Assignment #2

- **Due Date: 7/29/16 by 11:59pm**
- **Deliverable: post your homework on Blackboard digital dropbox as a zipped file with the name "HW2- YourLastName, FirstName".**
- **Communicate all questions regarding the homework with the TA.**

Using the data spreadsheet provided below to achieve the following:

1. Assume it has been requested that this project be started on 7/29/16 after the project in Assignment#1 has been started on 7/22/16. 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 7/29/16.? (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 three project managers PM710, PM711, PM712 available
2. There are four systems engineers SE934, SE935, SE936, SE937 available
3. There are three programmers/software engineers PE934, PE935, PE936 available
4. There are three test engineers TE912, TE913, TE914 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	43 pages	2 pages/Hour
Review Plan		
Preparation for review		5 pages/Hour
Review Meeting		10 pages/Hour
Rework	28 defects	3 defects/Hour
Requirement		
Write requirements	255 Req	5 Req/Hour
Review Requirements		
Preparation for review		4 Req/Hour
Review Meeting		8 Req/Hour
Rework	77 defects	10 defects/Hour
Lab and Environment Setup		
Hardware		
Install Server	4 servers	1 server/day
Install Clients	34 clients	10 clients/day
Software		
Install Development Tools	8 tools	5 tools/day
Install Testing Tools	12 tools	2 tools/day
Analysis/Design Document		
Write DD	112 pages	4 pages/Hour
Review DD		
Preparation for DD		4 pages/Hour
Review Meeting		8 pages/Hour
Rework	134 defects	6 defects/Hour
Data Model		
Create Data Model	24 pages	1 page/Hour
Review Data Model		
Preparation for DM		4 pages/Hour
Review Meeting		8 pages/Hour
Rework	55 defects	5 defects/Hour
Coding and unit test		
Write Code	3500 SLOC	5 SLOC/Hour
Unit Testing		
Prepare/Execute Test Cases	187 test cases	2 Test Case/Hour
Fix Found Defects	170 Defects	8 Defects/Day
Test Fixed Defects	170 Defects	16 Defects/Day
Code Inspection		
Preparation for Code Inspection		150 SLOC/Hour
Code Inspection Meeting		175 SLOC/Hour

Rework	210 defects	5 defects/Hour
Testing		
Write test plan (TP)	134 pages	5 pages/Day
Review TP		
Preparation for TP		3 pages/Hour
Review TP Meeting		6 pages/Hour
Rework	66 defects	4 defects/Hour
Execute TP (test cases)	166 test cases	5 test cases/day
Fix Found Defects	88 defects	8 defects/day
Documentation		
User Documentation	175 pages	5 page/Hour
Review UD		
Preparation for UD		4 pages/Hour
Review UD Meeting		8 pages/Hour
Rework	89 defects	10 defects/Hour