**Assignment 3 Analysis**

**7)** The earliest finish date for Project\_3 if it is scheduled to start on 10/14/19 is 4/2/20.

8) No, This project cannot be completed in 2 months after the project is started because the resources are being shared among the 3 projects. As the tasks are simultaneously running in the 3 projects it is difficult to use the same resources which makes them over utilized. So making efficient resource utilization does not give any chance to complete this project with in 2 months after it is started on 10/14/19.

10)

Start date for Assignment#1 project: 9/9/19

Finish date for Assignment#1 project: 9/22/20

Start date for Assignment#2 project: 10/7/19

Finish date for Assignment#2 project: 9/4/20

Start date for Assignment#3 project: 10/14/19

Finish date for Assignment#3 project: 4/2/20.

**Assumptions and Constraints:**

* No two projects have same project managers.
* Every review or inspection “meeting” task shall be carried by 5 engineers including ONE of the author(s).
* Every review or inspection “preparation” task shall be carried by 4 engineers excluding the author(s).
* Any “Rework” task can be executed by one or all authors of the original task.
* Project Plan shall be reviewed by at least one engineer from every technical area, because of this constraint there are 5 engineer’s assigned to project plan preparation task (DE, PE, TE, SE, RE) who are engineers from each technical area. “Documentation task is also considered as technical task”
* Design task is considered only for DD as this is the only common task in Assignment#1 project and Assignment#2 projects.
* Other than the project plan the writing task has been shared among the engineer’s to reduce the duration.

Note: Corrected the calculation mistake in Assignment#2 project and used the updated the finish dates in this results.

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| WBS for Project 1 includes: | WBS for project 2 includes: | WBS for project 3 includes: |
| |  | | --- | | Task Name | | **Project 1** | | **Project Plan** | | Write Plan | | **Review Plan** | | Preparation for review | | Review Meeting | | Rework | | **Risk Mitigation and Contingency Plan** | | Write Plan | | **Review Plan** | | Preparation for review | | Review Meeting | | Rework | | **Requirement** | | Write Requirements | | Write Use Case Model | | **Review Requirements/Use Case Model** | | Preparation for review-Requirements | | Preparation for Review- Use Cases | | Review Meeting-Requirements | | Review Meeting-Use Cases | | Rework | | **Analysis** | | Write Analysis Document | | **Review Analysis Document** | | Preparation for Analysis Document | | Review Meeting | | Rework | | **Design** | | Write DD | | **Review DD** | | Preparation for DD | | Review Meeting | | Rework | | Write Data Model(DM) | | **Review DM** | | Preparation for DM | | Review Meeting | | Rework | | **Coding and Unit test** | | Write Code | | **Unit Testing** | | Prepare/Execute Test Cases | | Fix Found Defects | | Test Fixed Defects | | **Code Inspection** | | Preparation for Code Inspection | | Code Inspection Meeting | | Rework | | **Testing** | | Write Test Plan (TP) | | **Review TP** | | Preparationn for TP | | Review TP Meeting | | Rework | | Execute TP(test cases) | | Fix Found Defects | | Test Fixed Defects | | **Documentation** | | User Documentation | | **Review UD** | | Preparation for UD Review | | Review UD Meeting | | Rework | | |  | | --- | | Task Name | | **Shared\_Project** | | **Project Plan** | | Write Plan | | **Review Plan** | | Preparation for review | | Review Meeting | | Rework | | **Requirement** | | Write Requirements | | **Review Requirements** | | Preparation for review | | Review Meeting | | Rework | | **Lab and Environment Setup** | | **Hardware** | | Install Server | | Install Clients | | **Software** | | Install Development Tools | | Install Testing Tools | | **Analysis Document** | | Write AD | | **Review AD** | | Preparation for AD | | Review Meeting | | Rework | | **Design Document** | | Write DD | | **Review DD** | | Preparation for DD | | Review Meeting | | Rework | | **Coding and Unit Test** | | Write Code | | **Unit Testing** | | Prepare/Execute Test Cases | | Fix Found Defects | | Test Fixed Defects | | **Code Inspection** | | Preparation for Code Inspection | | Code Inspection Meeting | | Rework | | **Testing** | | Write Test Plan (TP) | | **Review TP** | | Preparation for TP | | Review TP Meeting | | Rework | | Execute TP (test cases) | | Fix Found Defects | | **Documentation** | | User Documentation | | **Review UD** | | Preparation for UD | | Review UD Meeting | | Rework | | |  | | --- | | Task Name | | **Baseline\_Project** | | **Project Plan** | | Write Plan | | **Review Plan** | | Preparation for Review | | Review Meeting | | Rework | | **Documented Software Development Process Updates** | | Process Changes | | **Review Changes** | | Preparation for Review | | Review Meeting | | Rework | | **Requirement** | | Write Requirements | | **Review Requirements** | | Peparation for Review | | Review Meeting | | Rework | | **Build the development and testing lab environment** | | **Hardware Environment** | | Servers | | Clients | | **Software Development Tools** | | Build/Compile tools | | **Software Testing Tools** | | Test Cases Execution Tools | | Simulation tools | | **Analysis** | | Write Analysis Document | | **Review Analysis Document** | | Preparation for Analysis Document | | Review Meeting | | Rework | | **Design** | | Write DD | | **Review DD** | | Preparation for DD | | Review Meeting | | Rework | | **Coding and unit test** | | Write Code | | **Unit Testing** | | Prepare/Execute Test Cases | | Fix Found Defects | | Test Fixed Defects | | **Code Inspection** | | Preparation for Code Inspection | | Code Inspection Meeting | | Rework | | **Testing** | | Write Test Plan(TP) | | **Review TP** | | Preparation for TP | | Review TP Meeting | | Rework | | Execute TP(test cases) | | Fix Found Defects | | Test Fixed Defects | | **Documentation** | | User Documentation | | **Review UD** | | Preparation for UD | | Review UD Meeting | | Rework | |

**Comment on Network diagram:**

This is representation of tasks/activities and its dependencies. Where boxes represents each task and lines connecting two boxes represents the dependencies of the tasks. In the MS project 2016 clicking on Network diagram view gives you the Network diagram for the respective WBS in Assignment#1 project, Assignment#2 project, Assignment#3 projects.

**Comment on Resource pool utilizations:**

Assignment#3 project is using the shared resources of project#1 and project#2 and along with these there are some additional resources added TE5001, TE75002, TE75003, SE75001, SE75002, SE75003, PE5001, PE5002, PE5003, PE5004. I am using the shared resources the pool takes precedence here and the conflicts are handled by using the strategy 2 in which we select the resource and level the resource by clicking level resource option.