IT 243 – SYSTEM ANALYSIS AND DESIGN

Assignment 1 (40 points)

NOTE

- Submission Deadline: **October 22, 2016 (11:59 pm)**
- This assignment covers following chapters: 1, 2 & 3.
- In case of copying assignment from internet or any other student, ZERO points will be given.
- Late assignments will NOT be accepted and will be awarded ZERO points.
- Assignments must be submitted through BB only. Emailed assignments will NOT be considered.

Part I - Theoretical Short & Long Questions

[4 Questions – 24 points]

Q.1) What is the difference between tangible value and intangible value? Give three examples of each. *[6 points]*

ANSWER

> **NOTE: This is a sample answer. Students' examples may vary.**

Tangible value represents the system benefits that are quantifiable and measurable. *Intangible value* represents benefits that are real, but are difficult to quantify and measure.

Examples of tangible benefits might be increased sales, reduced operating costs, and reduced interest costs.

Examples of intangible value might include increased customer satisfaction, improved decision making, improved problem recognition.

Q.2) **Compare and contrast between parallel development and iterative development methodologies in terms of their major elements, benefits and disadvantages?** *[6 points]*

ANSWER

In *Parallel development* generally design of the entire system is performed; then, the project is divided into sub-projects, each of which is designed in detail and implemented. Work on the sub-projects occurs simultaneously in an effort to reduce the time between analysis and delivery of the system. After all sub-projects are complete, the pieces are integrated into the final delivered system. The total time to deliver the system can be reduced using parallel development. The issue in this methodology is in the integration of the sub-projects, since design decisions made in one sub-project may affect other sub-projects if they are not completely independent.

Iterative development is characterized by multiple versions of the overall project. The initial version contains the most important and fundamental requirements. This version can be accomplished with a mini-waterfall process. Once the version is complete, feedback is solicited as to the appropriateness of the system. The project then goes into the next version of the project, incorporating feedback that was received. The benefit to this is that an abbreviated version is quickly available for review. The disadvantage to iterative development is that the early versions are abbreviated. Customers must understand that each version will have additional functionality until the final version is delivered.

Q.3) **Three types of questions can be used in an interview: Closed-ended questions, Open-ended questions, and Probing questions. When would each type of question be used?** *[6 points]*

ANSWER

Closed-ended questions are used when the interviewer is looking for specific, precise information.

Open-ended questions are used to gather a broader, rich information set. Open-ended questions can help the interviewer learn why things are the way they are, and also give the interviewee the chance to add ideas or issues that the interviewer did not anticipate.

Probing questions are used whenever the interviewer is not satisfied with his/her understanding of the interviewee's answer, and needs more explanation before moving on to another topic.

Q.4) **What is the purpose of an approval committee in the software development process? Who is usually in this committee?** *[6 points]*

ANSWER

The approval committee generally serves as the decision making body regarding investments in information systems projects. This committee generally has a broad organizational representation and therefore can avoid allocating resources that will serve only narrow organizational interests. The approval committee commonly has project oversight responsibilities as well; monitoring project performance after the project has been accepted.

The composition of the approval committee will vary from organization to organization, but generally consists of high-level managers from throughout the organization. The committee is often chaired by the CIO.

Part II - Case Study Questions

[2 Questions – 16 points]

Q.5) **Review the www.seu.edu.sa Web site.** *[4+4 points]*

a) **Create a list of business functional requirements that the system meets with.**

b) **Create the different kinds of non-functional business requirements that the system meets with.**

ANSWER | **NOTE: This is a sample answer. Students' examples may vary.**

a) **Examples of Functional Requirements:**

Student

This web site enables each student to:

- add a course, drop course.
- access attendance report.
- access their courses (materials, syllabus , announcements, etc.).
- access their grades.

Instructor

This web site enables instructor to:

- upload attendance, students' marks, etc.
- create, edit and delete course materials.
- create online tests.

Employee:

- This system enables employee to register a student.

b) **Examples of Non-Functional Requirements:**

- *Operational*: the system should work on any web browser.
- *Performance*: the system should be available 24/7/365.
- *Security*: only instructor can upload grades.
- *Cultural*: the system is available in English and Arabic.

Q.6) **The management of Amazon.com Web site decided to extend its web-based system to include products other than books without a radical change in the applied business processes. Which of the requirements analysis techniques will the analyst follow? How the factors influence the choice of the analysis technique?** *[8 points]*

ANSWER

While the management decided to extend the system with only minor changes because the existing business processes are acceptable and without a need for radical redesign of business processes, then **BPA** or **BPI** is the strategy of choice.

Both of these techniques are narrow in a system scope and they strive to make incremental changes to the as-is system. The proposed extension to the system is with low risk. The technical systems are already in place, and the organization has experience with online commerce and the processes associated with sales projections for the new products. Additionally, the culture of this organization supports this type of expansion.

All the Best!