Software Project Management

INF3708

Assignment 03: Due date 4 April 2016 Compulsory

ASSIGNMENT 03 - SEMESTER 1

ASSIGNMENT 03	
Due date	4 April 2016
Study material	Hughes & Cotterell: Chapters 5,6 and 7
Total marks	60 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:
739759

3. Show all your working (calculations).

4. This assignment consists of 3 questions.

Questions on Chapter 5

QUESTION 1: **[20]**

1.1 Provide the equation and identify the variables in Boehm's equation for calculating effort in the use of the COCOMO model. (4)

1.2 Five systems with the following estimated lines of code were identified. Identify which can be completed in less than three years. (16)

System	Lines of code	System type
A	23557	Organic
B	18553	Organic
C	17014	Semi-detached
D	10572	Embedded
E	9568	Semi-detached

Table for Question 1: System details

Questions on Chapter 6 - Activity Planning

QUESTION 2 **[20]**

2.1 Consider the following list of tasks with dependencies and estimated durations reflected in table 1. Draw a CPM network (activity-on-arrow diagram) to illustrate the interaction of activities. Include all the values in the nodes. (12)

Task	Precedents	Duration (weeks)
A	None	5
B	None	9
C	None	11
D	A	8
E	B	5
F	B	12
G	C	10
H	G	5
I	D, E	11
J	F, H	4
K	G	4

Table 1 for Question 1.1

2.2 Write down the critical path(s) using the letters of the tasks and calculate and write down the duration of the project. How many paths are there in total? Identify them all and write them down. (3)

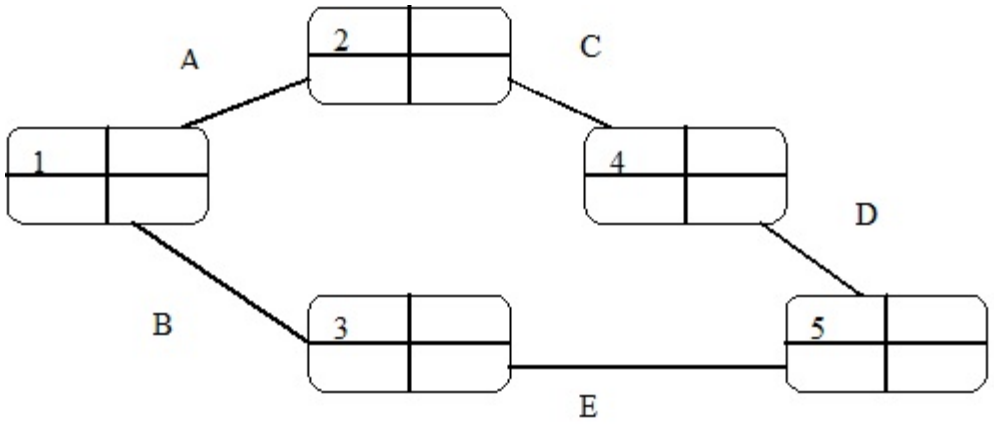
2.3 "Planning does not only take place during the project start-up." Discuss this statement, referring to **when** and **why** planning takes place as it does. (5)

Questions on Chapter 7 - Risk Management

QUESTION 3: **[20]**

3.1 Briefly discus a framework for dealing with risk. (8)

In the PERT network illustrated in the figure below, the target date for the completion of the project is 15 weeks.



Pert network for Question 3

	Optimistic (a)	Most Likely (m)	Pessimistic (b)	Expected (te)	Standard Deviation (s)
A	4	6	8		
B	1	4	5		
C	2	3	5		
D	2	5	6		
E	3	4	5		

Table for Question 2

Use the table above to calculate the following:

3.2 Calculate the Expected (te) values and Standard Deviation (s) and indicate the (te) and (s) values on the diagram. (10)

3.3 Calculate the Z value on the last event. (2)