Illinois Institute of Technology CS 587 – Software Project Management <u>Assignment-3 Report</u>

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PART - 1

EXTRAPOLATING VALUES:

	En trapolating values:
	1) Project Plan: 1) In Assignment #1:
11	Productivity rate for "Write (ode" - 5 Pages/Hr
	To Assignment #2:
	Romality mute for "Write code = 4 trages/HY
	Broductivity rate for Assignment 3 = Sty = 7 = 4.5 Pages/HT
	2) In Assignment 1, productivity rate for "preparation by review" = 5 Pag
	In Assignment 2, productivity rate too preparation for review . I far
	Productivity rate for Assignment 3 = 5+3 = 10 5 Pages / HT
	3) In Assignment 1, productivity rate for "Review Meeting": 5 enges/14r
	In Assignment 2, productivity rate for keview meeting" = & pages in
	Productivity sate for Assignment 3 = 548 = 13 = 6.5 pages/Hr
	The state of the s
	27 payes147
	4) In Assignment 1, productivity rate for "Rework" = 5 defects 14
	In Assignment 2, productivity rate for "REWORK" - 5 detects 14x
	Productivity rate for Assignment 3= 5+5= 10-5 defects 148
Sel	13h Am Mariage Salah II.
	Project Plan Rework:
	work size = 162 Pages = 0.102 Espages
	In Assignment 1, Number of defects / thranges for "Rework"
	= 13 x1000 = 534.88 \$ 535 defects / Frlage
	In Assignment 2, Number of defects / Krages for "Rework"
	= 76 × 1000 = 617.88 \times 618 defects/ klarger
	Average no. of defects = 535+618 = 5+6.5 % 5+7 defects/heag
	Number of defects in Assignment 3= 577 x0-102 = 58.954 \$ 59 defect

1) In assignment 1, productivity rate for "write Requirements"= 2 really In arrighment a, productivity rate for "Write Requirements" & regiliar Productivity rate for Assignment 3 = 2+5 = = = 3-5 regline 2) In onsignment 1, productivity rate for "Formation for reales" 20 region for regular regular segular regular productivity soil for Assignment 3= 20+5 25 =12:5 seglho 3) In orsignment , productivity route for "keniew Meeting"= 12 Realths In assignment 2, productivity rate for "Review meeting"= 8 reglar Moduchily rate for Assignment 3 - 22+8 - 30 - 15 reglbr a) In assignment 1, productivity rate for "Remort" = 5 defects lux In assignment 2, productivity rate for "Reworth" = 5 defects the Productivity rate for Assignment 3 = 5+5 - 10 = 5 defects/hr requirement rework! work size = 20 + requirements = 0.20 + Frequirements In Assignment 1, no. of defects/ Frequirements for rework & = 96 ×1000 = 484.94 × 485 defection forces Assignment 2, no of defects/Brequirements for remorks = 191 X1000 = 608.78 % 609 defects / Fireq Average no of defects = 485+609 = 547 defects /Kxeq No- of defects = 547x0.20+ = 113.229 % 114 defects.

	III) Analysis
	1) In arrighment 1, productivity rate for "write Analysis downers" = 5 property
	I arrianment 2, productivity note for "write analysis document" a
	Productivity note for Assignment 3= 5+0= 5=2.5 : pages/hr X3 pages/hr
)) In ansignment 1, productivity rate for "preparation for drawps downed" > early In assignment 2, productivity rate for "preparation for analysis downed": 0
- Alley	Anductivity rate for Assignment 3= 570=5215 pages 160
Mary 191	3) In assignment, productivity rate for "Review meeting" = to pays/br In assignment 2, productivity rate for "review meeting" = 0 (Broductivity rate for Assignment 3 = 10+0 = 15 = 5 pages/br
e par es ande La se ande	4) In ansignment 1, productivity rate for "Remork"= 5 defects the In assignment 2, productivity rate for "Remork"= 0 Anductivity rate for Assignment 3 = 540 - 25 defects I'm
	Analysis Rousik:
	Work Size= 201 Pages - 0.201 Frages
	+ accomment I no of defects/he raight for rework
alpert t	= 26 ×1000 = 37 -428 × 371 de feets/heagy
	In Assignment 2, no of detects/topages for remork = 0
ayaons	Average = 3+1+0 = 3+1 = 185.8 \$ 186 detects / Kiroges
	No. of defects: 186 × 0.901 = 17.386 & 37 defects.
1510116	\$5.0 - 20 4 2 37 5 2 \$55.0 x 29 8 - 24 28 124 x 2 - 0 64

1) In Assignment 1, productivity rate for "write DD"= & pagesthi W Derign 4n Assignment 2, productionly rate for "write DO"= 4 Pages/In Productivity rate for Assignment 3 = 5+9 = 9 = 45 props line 2) In Assignment 1, productivity rate for "Preparation for Arraysis doe"- 5 posps. In Assignment 2, production rate for exeparation for tralips doc"=5 popular Moduching rate for Assignment 3 = Str = 10 = 5 pages tha 3) In Assignment 1, productivity rate for "Review meeting" = 10 pages ins In Assignment 2, productivity rate for "review meeting" = 3 progestion Productivity rate. for Assignment 3 = 10+18 = 19- 9, pages 1hr. a) In Assignment 1, productivity rate for "Reworts" 2 & detects the In Assignment 2, productivity rate for "Reworts"? I detect (bx Productivity rate for Assignment 1 = 5+7 = 12 = 6 defects/hi Derign Reworks: Work lize = 314 Pages = 0.314 Frages. In anjignment, no of defects | Estages for rework = 18x x1000 = 840.78 2 871 defects / \$690 In assignments, no of defects , a lugar for rework = 288 x1000 = 888.88 & 889 defects/tipages Average no of defects 2 8 +1+589 = 880 No of defects = 6000314 = 276.32 % 274 defects

D) (rding DT ansignment 1, productivity rate for "write Gode" = 6 SLOCKLY In avoignment 2, productivity rote for "write code" = 0 swellow productivity rate for assignment 3= 6+5= 11=5:5 SLOCKER 2) In arrighment 1, productivity rate for "Preprio I Execute text cores" = 5 Toot couple. In assignment 2, productivity rate for "preparel Execute tex coses": 5 Test cousts, productivity real for anignment 1= 0.62x7x= x.62x = 2.812x 3) In assignment 1, productivity rate for "Fix Lound defects"= 4 defects iday In assignment 2, productivity rate for "Fin found defects" = to betech Idan productivity rate for assignment 3 - 4+10 = 14 = 7 defects I day 4) In assignment 1, productivity rote for "Test fixed detects"= I detects Iday. In assignment 2, productivity rate for "Text lined defects"= 12 defects lay productivity rate for omignment 3 - #12-19-9-5 defectedon SIO defects Iday 5) In arrignment 1, productivity rate by "Reparation for cake inspection" 90 SLOCINA In assignment 2, productivity rate for "Preposation for cade inspection"= 14x scotland productivity rate for anignment 3 = 90+14x = 238 = 117-8 C) In aniquent, productivity rate for "Fith found defects" is detected.

In aniquent 2, productivity rate for "Fith bound defects" = 150 shouldry. productivity rate for assignment 3 = 150+180= 120 = 165 SLOCHW assimment 1, productivity rate for "Rework"= 4 defects /hr In assignment 2, productivity rate for "Rework"= 7 defects I ho productivity rate for assignment 3- 4+7- 4-55 defectilled \$6 defects Thr

Prepare Afrente Text cases WOTA Size= 6934 SLOC = 6.234 Filoc 11 Assignment 1, no- of textcasus / 1/200 = 201 x10003 =48.90 5,49 tertaxs/Filoc For Assignment 2, no - of fertiany 14,000 572 X1000 = 90.83 × 91 testares / those Arenage no. of textcoxes = eqtay = 100 = 70 text coxes / 12000 No. of text cares = 70×6.214= 436.38 % 436 text cares. Fin Found defects / Text fined defects (since all values are same) MOSE Size = 6234 SLOC = 6.536 KSloc En Assignment, no of defects/610(=188 x1000 = 49.91 % 98 defects / 15/00 In Assignment 2, no of defects/Kloc= 812 x1000 = 80.99 \$ 81 defects IFLOC Aronage no of tenderous: 45th 126 - 63 defects/bloc No. of the defects = 63.16.234 = 392. 79 = 893 Lefells. Coding Rework WORK SIZE 26219 SLOC = 6.2] 9 KLbc In assignment 1, No. of defects/Blocs 188 x1000 = FRAI ~ 45 defects / Fluc In assignment 2, No-of defects/15100 912 x1000 = 149-18 2074\$ defect //sloc Avoid No of Lefects = 145+400 = 190 = 95 Lefe of 15100 No. of defects = 98 x 6.219 = 592. 21 5 593 detects.

Downentation
1) In Assignment 1, productivity rate for wher boumentabout a pagethor
In Assignment 2, productivity rate for "vier documentations stages that
"Productivity rate for anignment 3= ++x = 4, 4.5 pages I'm
2) In Assignment 1, productivity rate for "Preparation for review" to production
In Assignment 2, Production rate for "recombing for reason".
productivity rate for assignment 1 = lots = 15 = 7.5 roges/h
To 8 Pages 1h
3) In Assignment 1, productivity rate for "review meeting"= 10 Pagesthr
In Assignment 2, productivity rate tox "seview meeting"= 10 Pages 16
productivity south for assignment 3= 10+10 = 20 = 10 Pages 1m
4) In Assignment 1, productivity rate for "rework"= 8 de Rects I hr
In Assignment 2, productivity rate By "rework"= "> defects 1 hr
productivity rate for anagmment) = 8+5 = 13 = 6.8 pages/hr
ST pages/hr.
Documendation Reasonts!
WOOKE SIZE - 198 Pages - O. KIY hrages
In assignment 1, no. of defect / h.P. ages = 189 x1000 = 969-23
or 9 to surreurs / Norges
In arrighment 2, no of defects/progra = 189 x1000 = 713.20
268 & Fla defect / Frague
Average no of defects = 9 tot 719 - 842 defects /kroges
h 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
No. of defects = 84240.197=169.19 = 168 defects

PHASE	SIZE	Productivity
Project Plan	102 pages	
Write Plan	102 pages	5 pages/hour
Review Plan		
Preparation for review	102 pages	5 pages/hour
Review Meeting	102 pages	7 pages/hour
Rework	59 defects	5 defects/hour
Documented Software	101 changes	
Development Process Updates		
Process Changes	101 changes	4 changes/hour
Review Changes		
Preparation for review	101 changes	3 changes/hour
Review Meeting	101 changes	5 changes/hour
Rework	104 defects	5 defects/hour
Requirement	207 requirements	

Write requirements	207 requirements	4 requirements/hour
Review Requirements		
Preparation for review	207 requirements	13 requirements/hour
Review Meeting	207 requirements	15 requirements/hour
Rework	114 defects	5 defects/hour
Build the development and testing		
lab environment		
Hardware Environment		
Servers	25	1 server/day
Clients	31	5 clients/day
Software Development Tools		
Build/compile tools	7	1 tool/hour
Software Testing Tools		
Test Cases Execution tools	8	3 tool/day
Simulation tools	4	2 tool/day
Analysis	201 pages	
Write Analysis Document	201 pages	3 pages/hour
Review Analysis Document		
Preparation for Analysis	201 pages	3 pages/hour
Document		
Review Meeting	201 pages	5 pages/hour
Rework	38 defects	3 defects/hour
Design	314 pages	
Write DD	314 pages	5 pages/hour
Review DD		
Preparation for DD	314 pages	5 pages/hour
Review Meeting	314 pages	9 pages/hour
Rework	277 defects	6 defects/hour
Coding	6234 SLOC	
Write Code	6234 SLOC	6SLOC/hour
Unit Testing		
Prepare/Execute Test Cases	436 test cases	3 testcases/hour
Fix Found Defects	393 defects	7 defects/hour
Test Found Defects	393 defects	10 defects/hour
Code Inspection		,
Preparation for Code Inspection	6234 SLOC	118 SLOC/hour
Code Inspection Meeting	6234 SLOC	165 SLOC/hour
Rework	593 defects	6 defects/hour
Testing	174 pages	,
Write test plan (TP)	174 pages	10 pages/day
Review TP	1 5 -	
Preparation for TP	174 pages	4 pages/hour
Review TP Meeting	174 pages	10 pages/hour
Rework	134 defects	5 defects/hour
Execute TP (test cases)	404 test cases	15 test cases/day
Fix Found Defects	102 defects	10 defects/day

Test Found Defects	102 defects	28 defects/day
Documentation	232 pages	
User Documentation	232 pages	5 pages/hour
Review UD		
Preparation for UD Review	232 pages	8 pages/hour
Review UD Meeting	232 pages	10 pages/hour
Rework	165 defects	7 pages/hour

PART 2

7. What is the earliest finish date for this project if it is scheduled to start on 10/24/22?

Ans: The earliest finish date for this project is 06/05/2023 i.e., June 05, 2023 if it is scheduled to start on 10/24/22

8. Can this project be completed 2 months after it starts? Explain why yes or no.

Ans: No, this project cannot be completed in 2 months after it starts.

Because we are sharing the resources of assignment 1 and assignment 2 and few additional resources provided in assignment 3. We cannot use a resource unless it is free from other work. After completely utilizing all the resources, this project completion date is 06/05/2023 i.e., June 05, 2023

- 10. Submit your Comments regarding the start and completion dates and resources assignments for the three projects in a PDF document called Analysis.pdf.
- 1. Document and comment on the WBS

WBS gives us a hierarchical structure of the entire project by assigning sequential numbers to each task. These can also be used as task IDs. Budgets can be calculated or defined based on WBS.

2. Document and comment on the Network Diagram

Network diagram helps us to visualize the orientation of the entire project. We can also see the tasks, their dependencies and have a good overview of the project. Network diagram also gives us information about the critical path of the project.

3. Document and comment on the resource pool utilization

Assignment 3 has its own resource pool in addition to resources available in Assignment1 and 2 which have a shared resource pool which meant they had to share the resources among two projects

Because of this shared resource pool, assigning resources had to be done carefully and there are conflicts that come up when we assign resources which had to be resolved.