$\textit{Duration} = \textit{Effort} / \textit{No. of resources}$$

- Duration is the actual amount of time that passes before the task is done.
- Amount of work is the total work required to be done.
- Resource effort is the amount of effort of all the resources that are assigned to the task.
- Effort of each resource is measured by productivity rate.
- Productivity rate is the total amount of output in a given time period.

Example

1. Let Work = 3000 SLOC

2. Effort will be calculated as:

$$\begin{aligned}\text{Work/Productivity Rate} &= \frac{3000}{100 \text{ SLOC/day}} \\ &= 30 \text{ days/1 Head Count}\end{aligned}$$

3. Duration will be calculated as:

$$\begin{aligned}\text{Effort/\# Head Count} &= 30 \text{ days/1 HC} \\ &\text{duration will be 30 days for 1 HC} \\ &\text{or, for 2 Head Counts it will be} \\ &= 30 \text{ days/2 HC} \\ &= 15 \text{ days.}\end{aligned}$$