

## CALCULATIONS:

### Project Plan -

- Write Plan -  $135 \text{ pages} / 4 \text{ pages/hour} = 33.75 \text{ hours}$   
 $= 33.75 / 8 = 4.22 \text{ days}$

### Review Plan -

→ preparation for review  $\Rightarrow 135 \text{ pages} / 4 \text{ pages/hour} = 33.75 \text{ hours}$   
 $= 33.75 / 8 = 4.22 \text{ days}$

→ Review Meeting  $\Rightarrow 135 \text{ pages} / 8 \text{ pages/hour} = 16.87 \text{ hours}$

$= 16.87 / 8 = 2.10 \text{ days}$

- Rework -  $99 \text{ defects} / 6 \text{ defects/hour} = 16.5 \text{ hours}$

$= 16.5 / 8 = 2.06 \text{ days}$

### Requirement -

- Write Requirements -  $389 \text{ Req} / 3 \text{ Req/hour} = 129.66 \text{ hours}$

$= 129.66 / 8 = 16.20 \text{ days}$

### Review Requirements -

→ preparation for review  $\Rightarrow 389 \text{ Req} / 5 \text{ Req/hour} = 77.8 \text{ hours}$

$= 77.8 / 8 = 9.72 \text{ days}$

→ Review Meeting  $\Rightarrow 389 \text{ Req} / 8 \text{ Req/hour} = 48.62 \text{ hours}$

$= 48.62 / 8 = 6.08 \text{ days}$

- Rework -  $413 \text{ defects} / 5 \text{ defects/hour} = 82.6 \text{ hours}$

$= 82.6 / 8 = 10.32 \text{ days}$

## Lab and Environment Setup -

### - Hardware

#### → Install Network Elements -

$$\bullet \text{ Routers} = 8 / 3 \text{ routers/day} = 2.67 \text{ days}$$

$$\bullet \text{ Bridge} = 28 / 2 \text{ bridges/day} = 14 \text{ days}$$

$$\rightarrow \text{Install Server} = 31 \text{ servers} / 3 \text{ servers/day} = 10.33 \text{ days}$$

$$\rightarrow \text{Install Clients} = 105 \text{ clients} / 8 \text{ clients/day} = 13.12 \text{ days}$$

### - Software

$$\rightarrow \text{Install Development Tools} = 19 \text{ tools} / 5 \text{ tools/day} = 3.8 \text{ days}$$

$$\rightarrow \text{Install Testing Tools} = 26 \text{ tools} / 7 \text{ tools/day} = 3.71 \text{ days}$$

## Analysis / Design Document -

$$\text{- Write DD} = 234 \text{ pages} / 4 \text{ pages/hour} = 58.5 \text{ days hours}$$

$$58.5 / 8 = 7.31 \text{ days}$$

### - Review DD -

$$\rightarrow \text{Preparation for DD} = 234 \text{ pages} / 5 \text{ pages/hour} = 46.8 \text{ hours}$$

$$46.8 / 8 = 5.85 \text{ days}$$

$$\rightarrow \text{Review Meeting} = 234 \text{ pages} / 8 \text{ pages/hour} = 29.25 \text{ hours}$$

$$29.25 / 8 = 3.65 \text{ days}$$

$$\text{- Rework} = 509 \text{ Defects} / 7 \text{ defects/hour} = 72.71 \text{ hours}$$

$$= 72.71 / 8 = 9.08 \text{ days}$$



## Data Model -

- Create Data Model - 62 pages / 1 page / hour = 62 hours  
 $= 62/8 = 7.75$  days

- Review Data Model -

→ Preparation for DM - 62 pages / 4 pages / hour = 15.5 hours  
 $= 15.5/8 = 1.93$  days

→ Review Meeting - 62 pages / 10 pages / hour = 6.2 hours  
 $= 6.2/8 = 0.77$  days

- Rework - 378 defects / 6 defects / hour = 63 hours  
 $= 63/8 = 7.87$  days

## Coding and unit test -

- Write code - 9725 SLOC / 5 SLOC / hour = 1945 hours  
 $= 1945/8 = 243.12$  days

- Unit Testing -

→ prepare / execute test cases - 1045 test cases / 5 test cases / hour = 209 hours  
 $= 209/8 = 26.12$  days

→ Fix found defects - 902 defects / 12 defects / day = 75.16 days

→ Test fixed defects - 902 defects / 8 defects / day = 112.75 days

- Code Inspection -

→ preparation for code inspection - 9725 SLOC / 90 SLOC / hour = 108.05 hours  
 $= 108.05/8 = 13.50$  days

→ Code Inspection Meeting - 9725 SLOC / 135 SLOC / hour = 72.03 hours  
 $= 72.03/8 = 9.01$  days

→ Rework - 1230 defects / 5 defects / hour = 246 hours  $\Rightarrow 246/8 = 30.75$  days

### Defect Inspection - Testing -

- Write test plan (TP) =  $417 \text{ pages} / 8 \text{ pages/day} = 52.12 \text{ days}$
- Review TP
  - preparation for TP =  $417 \text{ pages} / 5 \text{ pages/hour} = 83.4 \text{ hours}$   
 $= 83.4 / 8 = 10.42 \text{ days}$
  - Review TP Meeting =  $417 \text{ pages} / 10 \text{ pages/hour} = 41.7 \text{ hours}$   
 $= 41.7 / 8 = 5.21 \text{ days}$
  - Rework =  $502 \text{ defects} / 5 \text{ defects/hour} = 100.4 \text{ hours}$   
 $= 100.4 / 8 = 12.55 \text{ days}$
- Execute TP (test cases) =  $1167 \text{ test cases} / 8 \text{ test cases/day} = 145.87 \text{ days}$
- Fix found <sup>defects</sup> ~~errors~~ =  $645 \text{ defects} / 5 \text{ defects/day} = 129 \text{ days}$

### Documentation -

- User documentation =  $389 \text{ pages} / 6 \text{ page/hour} = 64.83 \text{ hours}$   
 $= 64.83 / 8 = 8.10 \text{ days}$
- Review UD
  - preparation for UD review meeting =  $389 \text{ pages} / 5 \text{ pages/hour} = 77.8 \text{ hours}$   
 $= 77.8 / 8 = 9.72 \text{ days}$
  - Review UD Meeting =  $389 \text{ pages} / 7 \text{ pages/hour} = 55.57 \text{ hours}$   
 $= 55.57 / 8 = 6.95 \text{ days}$
  - Rework =  $532 \text{ defects} / 4 \text{ defects/hour} = 133 \text{ hours}$   
 $= 133 / 8 = 16.62 \text{ days}$



### Training-

- Training Handouts (TH) =  $310 \text{ pages} / 1 \text{ page/hour} = 310 \text{ hours}$   
 $= 310 / 8 = 38.75 \text{ days}$

- Review Training Handouts (TH) =

→ preparation for TH review meeting =  $310 \text{ pages} / 4 \text{ pages/hour} = 77.5 \text{ hours}$   
 $= 77.5 / 8 = 9.69 \text{ days}$

→ Review TH Meeting =  $310 \text{ pages} / 8 \text{ pages/hour} = 38.75 \text{ hours}$   
 $= 38.75 / 8 = 4.84 \text{ days}$

→ Rework =  $718 \text{ defects} / 9 \text{ defects/hour} = 79.78 \text{ hours}$   
 $= 79.78 / 8 = 9.97 \text{ days}$

6) The earliest finish date for this project is 4/14/25 i.e., Monday as shown in ~~as~~ my MS project Earliest Finish column. It is scheduled to start on 9/23/24 as mentioned in the assignment.

7) As per the current schedules of Assignment #1 and Assignment #2, it is at present not feasible to complete Assignment #2 within 3 weeks after the finish date of Assignment #1. We can now see that Assignment #2 is scheduled to complete approximately 14 weeks after completion of Assignment #1. It is feasible to complete as per the mentioned time frame with significant adjustments to schedule and Resource allocation in both the assignments.



9) The start and completion dates of both the projects are as follows:-

① Assignment #1 - start date  $\Rightarrow$  9/16/24 (Monday)  
Finish/End date  $\Rightarrow$  12/17/24 (Tuesday)

This assignment/project has a project plan for Sample project with above mentioned start and finish dates. It took about 66.25 days to complete the project. Most of the duration i.e., the highest number of days was for Testing task at about 59.62 days.

② Assignment #2 - start date  $\Rightarrow$  9/23/24 (Monday)  
Finish/End date  $\Rightarrow$  4/14/25 (Monday)

This assignment has project plan for ~~Sample plan 2~~ Sample project 2 with above mentioned start and finish dates. This project as per my plan takes upto 145.5 days to complete the project. Testing task took the highest number of days i.e., 127.47 days to complete.

Resources were assigned based on the given assumptions and constraints and the one's not mentioned i assigned them using software engineering assumptions. As I was deducted 1 mark for use of 2 project managers in Assignment #1. I have now modified it to 1 PM and uploaded the modified Assignment #1 file.