Software Project Management

INF3708

Assignment 04: Due date 28 September 2018 Compulsory

ASSIGNMENT 04 - SEMESTER 2

Total Mark: 66 Marks = 100%

Mark weight: 30%

ASSIGNMENT 04	
Due date	28 September 2018
Study material	Hughes & Cotterell: Chapters 8 and 9
Total marks	66 marks
If your assignment is late, please DO NOT PHONE OR E-MAIL asking for an extension but include a note in your assignment stating the reason for the late submission and we will decide whether or not it will be marked.	

Instructions:

1. **Download and complete** this assignment and submit online in a .pdf format by performing the calculations.

2. The following unique number has to be assigned to the assignment:

UNIQUE NUMBER:
768696

3. Show all your working (calculations).

4. This assignment consists of 4 questions

Question 1 [10 Marks]

Calculating the cost of Right Solution software development project should be straightforward because the organization has standard cost figures for their staff and other resources. The project is scheduled to be finished in four months (120 days including installation and training of staff) since it is a big project. The staff cost for the Right Solution Project is shown in table 1 below. Peter is the main project manager. Due to planning and other post project review he spends 17 days extra on the project. "You" (call yourself anything) are the developing project manager assisting Peter in the Right Solution project and you only spent 5 day extra. The project overhead cost amount to R500 each day. Emma is scheduled to work daily for the duration of the project. Bester and Steve are training and support specialist so their services would only be needed for only the fourth month (the last 30 days). The remaining project teams members like John (System Design), Ana (Programmer) and Khumo (System tester) will work for three months (90 days) after the first month (30 day) of requirement analysis by Smith.

Staff member	Daily cost
Peter	R1000
"You" (the name here depends on what you call yourself)	R450
John	R500
Ana	R550
Emma	R550
Bester	R200
Steve	R200
Khumo	R400
Smith	R400

Table1 for Question 1

Based on the information in table 1, calculate the total cost for the Right Solution software development project. Show all your calculation. (10)

Question 2 [20 Marks]

A project involves the design and building of four software modules, called A,B, C and D respectively. The estimated effort for each of the modules is 40 hours for A, 30 for B, 50 for C and 45 for D.

The organization that is undertaking the work assumes for EVA purposes that design takes up 30% of the effort, coding 40% and testing 30%.

On the day that this EVA is conducted, the project should have been completed in full. In fact the situation is as follows:

Module	***estimated effort***	***design (actual hrs)***	***code (actual hrs)***	***test (actual hrs)***
A	*40*	*14*	*18*	*14*
B	*30*	*7*	*10*	*5*
C	*50*	*16*	*not completed*	*not completed*
D	*45*	*10*	*not completed*	*not completed*

Table2 for Question 2

Where actual hours are shown the task has been completed.

Calculate the following:

Schedule and cost variances (SV and CV)
Cost performance and schedule performance indicators (CPI and SPI).

Based on your calculations above, what general conclusion might be drawn from these figures about the overall state of the project?

Question 3 [26]

In assignment 03 question 4, the below table was given (without resource column) and you were asked to Draw activity-on-node network and calculate earliest start (ES) and Latest finish (LF).

Activity	**Resources**	**Duration (working weeks)**	**Precedents**
A	System analyst	2	None
B	System Designer	3	None
C	System Designer	4	A

D	Programmer	3	B,A
E	Hardware Installer	8	D,C
F	Tester	3	C
G	Tester	2	E
H	Trainer and supporters	3	F,G

Table 3 for question 3

3.1 Given your activity plan (i.e your activity-on-node answer for question 4.1.1), use a bar chart to schedule the resources of the project activities as indicated in table 2. Assume each project activity is scheduled to start at its earliest start date. (10)

3.2 Assuming that there is only one system designer and tester, draw up a **resource table** showing the number of each type of resources needed on each day of the project. (10)

3.3 What impact did you notice with the duration of the project given the limited resource (designer and tester). Why was this the case? (4)

3.4 Why is it important to prioritize activities in projects? (2)

QUESTION 4 [10 Marks]

After calculating the schedule variance and scheduled performance indicator, the project manager responsible for the project in question 2 of this assignment realized that the project might be behind schedule.
Discuss the two main strategies the project manager should consider when drawing up plans to bring the project back on target. (10)