Assignment #2

- **Deliverable: post your homework on Canvas as a zipped file with the name "HW2- YourLastName, FirstName".**

Using the data spreadsheet provided below to achieve the following:

1. Assume it has been requested that this project be started on 6/10/25 after the project in Assignment#1 has been started on 6/3/25. This project and the project in Homework#1 will use/share the same resources listed in Assignment#1 .
2. Create a resource pool in MS-Project that will be shared by Homework#1 and Homework#2
3. Feed the information provided in this handout in MS Project to create the Project Plan and the Network Diagram
4. Create a WBS with the required phases and activities to complete this project
5. Assign the Resources to the Tasks making any assumptions you consider appropriate (Software Engineering Assumptions).
6. What is the earliest finish date for this project if it is scheduled to start on 6/10/2025? (under this scenario, as soon as engineers complete their tasks on Homework#1 you will assign them to start working on tasks for Homework#2 project)
7. Is it feasible to complete this project (Assignment#2 project) 3 weeks after the completion date you identified for the project in Assignment#1? Explain.
8. Submit your MS Project File
9. Submit your Comments regarding the start and completion dates and resources assignments for the two projects in a PDF document called Analysis.pdf.
10. The two documents in step 8 and 9 shall be saved in a zipped file with name "HW#2- YourLastName, FirstName".

Resources Available

Important Note: Use the same resources listed in Assignment#1; in essence, Assignment#1 project and Assignment#2 project will share the same resource pool. ONLY assign the needed resources to the tasks; for example writing project plan needs one manager of the available managers, however, you could use all available requirement engineers to work on writing the requirements.

In addition to resources listed in Assignment #1, following resources have been added to the resource pool of available headcounts

1. **There are two project managers, PM8, PM12, PM13 available.**
2. **There are two systems engineers, SE72, SE73, SE74 available**
3. **There are three programmers/software engineers PE735, PE736 available**
4. **There are three test engineers TE571, TE572, TE593 available**

Assumptions and Constraints:

1. Every review or inspection "meeting" task shall be carried by 5 engineers including ONE of the author(s)
2. Every review or inspection "preparation" task shall be carried by 4 engineers excluding the author(s)
3. Any "Rework" task can be executed by one or all authors of the original task
4. Project Plan shall be reviewed by at least one engineer from every technical area.
5. Data Model can be created only by system engineers and can be reviewed by any engineer
6. Lab and Environment Setup Tasks can be assigned and executed by system engineers only.

Task/Activity Dependencies:

It is expected that you will find the correct task dependencies based on the material discussed during class and considering the following constraints:

1. There is no technical task prior to requirement phase; project planning is not a technical task it is a managerial task.
2. Analysis Activity can start as soon as requirement document is complete
3. Design activity can start as soon as Analysis document is complete
4. Coding can start as soon as design is complete
5. Writing Test Plan can start as soon as requirements are complete
6. Executing Test Plan can start as soon as coding is complete
7. Documentation can start as soon as requirements are complete
8. Any other constraints that you might add, shall be documented clearly when you submit your homework.
9. Lab and Environment Setup Tasks must be completed before Coding tasks or text case execution tasks can be started.

Task	Amount of Work	Productivity Rate
Project Plan		
Write Plan	84 pages	5 pages/Hour
Review Plan		
Preparation for review		5 pages/Hour
Review Meeting		10 pages/Hour
Rework	123 defects	3 defects/Hour
Requirement		
Write requirements	165 Req	4 Req/Hour
Review Requirements		
Preparation for review		5 Req/Hour
Review Meeting		10 Req/Hour
Rework	210 defects	8 defects/Hour
Lab and Environment Setup		
Hardware		
Install Server	15 servers	1 server/day
Install Clients	19 clients	6 clients/day
Software		
Install Development Tools	8 tools	5 tools/day
Install Testing Tools	12 tools	2 tools/day
Analysis/Design Document		
Write DD	10 pages	6 pages/Hour
Review DD		
Preparation for DD		5 pages/Hour
Review Meeting		10 pages/Hour
Rework	278 defects	10 defects/Hour
Data Model		
Create Data Model	45 pages	1 page/Hour
Review Data Model		
Preparation for DM		5 pages/Hour
Review Meeting		10 pages/Hour
Rework	223 defects	4 defects/Hour
Coding and unit test		
Write Code	3945 SLOC	5 SLOC/Hour
Unit Testing		
Prepare/Execute Test Cases	187 test cases	3 Test Case/Hour
Fix Found Defects	155 Defects	5 Defects/Day
Test Fixed Defects	155 Defects	10 Defects/Day
Code Inspection		

Preparation for Code Inspection		125 SLOC/Hour
Code Inspection Meeting		200 SLOC/Hour
Rework	314 defects	3 defects/Hour
Testing		
Write test plan (TP)	203 pages	6 pages/Day
Review TP		
Preparation for TP		2 pages/Hour
Review TP Meeting		6 pages/Hour
Rework	102 defects	5 defects/Hour
Execute TP (test cases)	310 test cases	6 test cases/day
Fix Found Defects	185 defects	12 defects/day
Documentation		
User Documentation	195 pages	4 pages/Hour
Review UD		
Preparation for UD		5 pages/Hour
Review UD Meeting		8 pages/Hour
Rework	344 defects	15 defects/Hour