Assignment #2

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

- **Include the following files in your compressed/zipped (winzip only) file for your assignment #2 submission:**

    1. **Assignment#1 – MS-project file**
    2. **Assignment#2 – MS-project file**
    3. **Analysis.pdf file**

- *Communicate all questions regarding the homework with the TA.*

Use the data spreadsheet provided below to achieve the following:

1. Assume it has been requested that this project be started on 2/24/245after the project in Assignment#1 has been started on 2/10/25. 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 2/24/25? (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 Files
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. All effort and duration calculations must be documented in your Analysis.pdf document
11. The 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. The following project managers are available: PM9, PM10
2. The following requirement engineers are available: RE64, RE65, RE66, RE67, RE70
3. The following system engineers are available SE22, SE23, SE24, SE34
4. The following programmers/software engineers are available: PE32, PE33, PE34, PE35, PE38, PE39, PE40
5. The following test engineers are available: TE34, TE38, TE39, TE40, TE4, TE42
6. The following Documentation engineers are available: DE36, DE37, DE38, DE46, DE47, DE48, DE49, DE50

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 the 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	129 pages	5 pages/Hour
Review Plan		
Preparation for review		5 pages/Hour
Review Meeting		9 pages/Hour
Rework	87 defects	5 defects/Hour
Requirement		
Write requirements	273 Req	3 Req/Hour
Review Requirements		
Preparation for review		5 Req/Hour
Review Meeting		10 Req/Hour
Rework	388 defects	5 defects/Hour
Lab and Environment Setup		
Hardware		
Install Network Elements		
Routers	10	3 Routers/day
Bridge	31	2 Bridges/day
Install Server	26 servers	3 servers/day
Install Clients	38 clients	5 clients/day
Software		
Install Development Tools	15 tools	5 tools/day
Install Testing Tools	23 tools	7 tools/day
Analysis/Design Document		
Write DD	188 pages	5 pages/Hour
Review DD		
Preparation for DD		5 pages/Hour
Review Meeting		8 pages/Hour
Rework	385 defects	10 defects/Hour
Data Model		
Create Data Model	71 pages	1 page/Hour
Review Data Model		
Preparation for DM		4 pages/Hour
Review Meeting		8 pages/Hour
Rework	249 defects	5 defects/Hour
Coding and unit test		
Write Code	7890 SLOC	5 SLOC/Hour
Unit Testing		
Prepare/Execute Test Cases	925 test cases	4 Test Cases/Hour
Fix Found Defects	489 Defects	16 Defects/Day
Test Fixed Defects	489 Defects	20 Defects/Day

Code Inspection		
Preparation for Code Inspection		100 SLOC/Hour
Code Inspection Meeting		160 SLOC/Hour
Rework	945 defects	10 defects/Hour
Testing		
Write test plan (TP)	210 pages	8 pages/Day
Review TP		
Preparation for TP		5 pages/Hour
Review TP Meeting		10 pages/Hour
Rework	438 defects	6 defects/Hour
Execute TP (test cases)	793 test cases	6 test cases/day
Fix Found Defects	734 defects	10 defects/day
Documentation		
User Documentation	410 pages	5 page/Hour
Review UD		
Preparation for UD review meeting		5 pages/Hour
Review UD Meeting		7 pages/Hour
Rework	392 defects	4 defects/Hour
Training		
Training Handouts (TH)	266 pages	1 page/Hour
Review Training Handouts (TH)		
Preparation for TH review meeting		5 pages/Hour
Review TH Meeting		10 pages/Hour
Rework	623 defects	12 defects/Hour