Software Project Management (CS 587)
Assignment - 3

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Part – 1:

Project Plan:

Write Plan:

Given project plan Size in assignment 3 is 95 pages

Given Productivity Rate in Assignment 1 is 5 pages/hour
Given Productivity Rate in Assignment 2 is 5 pages/hour

$$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(5+5)\text{ pages/ hours}}{2} => 5\ pages/hour$$

Review Plan:

Preparation for review:

Given project plan Size in assignment 3 is 95 pages

Given Productivity Rate in Assignment 1 is 4 pages/hour
Given Productivity Rate in Assignment 2 is 5 pages/hour

$$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(5+4)\text{ pages / hour}}{2} => 4.5 \cong 5\ pages/hour$$

Review Meeting:

Given project plan Size in assignment 3 is 95 pages

Given Productivity Rate in Assignment 1 is 8 pages/hour
Given Productivity Rate in Assignment 2 is 9 pages/hour

$$average = \frac{\text{Productivity rate (Assign}-1\text{+ Assign}-2)}{2} => \frac{(8+9)\text{ pages /hour}}{2} => 8.5 \cong 9\ pages/hour$$

Rework:

Given Productivity Rate in Assignment 1 is 5 defects /hour
Given Productivity Rate in Assignment 2 is 5 defects /hour

$$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(5+5)\text{ defects / hours}}{2} => 5\ \text{defects}/hour$$

Given Assignment-1 baseline is 56 pages
Given Assignment-2 baseline is 129 pages
Given Assignment-3 baseline is 95 pages
Given Amount of work in Assignment 1 is 39 defects
Given Amount of work in Assignment 2 is 87 defects

In Project 1, We get
Number of defects for project 1 is

$\frac{(39*1000)}{56}$ => 696.4 ≅ 697

In project 2, the Pages are
Number of defects for project 2/KLOC is

$\frac{(87*1000)}{129}$ => 674.41 ≅ 675

Average of defects from Project1 and project 2

$\frac{(697+675)}{2}$ ≅ 686 defects

In project -3, Taking the average values = $\frac{(686 * 95)}{1000}$ => 65.17 ≅ 66 defects

Requirements
Write Requirements
Given requirement Size in assignment 3 is 189 Req

Given Productivity Rate in Assignment 1 is 4 Req /hour
Given Productivity Rate in Assignment 2 is 3 Req /hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(4+3)\text{ Req/ hours}}{2} => 3.5 \cong 4\ \text{Req}/hour$

Review Use Case Model
Given Amount of work in Assignment 1 is 62 use cases
Given Amount of work in Assignment 2 is 0 use cases
$average = \frac{\text{Amount of work (Assignment 1+ Assignment 2)}}{2} => \frac{62 + 0\text{ use cases}}{2} => 31\ usecases$

Given Productivity Rate in Assignment 1 is 5 use cases /2 hour => 2.5 use cases / hour
Given Productivity Rate in Assignment 2 is 0 use cases / hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(4+3)\text{ Req/ hours}}{2} => 3.5 \cong 4\ \text{Req}/hour$

Review Requirements/ Use Case Model
Preparation for review – review Requirements
Given requirement Size in assignment 3 is 189 Req

Given Productivity Rate in Assignment 1 is 18 Req /hour
Given Productivity Rate in Assignment 2 is 5 Req /hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(18+5)\text{ Req/ hours}}{2} => 11.5 \cong 12\ \text{Req}/hour$

Preparation for review – Use Case Model
Given Amount of work in Assignment 1 is 62 use cases
Given Amount of work in Assignment 2 is 0 use cases
$average = \frac{\text{Amount of work (Assignment 1+ Assignment 2)}}{2} => \frac{62+0\text{ use cases}}{2} => 31\ use\ cases$

Given Productivity Rate in Assignment 1 is 4 use cases/hour
Given Productivity Rate in Assignment 2 is 0 use cases/hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(4+0)\text{ usecases / hours}}{2} => 2\ \text{usecases / hours}$

Review Meeting – review Requirements
Given requirement Size in assignment 3 is 189 Req

Given Productivity Rate in Assignment 1 is 23 Req /hour
Given Productivity Rate in Assignment 2 is 10 Req /hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(23+10)\text{ Req/ hours}}{2} => 16.5 \cong 17\ \text{Req}/hour$

Review Meeting – Use Case Model
Given Amount of work in Assignment 1 is 62 use cases

Given Amount of work in Assignment 2 is 0 use cases

$average = \frac{\text{Amount of work (Assignment 1+ Assignment 2)}}{2} => \frac{62+0 \text{ use cases}}{2} => 31\ use\ cases$

Given Productivity Rate in Assignment 1 is 5 use cases/hour
Given Productivity Rate in Assignment 2 is 0 use cases/hour

$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(2+0) \text{ usecases / hours}}{2} => 2.5 \cong 3 \text{ usecases / hours}$

Rework:
Given Productivity Rate in Assignment 1 is 8 defects /hour
Given Productivity Rate in Assignment 2 is 5 defects /hour

$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(8+5) \text{ defects / hours}}{2} => 6.5 \cong 7 \text{ defects}/hour$

Given Assignment-1 baseline is 176 Req
Given Assignment-2 baseline is 273 Req
Given Assignment-3 baseline is 189 Req
Given Amount of work in Assignment 1 is 127 defects
Given Amount of work in Assignment 2 is 388 defects

In Project 1, We get
Number of defects for project 1 is
$\frac{(127*1000)}{176}$ => 721.59 ≅ 722
In project 2, the Pages are
Number of defects for project 2/KLOC is

$\frac{(388 * 1000)}{273}$ => 1421.24 ≅ 1422

Average of defects from Project1 and project 2
$\frac{(722 + 1422)}{2}$ ≅ 1072 defects
In project -3, Taking the average values = $\frac{(1072\ * 189\ )}{1000}$ => 202.608 ≅ 203 defects

Analysis
Write Analysis Document
Given analysis Size in assignment 3 is 143 pages

Given Productivity Rate in Assignment 1 is 5 pages/hour
Given Productivity Rate in Assignment 2 is 5 pages/hour

$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(5+5) \text{ pages/ hours}}{2} => 5\ pages/hour$

Review Analysis Document
Preparation for Analysis Document
Given analysis Size in assignment 3 is 143 pages

Given Productivity Rate in Assignment 1 is 4 pages/hour
Given Productivity Rate in Assignment 2 is 5 pages/hour

$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(4+5) \text{ pages/ hours}}{2} => 4.5 \cong 5\ pages/hour$

Review Meeting
Given analysis Size in assignment 3 is 143 pages

Given Productivity Rate in Assignment 1 is 7 pages/hour
Given Productivity Rate in Assignment 2 is 8 pages/hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(7+8)\text{ pages/ hours}}{2} => 7.5 \cong 8\ pages/hour$

Rework
Given Productivity Rate in Assignment 1 is 5 defects /hour
Given Productivity Rate in Assignment 2 is 10 defects /hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(5+10)\text{ defects / hours}}{2} => 7.5 \cong 8\ \text{defects}/hour$

Given Assignment-1 baseline is 72 pages
Given Assignment-2 baseline is 188 pages
Given Assignment-3 baseline is 143 pages
Given Amount of work in Assignment 1 is 92 defects
Given Amount of work in Assignment 2 is 385 defects

In Project 1, We get
Number of defects for project 1 is
$\frac{(92*1000)}{72}$ => 1277.77 ≅ 1278
In project 2, the Pages are
Number of defects for project 2/KLOC is

$\frac{(385 * 1000)}{188}$ => 2047.87 ≅ 2048

Average of defects from Project1 and project 2
$\frac{(1278+ 2048)}{2}$ ≅ 1663 defects
In project -3, Taking the average values = $\frac{(1663 * 143)}{1000}$ => 237.809 ≅ 238 defects

Design
Write DD
Given Design DD Size in assignment 3 is 173 pages

Given Productivity Rate in Assignment 1 is 4 pages/hour
Given Productivity Rate in Assignment 2 is 5 pages/hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(4+5)\text{ pages/ hours}}{2} => 4.5 \cong 5\ pages/hour$

Review DD
Preparation for DD
Given Design DD Size in assignment 3 is 173 pages

Given Productivity Rate in Assignment 1 is 5 pages/hour
Given Productivity Rate in Assignment 2 is 5 pages/hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(5+5)\text{ pages/ hours}}{2} => 5\ pages/hour$

Review Meeting
Given project plan Size in assignment 3 is 173 pages

Given Productivity Rate in Assignment 1 is 9 pages/hour
Given Productivity Rate in Assignment 2 is 8 pages/hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(9+8)\text{ pages/ hours}}{2} => 8.5 \cong 9\ pages/hour$

Rework
Given Productivity Rate in Assignment 1 is 4 defects /hour
Given Productivity Rate in Assignment 2 is 10 defects /hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(4+10)\text{ defects / hours}}{2} => 7\ \text{defects}/hour$

Given Assignment-1 baseline is 78 pages
Given Assignment-2 baseline is 188 pages
Given Assignment-3 baseline is 173 pages
Given Amount of work in Assignment 1 is 175 defects
Given Amount of work in Assignment 2 is 385 defects

In Project 1, We get
Number of defects for project 1 is
$\frac{(175*1000)}{78}$ => 2243.58 ≅ 2244

In project 2, the Pages are
Number of defects for project 2/KLOC is

$\frac{(385*1000)}{188}$ => 2047.87 ≅ 2048

Average of defects from Project1 and project 2
$\frac{(2244\ +2048)}{2}$ ≅ 2146 defects
In project -3, Taking the average values = $\frac{(2146*173)}{1000}$ => 371.258 ≅ 372 defects

Data Model
Write Data Model
Given Assignment-1 baseline is 31 pages
Given Assignment-2 baseline is 71 pages
Given Assignment-3 baseline is 173 pages
Given Amount of work in Assignment 1 is 78 defects
Given Amount of work in Assignment 2 is 249 defects

In Project 1, We get
$\frac{(31*1000)}{78}$ => 397.43 ≅ 398
In project 2, the Pages are

$\frac{(71*1000)}{188}$ => 377.65 ≅ 378

Average of defects from Project1 and project 2

$\frac{(398+378)}{2}$ => 388 pages

In project -3, Taking the average values = $\frac{(388*173)}{1000}$ => 67.124 ≅ 68 pages

Given Productivity Rate in Assignment 1 is 1 pages/3hour => 0.3333 => 0.34 pages/hour
Given Productivity Rate in Assignment 2 is 1 pages/hour

$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(0.34+1)\text{ pages/ hours}}{2} => 0.77 \cong 1\ pages/hour$

Review DM
Preparation for DM

Given Productivity Rate in Assignment 1 is 5 pages/hour
Given Productivity Rate in Assignment 2 is 4 pages/hour

$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(5+4)\text{ pages/ hours}}{2} => 4.5 \cong 5\ pages/hour$

Review Meeting

Given Productivity Rate in Assignment 1 is 4 pages/hour
Given Productivity Rate in Assignment 2 is 8 pages/hour

$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(4+8)\text{ pages/ hours}}{2} => 6\ pages/hour$

Rework

Given Productivity Rate in Assignment 1 is 7 defects /hour
Given Productivity Rate in Assignment 2 is 5 defects /hour

$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(7+5)\text{ defects / hours}}{2} => 6\ \text{defects}/hour$

Given Assignment-1 baseline is 31 pages
Given Assignment-2 baseline is 71 pages
Given Assignment-3 baseline is 173 pages
Given Amount of work in Assignment 1 is 79 defects
Given Amount of work in Assignment 2 is 249 defects

In Project 1, We get

$\frac{(79*1000)}{31}$ => 2548.38 ≅ 2549

In project 2, the Pages are

$\frac{(249*1000)}{71}$ => 3507.04 ≅ 3508

Average of defects from Project1 and project 2

$\frac{(2549+3508)}{2}$ ≅ 3029 defects

In project -3, Taking the average values = $\frac{(3029*68)}{1000}$ => 205.972 ≅ 206 defects

Documentation
User Documentation

Given Documentation Size in assignment 3 is 218 pages

Given Productivity Rate in Assignment 1 is 4 pages/hour
Given Productivity Rate in Assignment 2 is 5 pages/hour

$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(4+5)\text{ pages/ hours}}{2} => 4.5 \cong 5\ pages/hour$

Review UD
Preparation for UD Review
Given Documentation Size in assignment 3 is 218 pages

Given Productivity Rate in Assignment 1 is 4 pages/hour
Given Productivity Rate in Assignment 2 is 5 pages/hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(4+5)\text{ pages/ hours}}{2} => 4.5 \cong 5\ pages/hour$

Review UD Review
Given Documentation Size in assignment 3 is 218 pages

Given Productivity Rate in Assignment 1 is 6 pages/hour
Given Productivity Rate in Assignment 2 is 7 pages/hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(7+6)\text{ pages/ hours}}{2} => 6.5 \cong 7\ pages/hour$

Rework
Given Productivity Rate in Assignment 1 is 8 defects /hour
Given Productivity Rate in Assignment 2 is 4 defects /hour
$average = \frac{\text{Productivity rate (Assignment 1+ Assignment 2)}}{2} => \frac{(8+4)\text{ defects / hours}}{2} => 6\ \text{defects}/hour$

Given Assignment-1 baseline is 147 pages
Given Assignment-2 baseline is 410 pages
Given Assignment-3 baseline is 218 pages
Given Amount of work in Assignment 1 is 163 defects
Given Amount of work in Assignment 2 is 392 defects

In Project 1, We get
$\frac{(163 * 1000)}{147}$ =>1108.84 ≅ 1109
In project 2, the Pages are

$\frac{(392 * 1000)}{410}$ => 956.097 ≅ 957

Average of defects from Project1 and project 2
$\frac{(1109 + 957)}{2}$ => 1033 defects
In project -3, Taking the average values = $\frac{(1033 * 218)}{1000}$ => 225.194 ≅ 226 defects

WBS	Phase	Size	Productivity
1.1	**Project Plan**		
1.1.1	Write Plan	95 pages	5 pages/hour
1.1.2	Review Plan		
1.1.2.1	Preparation for review		5 pages/hour
1.1.2.2	Review Meeting		9 pages/hour
1.1.3	Rework	66 defects	5 defects/hour
1.2	**Documented Software Development Process Updates**		
1.2.1	Process Changes	78 Changes	5 Changes / hour
1.2.2	Review Changes		
1.2.2.1	Preparation for review		5 Changes / hour
1.2.2.2	Review Meeting		10 Changes / hour
1.2.3	Rework	102 defects	6 defects/hour
1.3	**Requirement**		
1.3.1	Write Requirements	189 Req	4 Req / hour
1.3.2	Review Requirements		
1.3.2.1	Preparation for review		12 Req / hour
1.3.2.2	Review Meeting		17 Req / hour
1.3.3	Rework	203 defects	7 defects/hour
1.4	**Build the development and testing lab environment**		
1.4.1	Hardware Environment		
1.4.1.1	Servers	8	1 server / day

1.4.1.2	Clients	17	4 clients / day
1.4.2	Software Development Tools		
1.4.2.1	Build/Compile tools	18	1 tool / hour
1.4.3	Software Testing Tools		
1.4.3.1	Test Cases Execution tools	7	3 tools/day
1.4.3.2	Simulation tools	10	2 tools/day
1.5	**Analysis**		
1.5.1	Write Analysis document	143 pages	3 pages / hour
1.5.2	Review Analysis document.		
1.5.2.1	Preparation for Analysis document		2 pages / hour
1.5.2.2	Review Meeting		4 pages / hour
1.5.3	Rework	238 defects	3 defects / hour
1.6	**Design**		
1.6.1	Write DD	173 pages	5 pages / hour
1.6.2	Review DD		
1.6.2.1	Preparation for DD		5 pages / hour
1.6.2.2	Review Meeting		9 pages / hour
1.6.3	Rework	372 defects	7 defects / hour
1.6.4	Create/Write Data Model	68 pages	1 page / hour
1.6.5	Review Data Model		
1.6.5.1	Preparation for DM		5 pages / hour
1.6.5.2	Review Meeting		6 pages / hour
1.6.6	Rework	206 defects	6 defects / hour

1.7	**Coding**		
1.7.1	Write Code	4150 SLOC	5 SLOC / Hour
1.7.2	Unit Testing		
1.7.2.1	Prepare/Execute Test Cases	353 test cases	3 test cases / hour
1.7.2.2	Fix Found Defects	233 defects	12 defects / Day
1.7.2.3	Test Found Defects	233 defects	13 defects / Day
1.7.3	Code Inspection		
1.7.3.1	Preparation for Code Inspection	4150 SLOC	112 SLOC / Hour
1.7.3.2	Code Inspection Meeting	4150 SLOC	185 SLOC / Hour
1.7.3.3	Rework	349 defects	7 defects / Day
1.8	**Testing**		
1.8.1	Write Test plan (TP)	169 pages	10 pages / day
1.8.2	Review TP		
1.8.2.1	Preparation for TP		5 pages / Hour
1.8.2.2	Review TP Meeting		10 pages / Hour
1.8.2.3	Rework	133 defects	4 defects / hour
1.8.3	Execute TP (test cases)	231 test cases	10 test cases / day
1.8.4	Fix Found Defects	92 defects	5 defects / day
1.8.5	Test Fixed Defects	92 defects	8 defects / day

1.9	**Documentation**		
1.9.1	User Documentation	218 pages	5 pages / hour
1.9.2	Review UD		
1.9.2.1	Preparation for UD Review		5 pages / hour
1.9.2.2	Review UD		7 pages / hour
1.9.3	Rework	226 defects	6 defects / hour

Part – 2
10) 4)
Project Plan:

Write Plan:

Time in hrs $= \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{95 \text{ pages}}{5 \text{ pages / hour}} => 19\ hours$

days $= \frac{19 \text{ hours}}{8 \text{ hours/day}} => 2.375\ days \cong 3\ days$

3 days ≅ 1 HCT
1.5 ≅22 2 days ≅ 2 HCT

Review Plan:
Preparation for review:

Time in hrs $= \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{95 \text{ pages}}{5 \text{ pages / hour}} => 19\ hours$

days $= \frac{19 \text{ hours}}{8 \text{ hours/day}} => 2.375\ days \cong 3\ days$

Review Meeting:

Time in hrs $= \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{95 \text{ pages}}{9 \text{ pages / hour}} => 10.55 \cong 11\ hours$

days $= \frac{11 \text{ hours}}{8 \text{ hours/day}} => 1.31\ days \cong 2\ days$

Rework:

Time in hrs $= \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{66 \text{ defects}}{5 \text{ defects / hour}} => 13.2 \cong 14\ hours$

days $= \frac{14 \text{ hours}}{8 \text{ hours/day}} => 1.75\ days \cong 2\ days$

2 days ≅ 1 HCT
1 days ≅ 2 HCT

Documented Software Development Process Updates:

Process Changes:

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{78 \text{ changes}}{5 \text{ changes / hour}} => 15.6 \cong 16\ hours$$

$$\#\text{ days} = \frac{16 \text{ hours}}{8 \text{ hours/day}} => 2\ days$$

2 days ≅ 1 HCT

1 days ≅ 2 HCT

Review Changes:

Preparation for review:

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{78 \text{ changes}}{5 \text{ changes / hour}} => 15.6 \cong 16\ hours$$

$$\#\text{ days} = \frac{16 \text{ hours}}{8 \text{ hours/day}} => 2\ days$$

Review Meeting:

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{78 \text{ changes}}{10 \text{ changes / hour}} => 7.8 \cong 8\ hours$$

$$\#\text{ days} = \frac{8 \text{ hours}}{8 \text{ hours/day}} => 1\ days$$

Rework:

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{102 \text{ defects}}{6 \text{ defects / hour}} => 17\ hours$$

$$\#\text{ days} = \frac{17 \text{ hours}}{8 \text{ hours/day}} => 2.125\ days \cong 3\ days$$

3 days ≅ 1 HCT

1.5 ≅ 2 days ≅ 2 HCT

Requirement

Write Requirement

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{189 \text{ Req}}{4 \text{ Req / hour}} => 47.25 \cong 48\ hours$$

$$\#\text{ days} = \frac{48 \text{ hours}}{8 \text{ hours/day}} => 6\ days$$

6 days ≅ 1 HCT

3 days ≅ 2 HCT

2 days ≅ 3 HCT

Review Requirement

Preparation for review

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{189 \text{ Req}}{12 \text{ Req / hour}} => 15.75 \cong 16\ hour$$

$$\#\ \text{days} = \frac{16\ \text{hours}}{8\ \text{hours/day}} => 2\ days$$

Review Meeting

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{189\ \text{Req}}{17\ \text{Req / hour}} => 11.12\ \cong 12\ hours$$

$$\#\ \text{days} = \frac{12\ \text{hours}}{8\ \text{hours/day}} => 1.5 \cong 2\ days$$

Rework

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{203\ \text{defects}}{7\ \text{defects / hour}} => 29\ hours$$

$$\#\ \text{days} = \frac{29\ \text{hours}}{8\ \text{hours/day}} => 3.625 \cong 4\ days$$

4 days ≅ 1 HCT
2 days ≅ 2 HCT
1.33 ≅ 2 days ≅ 3 HCT

Build the development and testing lab environment

Hardware Environment:

Servers:

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{8\ \text{servers}}{1\ \text{server / Day}} => 8\ days$$

8 days ≅ 1 HCT
4 days ≅ 2 HCT
2.66 ≅ 3 days ≅ 3 HCT

Clients:

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{17\ \text{clients}}{4\ \text{clients / Day}} => 4.25 \cong 5\ days$$

5 days ≅ 1 HCT
2.5 ≅ 3 days ≅ 2 HCT
1.66 ≅ 2 days ≅ 3 HCT

Software Development Tools:

Build/Compile tools:

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{18}{17\ \text{tool / hour}} => 18\ hours$$

$$\#\ \text{days} = \frac{18\ \text{hours}}{8\ \text{hours/day}} => 2.25 \cong 3\ days$$

3 days ≅ 1 HCT
1.5 ≅ 2 days ≅ 2 HCT
1days ≅ 3 HCT

Software testing Tools

Test Cases Execution tools

Time in hrs $= \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{7}{3 \text{ tool } / \text{Day}} => 2.33 \cong 3\ days$

3 days ≅ 1 HCT

1.5 ≅ 2 days ≅ 2 HCT

1 days ≅ 3 HCT

Simulation tools

Time in hrs $= \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{10}{2 \text{ tool / Day}} => 5\ days$

5 days ≅ 1 HCT

2.5 ≅ 3 days ≅ 2 HCT

1.66 ≅ 2 days ≅ 3 HCT

Analysis:

Write Analysis Document:

Time in hrs $= \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{143 \text{ pages}}{5 \text{ pages / hour}} => 28.6 \cong 29\ hours$

days $= \frac{29 \text{ hours}}{8 \text{ hours/day}} => 3.625 \cong 4\ days$

4 days ≅ 1 HCT

2 days ≅ 2 HCT

Review Analysis document

Preparation for Analysis document

Time in hrs $= \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{143 \text{ pages}}{5 \text{ pages / hour}} => 28.6 \cong 29\ hours$

days $= \frac{29 \text{ hours}}{8 \text{ hours/day}} => 3.625 \cong 4\ days$

Review Meeting

Time in hrs $= \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{143 \text{ pages}}{8 \text{ pages / hour}} => 17.87 \cong 18\ hours$

days $= \frac{18 \text{ hours}}{8 \text{ hours/day}} => 2.25 \cong 3\ days$

Rework

Time in hrs $= \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{238 \text{ defects}}{8 \text{ defects / hour}} => 29.75 \cong 30\ hours$

days $= \frac{\text{hours}}{8 \text{ hours/day}} => 3.75 \cong 4\ days$

4 days ≅ 1 HCT

2 days ≅ 2 HCT

Design

Write DD

Time in hrs = $\frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{173 \text{ pages}}{5 \text{ pages / hour}} => 34.6 \cong 35\ hours$

\# days = $\frac{35 \text{ hours}}{8 \text{ hours/day}} => \cong 4.325 \cong 5\ days$

5 days ≅ 1 HCT
2.5 ≅ 3 days ≅ 2 HCT
1.66 ≅ 2 days ≅ 3 HCT

Review DD

Preparation for DD

Time in hrs = $\frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{173 \text{ pages}}{5 \text{ pages / hour}} => 34.6 \cong 35\ hours$

\# days = $\frac{35 \text{ hours}}{8 \text{ hours/day}} => \cong 4.325 \cong 5\ days$

Review Meeting

Time in hrs = $\frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{173 \text{ pages}}{9 \text{ pages / hour}} => 19.22 \cong 20\ hours$

\# days = $\frac{20 \text{ hours}}{8 \text{ hours/day}} => \cong 2.5 \cong 3\ days$

Rework:

Time in hrs = $\frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{372 \text{ defects}}{7 \text{ defects / hour}} => 53.14 \cong 54\ hours$

\# days = $\frac{54 \text{ hours}}{8 \text{ hours/day}} => \cong 6.75 \cong 7\ days$

7 days ≅ 1 HCT
3.5 ≅ 4 days ≅ 2 HCT
2.33 ≅ 3 days ≅ 3 HCT

Create/Write Data Model

Time in hrs = $\frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{68 \text{ pages}}{1 \text{ pages / hour}} => 68\ hours$

\# days = $\frac{68 \text{ hours}}{8 \text{ hours/day}} => 8.5 \cong 9\ days$

9 days ≅ 1 HCT
4.5 ≅ 5 days ≅ 2 HCT
3 days ≅ 3 HCT

Review Data Model:

Preparation for DM:

Time in hrs = $\frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{68 \text{ pages}}{5 \text{ pages / hour}} => 13.6 \cong 14\ hours$

$$\#\text{ days} = \frac{14\ \text{hours}}{8\ \text{hours/day}} => 1.75 \cong 2\ days$$

Review Meeting:

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{68\ \text{pages}}{6\ \text{pages / hour}} => 11.33 \cong 12\ hours$$

$$\#\text{ days} = \frac{12\ \text{hours}}{8\ \text{hours/day}} => 1.5 \cong 2\ days$$

Rework:

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{206\ \text{defects}}{6\ \text{defects / hour}} => 34.33 \cong 35\ hours$$

$$\#\text{ days} = \frac{35\ \text{hours}}{8\ \text{hours/day}} => \cong 4.375 \cong 5\ days$$

5 days ≅ 1 HCT
2.5 ≅ 3 days ≅ 2 HCT
1.66 ≅ 2 days ≅ 3 HCT

Coding

Write Code

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{4150\ \text{SLOC}}{5\ \text{SLOC / hour}} => 830\ \ hours$$

$$\#\text{ days} = \frac{830\ \text{hours}}{8\ \text{hours/day}} => \cong 103.75 \cong 104\ days$$

104 days ≅ 1 HCT
52 days ≅ 2 HCT
34.66 ≅ 35 days ≅ 3 HCT
26 days ≅ 4 HCT
20.8 ≅ 21 days ≅ 5 HCT
17.33 ≅ 18 days ≅ 6 HCT
14.85 ≅ 15 days ≅ 7 HCT
13 days ≅ 8 HCT
11.55 ≅ 12 days ≅ 9 HCT
10.4 ≅ 11 days ≅ 10 HCT

Unit Testing

Prepare/Execute Test Cases

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{353\ \text{test cases}}{3\ \text{test cases / hour}} => 117.66 \cong 118\ \ hours$$

$$\#\text{ days} = \frac{118\ \text{hours}}{8\ \text{hours/day}} => \cong 14.75 \cong 15\ days$$

15 days ≅ 1 HCT
7.5 ≅ 8 days ≅ 2 HCT
5 days ≅ 3 HCT
3.75 ≅ 4 days ≅ 4 HCT
3 days ≅ 5 HCT

2.5 ≅ 3 days ≅ 6 HCT
2.14 ≅ 3 days ≅ 7 HCT
1.875 ≅ 2 days ≅ 8 HCT
1.66 ≅ 2 days ≅ 9 HCT
1.5 ≅ 2 days ≅ 10 HCT

Fix Found Defects

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{233 \text{ defects}}{12\ defects/Day} => 19.41 \cong 20\ Days$$

20 days ≅ 1 HCT
10 days ≅ days ≅ 2 HCT
6.66 ≅ 7 days ≅ 3 HCT
5 days ≅ 4 HCT
4 days ≅ 5 HCT
3.33 ≅ 4 days ≅ 6 HCT
2.85 ≅ 3 days ≅ days ≅ 7 HCT
2.5 ≅ 3 days ≅ 8 HCT
2.22 ≅ 3 days ≅ 9 HCT
2 days ≅ 10 HCT

Test Fixed Defects

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{233 \text{ defects}}{13\ defects/Day} => 17.92 \cong 18\ Days$$

18 days ≅ 1 HCT
9 days ≅ 2 HCT
6 days ≅ 3 HCT
4.5 ≅ 5 days ≅ 4 HCT
3.6 ≅ 4 days ≅ 5 HCT
3 days ≅ 6 HCT

Code Inspection
Preparation for Code Inspection

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{4150 \text{ SLOC}}{112 \text{ SLOC / hour}} => 37.05 \cong 38\ hours$$

$$\#\text{ days} = \frac{38 \text{ hours}}{8 \text{ hours/day}} => 4.75 \cong 5\ days$$

Code Inspection Meeting

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{4150 \text{ SLOC}}{185 \text{ SLOC / hour}} => 22.43 \cong 23\ hours$$

$$\#\text{ days} = \frac{23 \text{ hours}}{8 \text{ hours/day}} => 2.875 \cong 3\ days$$

Rework

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{349 \text{ defects}}{7\ defects/Day} => 49.85 \cong 50\ hours$$

days = $\frac{50 \text{ hours}}{8 \text{ hours/day}} => 6.25 \cong 7\ days$

7 days ≅ 1 HCT
3.5 ≅ 4 days ≅ 2 HCT
2.33 ≅ 3 days ≅ 3 HCT
1.75 ≅ 2 days ≅ 4 HCT

Testing:

Write Test plan (TP)

Time in hrs = $\frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{169 \text{ pages}}{10 \text{ pages / } Day} => 16.9 \cong 17\ Days$

17 days ≅ 1 HCT
8.5 ≅ 9 days ≅ 2 HCT
5.66 ≅ 6 days ≅ 3 HCT
4.25 ≅ 5 days ≅ 4 HCT
3.4 ≅ 4 days ≅ 5 HCT
2.83 ≅ 3 days ≅ 6 HCT

Review TP

Preparation for TP

Time in hrs = $\frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{169 \text{ pages}}{5\ pages/hour} => 33.8 \cong 34\ hours$

days = $\frac{34 \text{ hours}}{8 \text{ hours/day}} => 4.25 \cong 5\ days$

Review TP Meeting

Time in hrs = $\frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{169 \text{ pages}}{10\ pages/hour} => 16.9 \cong 17\ hours$

days = $\frac{17 \text{ hours}}{8 \text{ hours/day}} => 2.125 \cong 3\ days$

Rework

Time in hrs = $\frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{133 \text{ defects}}{4\ defects\ /\ hour} => 33.25 \cong 34\ hours$

days = $\frac{34 \text{ hours}}{8 \text{ hours/day}} => 4.25 \cong 5\ days$

5 days ≅ 1 HCT
2.5 ≅ 3 days ≅ 2 HCT
1.66 ≅ 2 days ≅ 3 HCT
1.25 ≅ 2 days ≅ 4 HCT

Execute TP (test cases)

Time in hrs = $\frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{231 \text{ test cases}}{10 \text{ test cases / } Day} => 23.1 \cong 24\ Days$

24 days ≅ 1 HCT
12 days ≅ 2 HCT
8 days ≅ 3 HCT
6 days ≅ 4 HCT
4.8 ≅ 5 days ≅ 5 HCT
4 days ≅ 6 HCT
3.43 ≅ 4 days ≅ 7 HCT
3 days ≅ 8 HCT

Fix found Defects

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{92 \text{ defects}}{5 \text{ defects / } Day} => 18.4 \cong 19\ Days$$

19 days ≅ 1 HCT
9.5 ≅ 10 days ≅ 2 HCT
6.333 ≅ 7 days ≅ 3 HCT
4.75 ≅ 5 days ≅ 4 HCT
3.8 ≅ 4 days ≅ 5 HCT
3.166 ≅ 4 days ≅ 6 HCT
2.71 ≅ 3 days ≅ 7 HCT
2.37 ≅ 3 days ≅ 8 HCT

Test Fixed Defects

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{92 \text{ defects}}{8 \text{ defects—}Day} => 11.5 \cong 12\ Days$$

12 days ≅ 1 HCT
6 days ≅ 2 HCT
4 days ≅ 3 HCT
3 days ≅ 4 HCT
2.4 ≅ 3 days ≅ 5 HCT
2 days ≅ 6 HCT
1.71 ≅ 2 days ≅ 7 HCT
1.5 ≅ 2 days ≅ 8 HCT

Documentation

User Documentation

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{218 \text{ pages}}{5\ pages\ /\ hour} => 43.6 \cong 44\ hours$$

$$\text{\# days} = \frac{44 \text{ hours}}{8 \text{ hours/day}} => 5.5 \cong 6\ days$$

6 days ≅ 1 HCT
3 days ≅ 2 HCT
2 days ≅ 3 HCT

Review UD

Preparation for UD Review

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{218 \text{ pages}}{5\ pages\ /\ hour} => 43.6 \cong 44\ hours$$

$$\#\ \text{days} = \frac{44\ \text{hours}}{8\ \text{hours/day}} => 5.5 \cong 6\ days$$

Review UD

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{218\ \text{pages}}{7\ pages/hour} => 31.14 \cong 32\ hours$$

$$\#\ \text{days} = \frac{32\ \text{hours}}{8\ \text{hours/day}} => 4\ days$$

Rework

$$\text{Time in hrs} = \frac{\text{Amount of Work}}{\text{Productivity Rate}} => \frac{226\ \text{defects}}{6\ defects\ /hour} => 37.66 \cong 38\ hours$$

$$\#\ \text{days} = \frac{38\ \text{hours}}{8\ \text{hours/day}} => 4.75 \cong 5\ days$$

5 days ≅ 1 HCT
2.5 ≅ 3 days ≅ 2 HCT
1.66 ≅ 2 days ≅ 3 HCT

Project plan Screenshots

10) 1) This is the screen shot for both project plan and WBS.

GANTT CHART

	Task Mode	WBS	Task Name	Predecessors	Duration	Start	Finish	Resource Names
1		1	Assignment-3		125 days	Mon 3/10/25	Fri 8/29/25	
2		1.1	Project Plan		8 days	Mon 3/10/25	Wed 3/19/25	
3		1.1.1	Write Plan		2 days	Mon 3/10/25	Tue 3/11/25	PM1,PM10
4		1.1.2	Review Plan	3	5 days	Wed 3/12/25	Tue 3/18/25	
5		1.1.2.1	Preparation for review	3	3 days	Wed 3/12/25	Fri 3/14/25	PE8,RE10,TE4,SE9,DE47
6		1.1.2.2	Review Meeting	5	2 days	Mon 3/17/25	Tue 3/18/25	DE47,PE8,RE10,TE4,SE9,PM1
7		1.1.3	Rework	6	1 day	Wed 3/19/25	Wed 3/19/25	PM1,PM10
8								
9		1.2	Documentation Software Development Process Updates	7	6 days	Thu 3/20/25	Thu 3/27/25	
10		1.2.1	Process Changes	7	1 day	Thu 3/20/25	Thu 3/20/25	DE37,SE11
11		1.2.2	Review Changes	10	3 days	Fri 3/21/25	Tue 3/25/25	
12		1.2.2.1	Preparation for review	10	2 days	Fri 3/21/25	Mon 3/24/25	PE32,RE67,TE39,DE36
13		1.2.2.2	Review Meeting	12	1 day	Tue 3/25/25	Tue 3/25/25	DE36,PE32,RE67,TE39,SE11
14		1.2.3	Rework	13	2 days	Wed 3/26/25	Thu 3/27/25	DE37,SE11
15								
16		1.3	Requirement	14	8 days	Fri 3/28/25	Tue 4/8/25	
17		1.3.1	Write Requirement	14	2 days	Fri 3/28/25	Mon 3/31/25	RE10,RE11,RE12
18		1.3.2	Review Requirement	17	4 days	Tue 4/1/25	Fri 4/4/25	
19		1.3.2.1	Preparation for review	17	2 days	Tue 4/1/25	Wed 4/2/25	PE38,SE24,TE40,DE46
20		1.3.2.2	Review Meeting	19	2 days	Thu 4/3/25	Fri 4/4/25	PE38,SE24,TE40,DE46,RE10
21		1.3.3	Rework	20	2 days	Mon 4/7/25	Tue 4/8/25	RE10,RE11,RE12
22								
23		1.4	Build the development and testing lab environment	7	9 days	Thu 3/20/25	Tue 4/1/25	
24		1.4.1	Hardware Environment	7	5 days	Thu 3/20/25	Wed 3/26/25	
25		1.4.1.1	Servers	7	3 days	Thu 3/20/25	Mon 3/24/25	SE13,SE17,SE22
26		1.4.1.2	Clients	25	2 days	Tue 3/25/25	Wed 3/26/25	SE13,SE17,SE22
27		1.4.2	Software Development Tools	26	1 day	Thu 3/27/25	Thu 3/27/25	
28		1.4.2.1	Build/Compile tools	26	1 day	Thu 3/27/25	Thu 3/27/25	SE23,SE22,SE13
29		1.4.3	Software Testing tools	28	3 days	Fri 3/28/25	Tue 4/1/25	
30		1.4.3.1	Test case Execute tools	28	1 day	Fri 3/28/25	Fri 3/28/25	SE22,SE23,SE282
31		1.4.3.2	Simulation tools	30	2 days	Mon 3/31/25	Tue 4/1/25	SE22,SE23,SE282
32								

GANTT CHART

	Task Mode	WBS	Task Name	Predecessors	Duration	Start	Finish	Resource Names
33		**1.5**	**Analysis**	**21**	**15 days**	**Wed 4/9/25**	**Tue 4/29/25**	
34		1.5.1	Write Analysys document	21	4 days	Wed 4/9/25	Mon 4/14/25	SE282
35		**1.5.2**	**Review Anlysis document**	**34**	**7 days**	**Tue 4/15/25**	**Wed 4/23/25**	
36		1.5.2.1	Preparation for Analysis document	34	4 days	Tue 4/15/25	Fri 4/18/25	DE14,RE12,PE16,TE15
37		1.5.2.2	Review Meeting	36	3 days	Mon 4/21/25	Wed 4/23/25	DE14,RE12,PE16,TE15,SE282
38		1.5.3	Rework	37	4 days	Thu 4/24/25	Tue 4/29/25	SE282
39		1.5.4						
40		**1.6**	**Design**	**38**	**22 days**	**Wed 4/30/25**	**Thu 5/29/25**	
41		1.6.1	Write DD	38	2 days	Wed 4/30/25	Thu 5/1/25	SE23,SE24,SE8
42		**1.6.2**	**Review DD**	**41**	**8 days**	**Fri 5/2/25**	**Tue 5/13/25**	
43		1.6.2.1	Preparation for DD	41	5 days	Fri 5/2/25	Thu 5/8/25	DE37,PE16,RE20,TE42
44		1.6.2.2	Review Meeting	43	3 days	Fri 5/9/25	Tue 5/13/25	DE37,PE16,RE20,TE42,SE282
45		1.6.3	Rework	44	3 days	Wed 5/14/25	Fri 5/16/25	SE23,SE24,SE8
46		1.6.4	Create/Write Data Model	45	3 days	Mon 5/19/25	Wed 5/21/25	SE17,SE22,SE23
47		**1.6.5**	**Review Data Model**	**46**	**4 days**	**Thu 5/22/25**	**Tue 5/27/25**	
48		1.6.5.1	Preparation for DM	46	2 days	Thu 5/22/25	Fri 5/23/25	PE292,DE37,TE40,RE64
49		1.6.5.2	Review Meeting	48	2 days	Mon 5/26/25	Tue 5/27/25	DE37,PE292,RE64,TE40,SE17
50		1.6.6	Rework	49	2 days	Wed 5/28/25	Thu 5/29/25	SE17,SE22,SE23
51								
52		**1.7**	**Coding**	**50**	**57 days**	**Fri 5/30/25**	**Mon 8/18/25**	
53		1.7.1	Write Code	50	35 days	Fri 5/30/25	Thu 7/17/25	PE292,PE293,PE12
54		**1.7.2**	**Unit Testing**	**53**	**11 days**	**Fri 7/18/25**	**Fri 8/1/25**	
55		1.7.2.1	Prepare/Execute Test Cases	53	3 days	Fri 7/18/25	Tue 7/22/25	TE42,TE272,TE273,TE274,TE40
56		1.7.2.2	Fix Found Defects	55	4 days	Wed 7/23/25	Mon 7/28/25	TE40,TE42,TE272,TE273,TE274
57		1.7.2.3	Test Found Defects	56	4 days	Tue 7/29/25	Fri 8/1/25	TE40,TE42,TE272,TE273,TE274
58		**1.7.3**	**Code Inspection**	**57**	**11 days**	**Mon 8/4/25**	**Mon 8/18/25**	
59		1.7.3.1	Preparation for Code Inspection	57	5 days	Mon 8/4/25	Fri 8/8/25	DE36,RE20,SE13,TE42
60		1.7.3.2	Code Inspection Meeting	59	3 days	Mon 8/11/25	Wed 8/13/25	DE36,RE20,SE13,TE42,PE12
61		1.7.3.3	Rework	60	3 days	Thu 8/14/25	Mon 8/18/25	PE12,PE292,PE293

62								
63		**1.8**	**Testing**	**21**	**103 days**	**Wed 4/9/25**	**Fri 8/29/25**	
64		1.8.1	Write Test Plan (TP)	21	4 days	Wed 4/9/25	Mon 4/14/25	TE272,TE273,TE274,TE4
65		**1.8.2**	**Review TP**	**64**	**10 days**	**Tue 4/15/25**	**Mon 4/28/25**	
66		1.8.2.1	Preparation for TP	64	5 days	Tue 4/15/25	Mon 4/21/25	DE37,PE10,RE18,SE283
67		1.8.2.2	Review TP Meeting	66	3 days	Tue 4/22/25	Thu 4/24/25	DE37,PE10,RE18,SE283,TE4
68		1.8.2.3	Rework	67	2 days	Fri 4/25/25	Mon 4/28/25	TE272,TE273,TE274,TE4
69		1.8.3	Execute TP (test cases)	61	4 days	Tue 8/19/25	Fri 8/22/25	TE39,TE42,TE272,TE273,TE274,TE38
70		1.8.4	Fix Found Defects	69	3 days	Mon 8/25/25	Wed 8/27/25	TE272,TE273,TE274,TE34,TE38,TE39,TE42
71		1.8.5	Test Fixed Defects	70	2 days	Thu 8/28/25	Fri 8/29/25	TE38,TE39,TE42,TE272,TE273,TE274
72								
73		**1.9**	**Documentation**	**21**	**21 days**	**Wed 4/9/25**	**Wed 5/7/25**	
74		1.9.1	User Documentation	21	6 days	Wed 4/9/25	Wed 4/16/25	DE401,DE402,DE403
75		**1.9.2**	**Review UD**	**74**	**10 days**	**Thu 4/17/25**	**Wed 4/30/25**	
76		1.9.2.1	Preparation for UD Review	74	6 days	Thu 4/17/25	Thu 4/24/25	PE292,RE67,SE9,TE42
77		1.9.2.2	Review UD	76	4 days	Fri 4/25/25	Wed 4/30/25	PE292,RE67,SE9,TE42,DE401
78		1.9.3	Rework	77	5 days	Thu 5/1/25	Wed 5/7/25	DE401,DE402,DE403

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7)
If the assignment - 3 is scheduled on 3/10/25, then the possible earliest date is 8/29/25 which is 125 days away from start date

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8)
Project 1

Start date: 2/10/25, End date: 7/10/25 , Days: 109 days

Project 2:

Start date: 2/24/25, End date: 9/17/25, Days: 148 days

Project 3:

Start date: 3/10/25, End date: 8/29/25, Days: 125 days

No, it cannot be completed within 2 month of the start date - 3/10/25. The available resources are limited, and few of them are assigned to the projects of assignment 1 and 2. There by, the duration of project - 3 increases.

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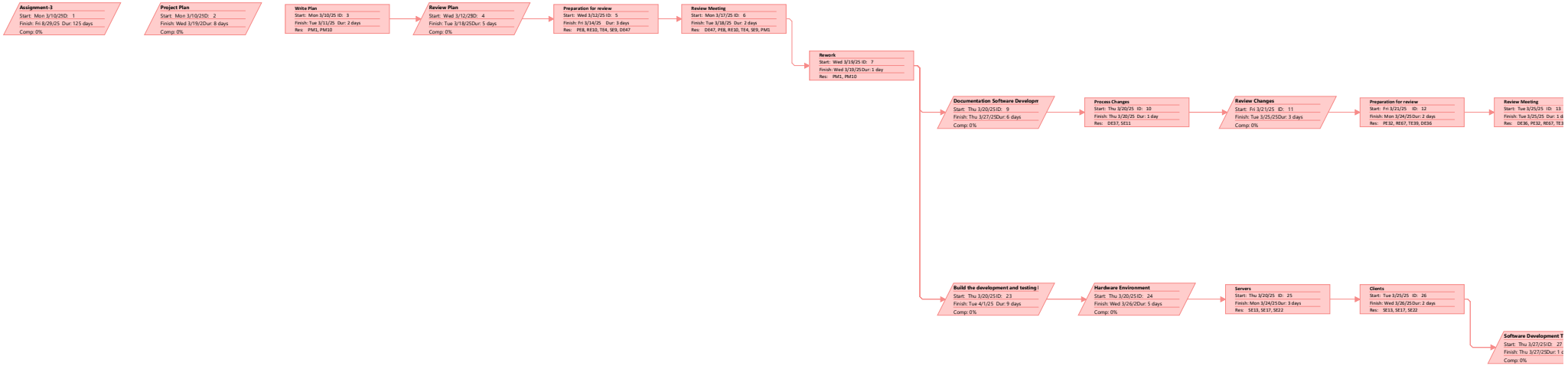
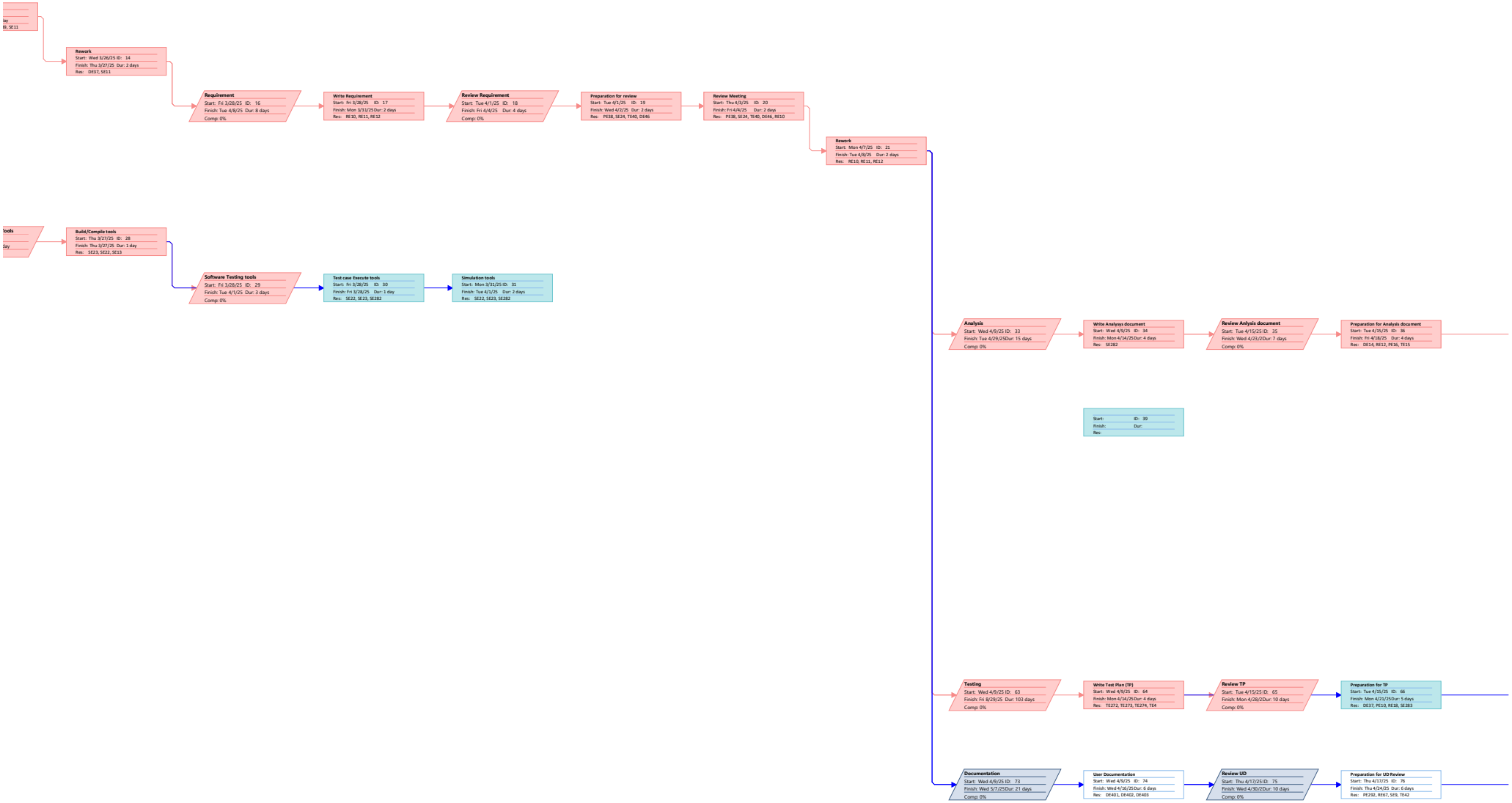
10)

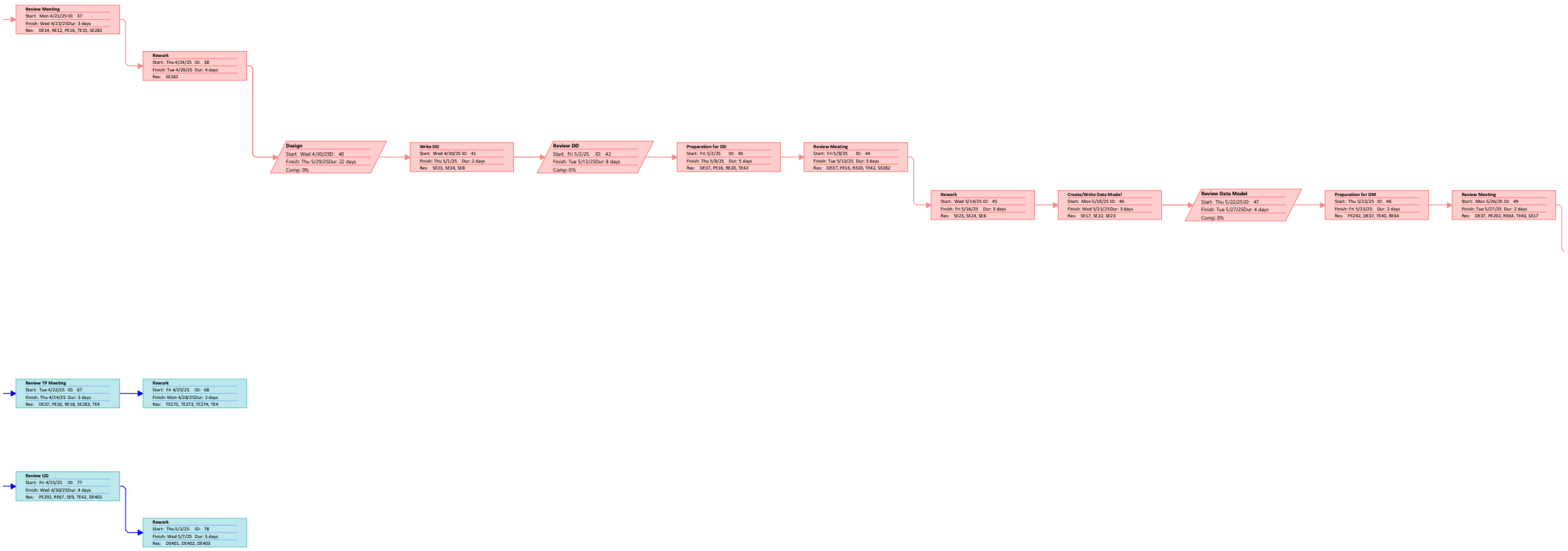
1)
There were new phrases added and thereby it became (1.1 to 1.9) 9 phases.

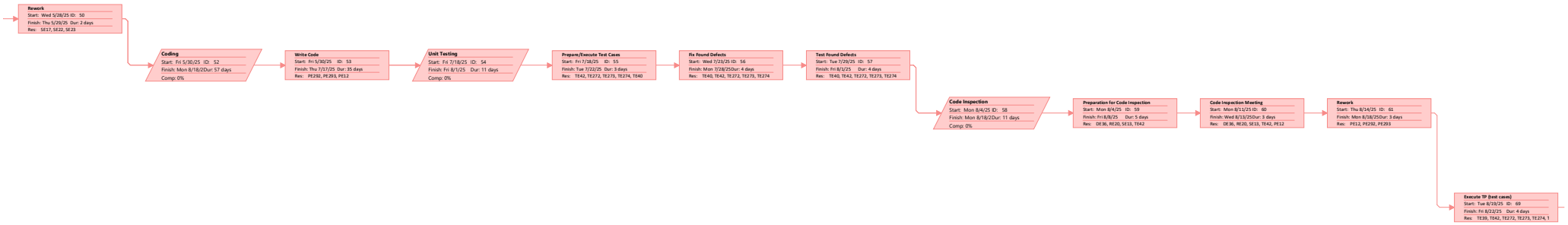
2)
The network diagram is available below.

3)
In assignments 1 and 2, I consumed a largish portion of available resources to accomplish the hard tasks efficiently. Due to limitations in resource availability, I used a more strategic approach in assignment number 3 by using limited resources. This include prioritizing the necessary computations, workflows optimization, and ensuring that the apportionment is staying within an acceptable limit for overall system efficiency.


Assignment-3
Start: Mon 3/10/25 ID: 1
Finish: Fri 8/29/25 Dur: 125 days
Comp: 0%
Project Plan
Start: Mon 3/10/25 ID: 2
Finish: Wed 3/19/25 Dur: 8 days
Comp: 0%
Write Plan
Start: Mon 3/10/25 ID: 3
Finish: Tue 3/11/25 Dur: 2 days
Res: PM1, PM10
Review Plan
Start: Wed 3/12/25 ID: 4
Finish: Tue 3/18/25 Dur: 5 days
Comp: 0%
Preparation for review
Start: Wed 3/12/25 ID: 5
Finish: Fri 3/14/25 Dur: 3 days
Res: PE8, RE10, TE4, SE9, DE47
Review Meeting
Start: Mon 3/17/25 ID: 6
Finish: Tue 3/18/25 Dur: 2 days
Res: DE47, PE8, RE10, TE4, SE9, PM1
Rework
Start: Wed 3/19/25 ID: 7
Finish: Wed 3/19/25 Dur: 1 day
Res: PM1, PM10
Documentation Software Developm
Start: Thu 3/20/25 ID: 9
Finish: Thu 3/27/25 Dur: 6 days
Comp: 0%
Process Changes
Start: Thu 3/20/25 ID: 10
Finish: Thu 3/20/25 Dur: 1 day
Res: DE37, SE11
Review Changes
Start: Fri 3/21/25 ID: 11
Finish: Tue 3/25/25 Dur: 3 days
Comp: 0%
Preparation for review
Start: Fri 3/21/25 ID: 12
Finish: Mon 3/24/25 Dur: 2 days
Res: PE32, RE67, TE39, DE36
Review Meeting
Start: Tue 3/25/25 ID: 13
Finish: Tue 3/25/25 Dur: 1 d
Res: DE36, PE32, RE67, TE3
Build the development and testing l
Start: Thu 3/20/25 ID: 23
Finish: Tue 4/1/25 Dur: 9 days
Comp: 0%
Hardware Environment
Start: Thu 3/20/25 ID: 24
Finish: Wed 3/26/25 Dur: 5 days
Comp: 0%
Servers
Start: Thu 3/20/25 ID: 25
Finish: Mon 3/24/25 Dur: 3 days
Res: SE13, SE17, SE22
Clients
Start: Tue 3/25/25 ID: 26
Finish: Wed 3/26/25 Dur: 2 days
Res: SE13, SE17, SE22
Software Development T
Start: Thu 3/27/25 ID: 27
Finish: Thu 3/27/25 Dur: 1 d
Comp: 0%


Rework
Start: Wed 3/26/25 ID: 14
Finish: Thu 3/27/25 Dur: 2 days
Res: DE37, SE11
Requirement
Start: Fri 3/28/25 ID: 16
Finish: Tue 4/8/25 Dur: 8 days
Comp: 0%
Write Requirement
Start: Fri 3/28/25 ID: 17
Finish: Mon 3/31/25Dur: 2 days
Res: RE10, RE11, RE12
Review Requirement
Start: Tue 4/1/25 ID: 18
Finish: Fri 4/4/25 Dur: 4 days
Comp: 0%
Preparation for review
Start: Tue 4/1/25 ID: 19
Finish: Wed 4/2/25 Dur: 2 days
Res: PE38, SE24, TE40, DE46
Review Meeting
Start: Thu 4/3/25 ID: 20
Finish: Fri 4/4/25 Dur: 2 days
Res: PE38, SE24, TE40, DE46, RE10
Rework
Start: Mon 4/7/25 ID: 21
Finish: Tue 4/8/25 Dur: 2 days
Res: RE10, RE11, RE12
Build/Compile tools
Start: Thu 3/27/25 ID: 28
Finish: Thu 3/27/25 Dur: 1 day
Res: SE23, SE22, SE13
Software Testing tools
Start: Fri 3/28/25 ID: 29
Finish: Tue 4/1/25 Dur: 3 days
Comp: 0%
Test case Execute tools
Start: Fri 3/28/25 ID: 30
Finish: Fri 3/28/25 Dur: 1 day
Res: SE22, SE23, SE282
Simulation tools
Start: Mon 3/31/25 ID: 31
Finish: Tue 4/1/25 Dur: 2 days
Res: SE22, SE23, SE282
Analysis
Start: Wed 4/9/25 ID: 33
Finish: Tue 4/29/25Dur: 15 days
Comp: 0%
Write Analysys document
Start: Wed 4/9/25 ID: 34
Finish: Mon 4/14/25Dur: 4 days
Res: SE282
Review Anlysis document
Start: Tue 4/15/25 ID: 35
Finish: Wed 4/23/2Dur: 7 days
Comp: 0%
Preparation for Analysis document
Start: Tue 4/35/25 ID: 36
Finish: Fri 4/38/25 Dur: 4 days
Res: DE14, RE12, PE38, TE15
Start: ID: 39
Finish: Dur:
Res:
Testing
Start: Wed 4/9/25 ID: 63
Finish: Fri 8/29/25 Dur: 103 days
Comp: 0%
Write Test Plan (TP)
Start: Wed 4/9/25 ID: 64
Finish: Mon 4/14/25Dur: 4 days
Res: TE272, TE273, TE274, TE4
Review TP
Start: Tue 4/15/25 ID: 65
Finish: Mon 4/28/2Dur: 10 days
Comp: 0%
Preparation for TP
Start: Tue 4/35/25 ID: 66
Finish: Mon 4/21/25Dur: 5 days
Res: DE37, PE10, RE38, SE283
Documentation
Start: Wed 4/9/25 ID: 73
Finish: Wed 5/7/25Dur: 21 day
Comp: 0%
User Documentation
Start: Wed 4/9/25 ID: 74
Finish: Wed 4/16/25Dur: 6 days
Res: DE401, DE402, DE403
Review UD
Start: Thu 4/17/25 ID: 75
Finish: Wed 4/30/2Dur: 10 days
Comp: 0%
Preparation for UD Review
Start: Thu 4/17/25 ID: 76
Finish: Thu 4/24/25 Dur: 6 days
Res: PE292, RE67, SE9, TE42


Review Meeting
Start: Mon 4/21/25 ID: 37
Finish: Wed 4/23/25 Dur: 3 days
Res: DE34, RE32, PE16, TE15, SE282
Rework
Start: Thu 4/24/25 ID: 38
Finish: Tue 4/29/25 Dur: 4 days
Res: SE282
Design
Start: Wed 4/30/25 ID: 40
Finish: Thu 5/29/25 Dur: 22 days
Comp: 0%
Write DD
Start: Wed 4/30/25 ID: 41
Finish: Thu 5/1/25 Dur: 2 days
Res: SE23, SE24, SE8
Review DD
Start: Fri 5/2/25 ID: 42
Finish: Tue 5/13/25 Dur: 8 days
Comp: 0%
Preparation for DD
Start: Fri 5/2/25 ID: 43
Finish: Thu 5/8/25 Dur: 5 days
Res: DE37, PE16, RE20, TE42
Review Meeting
Start: Fri 5/9/25 ID: 44
Finish: Tue 5/13/25 Dur: 3 days
Res: DE37, PE16, RE20, TE42, SE282
Rework
Start: Wed 5/14/25 ID: 45
Finish: Fri 5/16/25 Dur: 3 days
Res: SE23, SE24, SE8
Create/Write Data Model
Start: Mon 5/19/25 ID: 46
Finish: Wed 5/21/25 Dur: 3 days
Res: SE17, SE22, SE23
Review Data Model
Start: Thu 5/22/25 ID: 47
Finish: Tue 5/27/25 Dur: 4 days
Comp: 0%
Preparation for DM
Start: Thu 5/22/25 ID: 48
Finish: Fri 5/23/25 Dur: 2 days
Res: PE292, DE37, TE40, RE64
Review Meeting
Start: Mon 5/26/25 ID: 49
Finish: Tue 5/27/25 Dur: 2 days
Res: DE37, PE292, RE64, TE40, SE17
Review TP Meeting
Start: Tue 4/22/25 ID: 67
Finish: Thu 4/24/25 Dur: 3 days
Res: DE37, PE10, RE18, SE283, TE4
Rework
Start: Fri 4/25/25 ID: 68
Finish: Mon 4/28/25 Dur: 2 days
Res: TE272, TE273, TE274, TE4
Review UD
Start: Fri 4/25/25 ID: 77
Finish: Wed 4/30/25 Dur: 4 days
Res: PE292, RE67, SE9, TE42, DE401
Rework
Start: Thu 5/1/25 ID: 78
Finish: Wed 5/7/25 Dur: 5 days
Res: DE401, DE402, DE403


Rework
Start: Wed 5/28/25 ID: 50
Finish: Thu 5/29/25 Dur: 2 days
Res: SE17, SE22, SE23
Coding
Start: Fri 5/30/25 ID: 52
Finish: Mon 8/18/25Dur: 57 days
Comp: 0%
Write Code
Start: Fri 5/30/25 ID: 53
Finish: Thu 7/17/25 Dur: 35 days
Res: PE292, PE293, PE12
Unit Testing
Start: Fri 7/18/25 ID: 54
Finish: Fri 8/1/25 Dur: 11 days
Comp: 0%
Prepare/Execute Test Cases
Start: Fri 7/18/25 ID: 55
Finish: Tue 7/22/25 Dur: 3 days
Res: TE42, TE272, TE273, TE274, TE40
Fix Found Defects
Start: Wed 7/23/25 ID: 56
Finish: Mon 7/28/25Dur: 4 days
Res: TE40, TE42, TE272, TE273, TE274
Test Found Defects
Start: Tue 7/29/25 ID: 57
Finish: Fri 8/1/25 Dur: 4 days
Res: TE40, TE42, TE272, TE273, TE274
Code Inspection
Start: Mon 8/4/25 ID: 58
Finish: Mon 8/18/25Dur: 11 days
Comp: 0%
Preparation for Code Inspection
Start: Mon 8/4/25 ID: 59
Finish: Fri 8/8/25 Dur: 5 days
Res: DE36, RE20, SE13, TE42
Code Inspection Meeting
Start: Mon 8/11/25 ID: 60
Finish: Wed 8/13/25Dur: 3 days
Res: DE36, RE20, SE13, TE42, PE12
Rework
Start: Thu 8/14/25 ID: 61
Finish: Mon 8/18/25Dur: 3 days
Res: PE12, PE292, PE293
Execute TP (test cases)
Start: Tue 8/19/25 ID: 69
Finish: Fri 8/22/25 Dur: 4 days
Res: TE39, TE42, TE272, TE273, TE274, 1


Fix Found Defects
Start: Mon 8/25/25 ID: 70
Finish: Wed 8/27/25 Dur: 3 days
Res: TE272, TE273, TE274, TE34, TE38, T
Test Fixed Defects
Start: Thu 8/28/25 ID: 71
Finish: Fri 8/29/25 Dur: 2 days
Res: TE38, TE39, TE42, TE272, TE273, TI


Project: Assignment -3
Date: Sat 3/8/25
Critical
Noncritical
Critical Milestone
Milestone
Critical Summary
Summary
Critical Inserted
Inserted
Critical Marked
Marked
Critical External
External
Project Summary
Highlighted Critical
Highlighted Noncritical