University of Asia Pacific

Department of Computer Science and Engineering

Mid-Semester Examination Fall-2020

Program: B.Sc. Engineering

Course Title: Software Engineering   Course No. CSE 321   Credit: 3.00

Time: 1.00 Hour.   Full Mark: 60

There are **Four** Questions. Answer three questions including **Q-3** and **Q-4.**

1. a. Giving reasons for your answer based on the type of system being developed, suggest the most appropriate generic software process model that might be used as a basis for managing the development of the following systems: **[5]**
   - I. A virtual reality system to support software maintenance

   b. To help counter terrorism, many countries are planning the development of computer systems that track large numbers of their citizens and their actions. Clearly, this has privacy implications for citizens. On other hand, tracing system helps to protect terrorism. **[15]**
   Discuss the code of ethics based on professional aspect according to software engineering of developing this type of system.

Or

2. a. Giving reasons for your answer based on the type of system being developed, suggest the most appropriate generic software process model that might be used as a basis for managing the development of the following systems: **[5]**
   - I. A university accounting system that replaces an existing system

   b. Spying software is a type of monitoring software that surreptitiously install on user's electrical device like cell phone, laptop, desktop, etc. Clearly, this has privacy implications for citizens. On other hand, monitoring system helps to protect suspicious movement of any citizens. **[15]**
   Discuss the code of ethics based on public-welfare according to software engineering of developing this type of system.

3. In software development, agile practices involve discovering requirements and developing solutions through the collaborative effort of self-organizing and cross-functional teams and their customers.

   a. Write an example that use the agile model for development. Give an interpretation on behalf of your example. **[10]**

   b. How does extreme programming methodology assist to elaborate your proposed example? **[10]**

4. Electronic payment (e-pay) system showed in figure is a subspecies of the payment system, which provides the process of passing online payment transactions over the Internet.

Simply put - payment systems are a way to pay for goods and services with a bankcard or electronic money (cashless). The most common payment systems in Bangladesh are debit card, master card and mobile banking. To make payment through e-pay consumer may need to go authentication process. Payment gateway will ensure the user authentication security. Corresponding financial authorities will responsible for payment gateway. Finally, Bank will pay money to the merchant and complete the payment transaction.

a. List enduring and volatile requirements for the e-pay system.   **[5]**

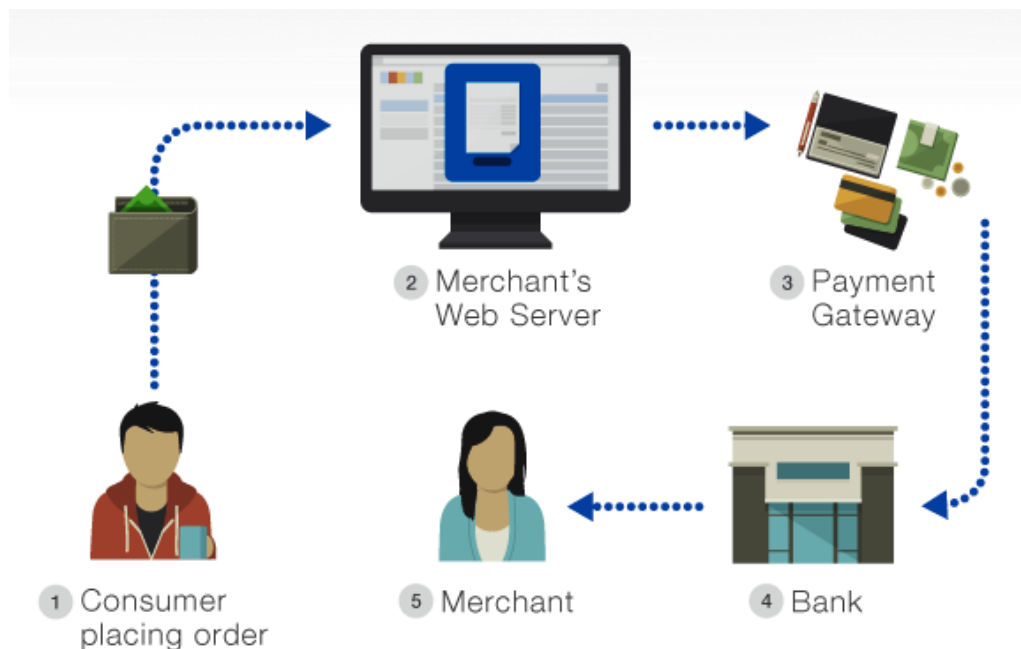b. Draw the use case diagram for e-pay system.   **[15]**

Fig: Electronic payment (e-pay) system