MS Project Professional 2021

Tutorial #4 – Resource Pool

CS 587 – Software Project Management
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Resource pool project and Sharer project

- **Resource pool project** - the project containing the resources that you want to share

- **Sharer project** - the project that will share resources from another project

Tasks for both projects

Resource pool project

| #	Task Name	WBS	Duration	Start	Finish
1	Project1_ResourcePool	1	149 days	Fri 2/4/22	Wed 8/31/22
2	Project Plan	1.1	11 days	Fri 2/4/22	Fri 2/18/22
3	Write Plan	1.1.1	5 days	Fri 2/4/22	Thu 2/10/22
4	Review Plan	1.1.2	5 days	Fri 2/11/22	Thu 2/17/22
5	Preparation for review	1.1.2.1	3 days	Fri 2/11/22	Tue 2/15/22
6	Review Meeting	1.1.2.2	2 days	Wed 2/16/22	Thu 2/17/22
7	Rework	1.1.3	1 day	Fri 2/18/22	Fri 2/18/22
8	Risk Mitigation and Contingency Plan	1.2	8 days	Mon 2/21/22	Wed 3/2/22
9	Write Plan	1.2.1	2 days	Mon 2/21/22	Tue 2/22/22
10	Review Plan	1.2.2	5 days	Wed 2/23/22	Tue 3/1/22
11	Preparation for review	1.2.2.1	3 days	Wed 2/23/22	Fri 2/25/22
12	Review Meeting	1.2.2.2	2 days	Mon 2/28/22	Tue 3/1/22
13	Rework	1.2.3	1 day	Wed 3/2/22	Wed 3/2/22
14	Requirement	1.3	18 days	Thu 3/3/22	Mon 3/28/22
15	Write requirements	1.3.1	3 days	Thu 3/3/22	Mon 3/7/22
16	Write Use Case Model	1.3.2	2 days	Tue 3/8/22	Wed 3/9/22
17	Review Requirements/ Use Case Model	1.3.3	11 days	Thu 3/10/22	Thu 3/24/22
18	Preparation for review(Requirements)	1.3.3.1	3 days	Thu 3/10/22	Mon 3/14/22
19	Preparation for review(UseCases)	1.3.3.2	4 days	Tue 3/15/22	Fri 3/18/22
20	Review Meeting(Requirements)	1.3.3.3	2 days	Mon 3/21/22	Tue 3/22/22
21	Review Meeting(UseCases)	1.3.3.4	2 days	Wed 3/23/22	Thu 3/24/22
22	Rework	1.3.4	2 days	Fri 3/25/22	Mon 3/28/22
23	Analysis	1.4	13 days	Tue 3/29/22	Thu 4/14/22
24	Write Analysis Document	1.4.1	1 day	Tue 3/29/22	Tue 3/29/22
25	Review Analysis Document	1.4.2	7 days	Wed 3/30/22	Thu 4/7/22
26	Preparation for Analysis Document	1.4.2.1	3 days	Wed 3/30/22	Fri 4/1/22
27	Review Meeting	1.4.2.2	4 days	Mon 4/4/22	Thu 4/7/22
28	Rework	1.4.3	5 days	Fri 4/8/22	Thu 4/14/22
29	Design	1.5	24 days	Fri 4/15/22	Wed 5/18/22
30	Write DD	1.5.1	3 days	Fri 4/15/22	Tue 4/19/22
31	Review DD	1.5.2	4 days	Wed 4/20/22	Mon 4/25/22
32	Preparation for DD	1.5.2.1	3 days	Wed 4/20/22	Fri 4/22/22

Sharer project

| #	Task Name	WBS	Duration	Start	Finish
1	Project2_Sharer	1	174 days?	Fri 2/4/22	Wed 10/5/22
2	Project Plan	1.1	10 days	Fri 2/4/22	Thu 2/17/22
3	Write Plan	1.1.1	3 days	Fri 2/4/22	Tue 2/8/22
4	Review Plan	1.1.2	5 days	Wed 2/9/22	Tue 2/15/22
5	Preparation for review	1.1.2.1	2 days	Wed 2/9/22	Thu 2/10/22
6	Review Meeting	1.1.2.2	3 days	Fri 2/11/22	Tue 2/15/22
7	Rework	1.1.3	2 days	Wed 2/16/22	Thu 2/17/22
8	Requirement	1.2	16 days	Fri 2/18/22	Fri 3/11/22
9	Write requirements	1.2.1	4 days	Fri 2/18/22	Wed 2/23/22
10	Review Requirements	1.2.2	9 days	Thu 2/24/22	Tue 3/8/22
11	Preparation for review	1.2.2.1	5 days	Thu 2/24/22	Wed 3/2/22
12	Review Meeting	1.2.2.2	4 days	Thu 3/3/22	Tue 3/8/22
13	Rework	1.2.3	3 days	Wed 3/9/22	Fri 3/11/22
14	Lab and Environment Setup	1.3	20 days	Mon 3/14/22	Fri 4/8/22
15	Hardware	1.3.1	13 days	Mon 3/14/22	Wed 3/30/22
16	Install Network Elements	1.3.1.1	7 days	Mon 3/14/22	Tue 3/22/22
17	Routers	1.3.1.1.1	3 days	Mon 3/14/22	Wed 3/16/22
18	Bridge	1.3.1.1.2	4 days	Thu 3/17/22	Tue 3/22/22
19	Install Server	1.3.1.2	3 days	Wed 3/23/22	Fri 3/25/22
20	Install Clients	1.3.1.3	3 days	Mon 3/28/22	Wed 3/30/22
21	Software	1.3.2	7 days	Thu 3/31/22	Fri 4/8/22
22	Install Development Tools	1.3.2.1	4 days	Thu 3/31/22	Tue 4/5/22
23	Install Testing Tools	1.3.2.2	3 days	Wed 4/6/22	Fri 4/8/22
24	Analysis/Design Document	1.4	12 days	Mon 4/11/22	Tue 4/26/22
25	Write DD	1.4.1	2 days	Mon 4/11/22	Tue 4/12/22
26	Review DD	1.4.2	7 days	Wed 4/13/22	Thu 4/21/22
27	Preparation for DD	1.4.2.1	3 days	Wed 4/13/22	Fri 4/15/22
28	Review Meeting	1.4.2.2	4 days	Mon 4/18/22	Thu 4/21/22
29	Rework	1.4.3	3 days	Fri 4/22/22	Tue 4/26/22
30	Data Model	1.5	11 days?	Wed 4/27/22	Wed 5/11/22
31	Create Data Model	1.5.1	1 day?	Wed 4/27/22	Wed 4/27/22
32	Review Data Model	1.5.2	7 days	Thu 4/28/22	Fri 5/6/22

Step to create a resource pool

- **Step 1**: Click the sharer project, remember to have the resource pool project also open

- **Step 2**: On the Resource Tab, click **Resource Pool**, and then click **Share Resources**

- **Step 3**: Specify the **resources** and **precedence** in the pop-up window, and then click OK.

- If your project already had resources entered, the resources from both the projects are combined
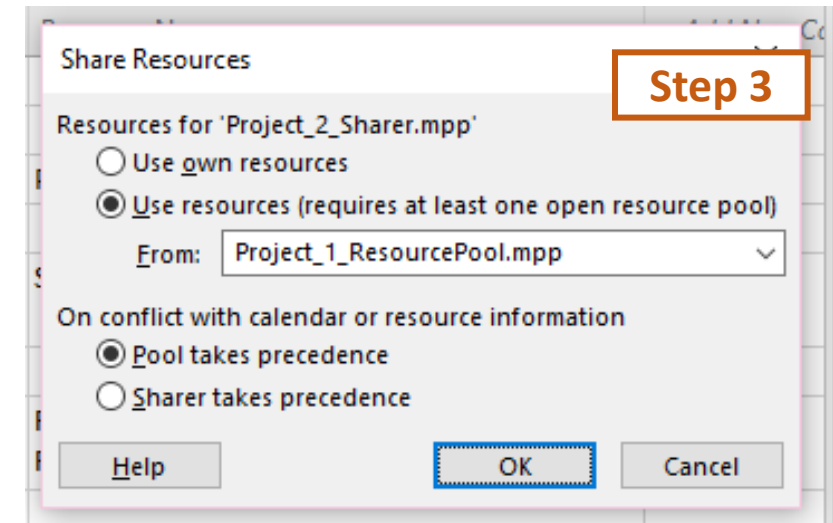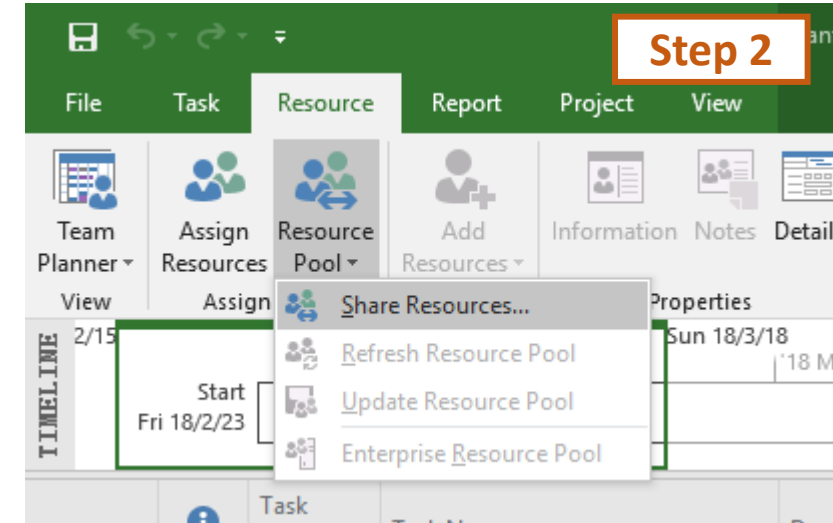
Handle conflicts

Pool takes precedence

- Resource information in the resource pool project to override any conflicting information from the sharer project (default)

- For example, if the resource named Karen Berg has maximum units of 100% in the sharer project, and 75% in the resource pool project. If the pool takes precedence, then the value of 75% is retained as the maximum units for Karen Berg.

Sharer takes precedence

- Resource information in the sharer project to override any conflicting information from the resource pool project

- For example, if Karen Berg has a standard rate of $50 in the sharer project, and a standard rate of $45 in the resource pool project. If sharer takes precedence, the value of $50 is retained as the standard rate for Karen Berg

Tasks for both projects

Resource pool project

Sharer project

Open the projects
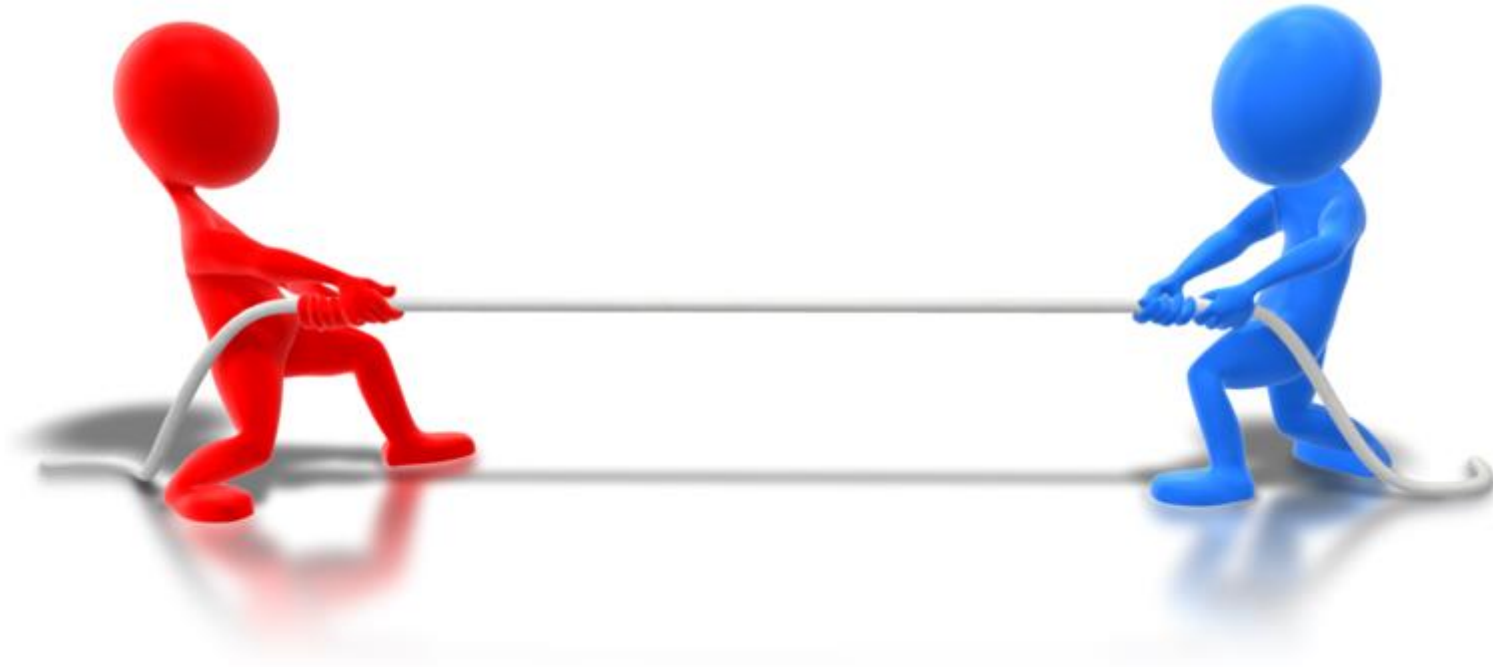
Open the resource pool
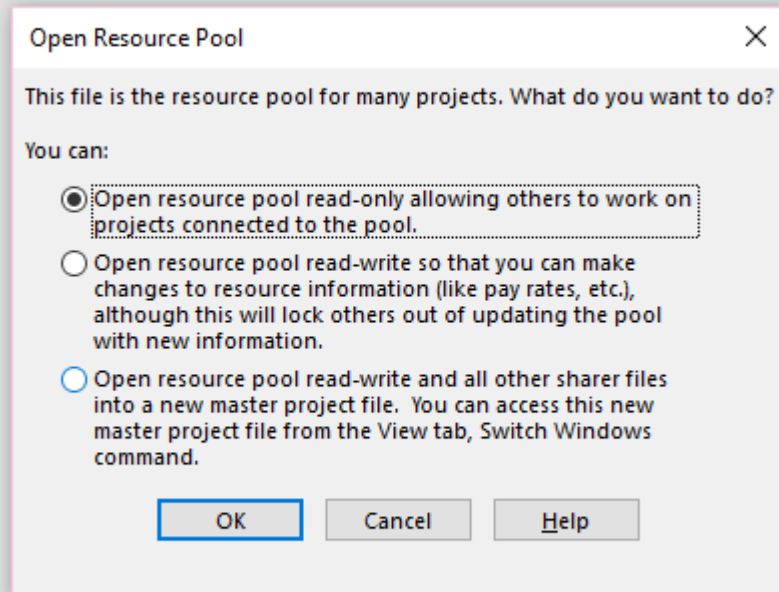
Open the sharer
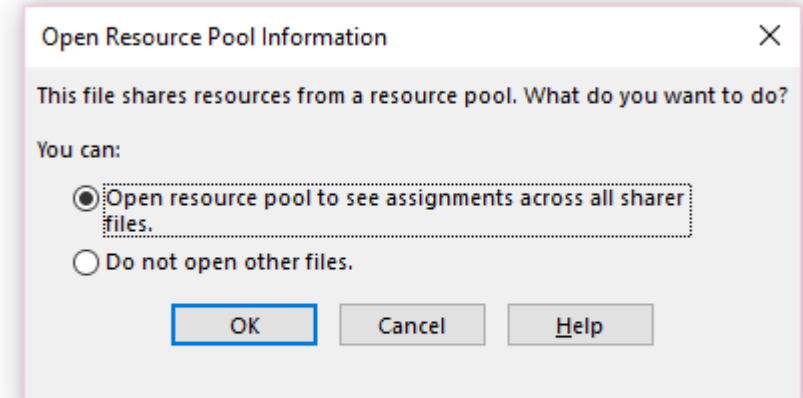
Handle the conflicts

Conflicts can happen when two or more tasks are done in parallel, and the same resource is assigned to work on all the tasks simultaneously

Handle the conflicts

- ## View conflicts

		Task Mode	Task Name	WBS	Duration	Start	Finish	Predecessors	Resource Names
1			⊿ Project1_ResourcePool	1	149 days	Fri 2/4/22	Wed 8/31/22		
2			⊿ Project Plan	1.1	10.5 days	Fri 2/4/22	Fri 2/18/22		
3			Write Plan	1.1.1	5 days	Fri 2/4/22	Thu 2/10/22		PM1,PM2
4			⊿ Review Plan	1.1.2	5 days	Fri 2/11/22	Thu 2/17/22	3	
5			Preparation for review	1.1.2.1	3 days	Fri 2/11/22	Tue 2/15/22	3	DE1,PE1,RE1,SE2,TE1
6			Review Meeting	1.1.2.2	2 days	Wed 2/16/22	Thu 2/17/22	5	DE1,PE1,RE1,SE2,TE1,PM1
7			Rework	1.1.3	0.5 days	Fri 2/18/22	Fri 2/18/22	6	PM1,PM2
8			⊿ Risk Mitigation and Contingency Plan	1.2	6.5 days	Fri 2/18/22	Mon 2/28/22	7	
9			Write Plan	1.2.1	1 day	Fri 2/18/22	Mon 2/21/22	7	PM1,PM2
10			⊿ Review Plan	1.2.2	5 days	Mon 2/21/22	Mon 2/28/22	9	
11	👤		Preparation for review	1.2.2.1	3 days	Mon 2/21/22	Thu 2/24/22	9	DE1,PE1,RE1,SE2,TE1
12	👤		Review Meeting	1.2.2.2	2 days	Thu 2/24/22	Mon 2/28/22	11	DE1,PE1,RE1,SE2,TE1,PM2
13			Rework	1.2.3	0.5 days	Mon 2/28/22	Mon 2/28/22	12	PM2,PM1
14			⊿ Requirement	1.3	13.67 days	Tue 3/1/22	Fri 3/18/22	13,7	
15	👤		Write requirements	1.3.1	1 day	Tue 3/1/22	Wed 3/2/22	13,7	RE1,RE2,RE3
16	👤		Write Use Case Model	1.3.2	0.83 days	Wed 3/2/22	Wed 3/2/22	15	RE1,RE2,RE3
17			⊿ Review Requirements/ Use Case Model	1.3.3	11 days	Thu 3/3/22	Thu 3/17/22	16	
18	👤		Preparation for review(Requirements)	1.3.3.1	3 days	Thu 3/3/22	Mon 3/7/22	16	DE5 ,PE1,SE1,TE1
19			Preparation for review(UseCases)	1.3.3.2	4 days	Tue 3/8/22	Fri 3/11/22	18	DE5 ,PE1,SE1,TE1
20			Review Meeting(Requirements)	1.3.3.3	2 days	Mon 3/14/22	Tue 3/15/22	19	PE1,SE1,TE1,DE5 ,RE1
21			Review Meeting(UseCases)	1.3.3.4	2 days	Wed 3/16/22	Thu 3/17/22	20	PE1,SE1,TE1,DE5 ,RE2
22			Rework	1.3.4	0.67 days	Fri 3/18/22	Fri 3/18/22	21	RE1,RE2,RE3

View in Gantt Chart

Handle the conflicts

- View conflicts

View in Resource Sheet

How to resolve conflicts ?

There are two ways to solve conflicts:

- **Strategy 1**

  Allocate 50% (or any %) units of resource to one project and the remaining units to the other project

- **Strategy 2**

  Assign 100% units of resource to both projects, but at different time slots

Note: The above strategies can be used for solving conflicts within the same project

Strategy 1

- **Step 1**: Select the task that has conflicts
- **Step 2**: Double click the resources
- **Step 3**: Change the percentage

Strategy 2

- **Step 1:** Select the task that has a conflict
- **Step 2:** On the Resource Tab, click on "Level Resource"
- **Step 3:** Select the responsible resources
- **Step 4:** Click on "Level now"

Note: The tasks in the project having precedence will start at the scheduled time. The tasks in the project **NOT** having precedence will be delayed until the resource is available to work on that task

Questions ?