Assignment #1

- **Deliverable**: **post your homework on Blackboard as a ZIP file (use 7-ZIP https://www.7-zip.org/download.html)with the name "HW1_YourLastName, FirstName".**

Using the data spreadsheet provided below to achieve the following:

1. Feed the information provided in this handout in MS Project to create the Project Plan and the Network Diagram
2. Create a WBS with the required phases and activities to complete this project
3. Assign the Resources to the Tasks making any assumptions you consider appropriate (Your assumptions should be based on Software Engineering Assumptions).
4. What is the earliest finish date for this project if it is scheduled to start on 6/3/24?
5. Submit a single ZIP file that has MS-Project and PDF document report
6. Submit your MS Project File
7. Create PDF Document Report that has the following :
    1. WBS
    2. Network Diagram
    3. Answers to Question #4

Resources Available

Category	Initials
Project *Manager*	PM3, PM4, PM5, PM6
Requirement Engineers	RE7, RE8, RE102, RE103, RE117, RE118, RE119, , RE120
System Engineers	SE7, SE8, SE9, SE204, SE205, SE501, SE503, SE504
Programmers/Software Engineers	PE7, PE8, PE9, PE10, PE202, PE203, PE205, PE206
Test Engineers	TE302, TE2403, TE404, TE405, TE509, TE510
Documentation Engineers	DE105, DE203, DE204, DE205, DE206

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. System Engineers are responsible for creating Analysis and Design artifacts

Task/Activity Dependencies:

It is expected that you will find the <u>correct</u> 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. Data Model task can start when Detailed Design task finishes
5. Coding can start as soon as design is complete
6. Writing Test Plan can start as soon as requirements are complete
7. Executing Test Plan can start as soon as coding is complete
8. Documentation can start as soon as requirements are complete
9. Any other constraints that you might add, shall be documented clearly when you submit your homework.

Task	Amount of Work	Productivity Rate
Project Plan		
Write Plan	102 pages	4 pages/Hour
Review Plan		
Preparation for review		4 pages/Hour
Review Meeting		5 pages/Hour
Rework	67 defects	5 defects/Hour
	52	
Requirements		
Write requirements	187 Req	4 Req/Hour
Write Use Case Model	48 Use Cases	4 use case/Hour
Review Requirements/ Use Case Model		
Preparation for review		8 Req/Hour
		4 Use Cases/Hour
Review Meeting		8 Req/Hour
		12 Use Cases/Hour
Rework	102 defects	5 defects/Hour
Analysis		
Write Analysis Document	61 pages	5 pages/Hour
Review Analysis Document		
Preparation for Analysis Document		5 pages/Hour
Review Meeting		8 pages/Hour
Rework	70 defects	4 defects/Hour
Design		
Write DD	150 pages	4 pages/Hour
Review DD		
Preparation for DD		3 pages/Hour
Review Meeting		6 pages/Hour
Rework	132 defects	5 defects/Hour
Write Data Model (DM)	78 pages	1 page/Hour
Review DM		
Preparation for DM		3 pages/Hour
Review Meeting		5 pages/Hour
Rework	108 defects	5 defects/Hour
Coding and unit test		
Write Code	4007 SLOC	9 SLOC/Hour
Unit Testing		
Prepare/Execute Test Cases	277 test cases	5 Test Cases/Day
Fix Found Defects	99 Defects	4 Defects/Day
Test Fixed Defects	99 Defects	5 Defects/Day
Code Inspection		
Preparation for Code Inspection		110 SLOC/Hour

Code Inspection Meeting		160 SLOC/Hour
Rework	309 defects	5 defects/Hour
System Integration Testing		
Write test plan (TP)	149 pages	5 pages/Day
Review TP		
Preparation for TP		5 pages/Hour
Review TP Meeting		6 pages/Hour
Rework	99 defects	4 defects/Hour
Execute TP (test cases)	199 test cases	30 test cases/day
Fix Found Defects	81 defects	4 defects/day
Test Fixed Defects	81 defects	10 defects/day
Load, Stress, and Performance Testing		
Write test plan (TP)	177 pages	4 pages/Day
Review TP		
Preparation for TP		3 pages/Hour
Review TP Meeting		6 pages/Hour
Rework	77 defects	3 defects/Hour
Execute TP (test cases)	255 test cases	8 test cases/day
Fix Found Defects	66 defects	5 defects/day
Test Fixed Defects	66 defects	8 defects/day
Documentation		
User Documentation	134 pages	5 page/Hour
Review UD		
Preparation for UD Review		4 pages/Hour
Review UD Meeting		10 pages/Hour
Rework	188 defects	8 defects/Hour
Training Material		
Tutorial	303 pages	4 page/Hour
Review Tutorial		
Preparation for Tutorial Review		5 pages/Hour
Review Tutorial Meeting		8 pages/Hour
Rework	299 defects	15 defects/Hour