

**Department of Computer Science and Engineering
College of Engineering, University of Nevada, Reno**

CS 425/CS 625 Software Engineering

Assignment #1

September 5, 2007

Due: Thursday, September 20, 2007, 4:00 p.m.

Points: 50

Weight in course grade: 6%

- 1** Research the library and/or the world-wide-web and find an example of a large software system (several hundreds of thousands or millions of lines of code) that has been developed by companies during the last decade. In your own words, describe the software system in terms of main goals, main components (or sub-systems), and functionality (400-500 words). Indicate the reference(s) used. [10 points]

- 2** Give an example of a software product that you, as an entrepreneur and project manager would like to develop with a group of 3 or 4 software engineers under your supervision. Describe this product (in 400-600 words) and explain why it would be an innovative and useful software. Also, briefly outline how you would organize your team and what type of professionals you would like to work on the project. [15 points]

- 3** The following table sets out a number of activities, durations, and dependencies. Draw an *activity network chart* and a *bar chart* showing the project schedule. Indicate the critical path and specify the minimum time required to finish the project. [15 points]

Task	Duration (days)	Dependencies
1	14	
2	6	T ₁
3	12	T ₁
4	10	T ₁
5	8	T ₂ (M ₁), T ₃ (M ₁)
6	4	T ₄ (M ₂)
7	8	T ₄ (M ₂)
8	6	T ₆ (M ₃)
9	8	T ₂ (M ₁), T ₃ (M ₁)
10	10	T ₅ (M ₄)
11	16	T ₇
12	6	T ₇ , T ₈
13	12	T ₁₀ (M ₅), T ₁₁ (M ₅)
14	8	T ₈ , T ₁₂ (M ₆)
15	6	T ₉ (M ₇)
16	8	T ₁₃ (M ₈), T ₁₄ , T ₁₅ (M ₉)

4 Do Exercise 4.2, page 91 of the textbook [Ian Sommerville, *Software Engineering*, 8th Edition, Addison-Wesley 2006] (answer: 100 to 200 words).

[5 points]

5 Do Exercise 4.9, page 91 of the textbook [Ian Sommerville, *Software Engineering*, 8th Edition, Addison-Wesley 2006] (answer: 100 to 200 words).

[5 points]

Notes on submission:

- Remember that this is an *individual assignment*, not a team work. Thus, collaboration is not allowed.
- Hand in the *printed hardcopy* of your assignment to the instructor in room SEM-236. If he is not there, slip your assignment under his office's door.