Assignment 1 (Section-A)

Software Engineering Concepts :

Section A:

Questions

Q.1 Explain with examples. What are the reasons of a successful and unsuccessful software project?

Answer :-

Causes Your Projects to Fail :-

Reason 1: Poor planning

Reason 2: Lack of leadership

Reason 3: Poor communication

Reason 4: Inadequate use of resources

Reason 5: Inability to overcome challenges

Steps to make your software projects succeed :-

#1 Define the project's goals

#2 Establish a project team structure

#3 Create a project plan

#4 Set realistic deadlines

#5 Communicate effectively with stakeholders

#6 Analyze the project's challenges and opportunities

A few more tips to help your software development projects succeed:

1. Define the project scope and goals clearly from the start

2. Assemble a solid and experienced project team

3. Put together a comprehensive project plan that details all aspects of the project, from start to finish

4. Keep communication channels open throughout the project, between all team members and stakeholders.

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Q.2 What types of problems may arise if a software project is developed on ad hoc basis?

Answer :-

The meaning of word Ad-hoc is something which is not in order or not organised or unstructured. In the similar note the Ad-hoc testing is nothing but a type of black box testing or behavioural testing.

Ad-hoc testing is carried out without following any formal process like requirement documents, test plan, test cases, etc. Similarly while executing the ad-hoc testing there is NO formal process of testing which can be documented.

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Q.3 Provide three examples of software projects that would be amenable to the waterfall model. Be specific.

Answer :-

1. An Operating System, as the various specific parts of the OS could be developed as the user requires them
2. A Graphical User Interface, similar to the OS, the GUI can be created according to the customer's requirements and approval.
3. A Web Application, a a base application can be developed and delivered, followed by any number of additional plug-ins that the customer would want for additional functionality

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Q.4 Provide three examples of software projects that would be amenable to the prototyping model. Be specific.

Answer:

1) fingerprint voting system

2) fingerprint. based ATM system

3) weather forecasting system

Explanation:

1) Fingerprint voting system- Fingerprint Voting System was implemented with the Arduino technology. In this System a voter can poll his vote easily. In this database server all voters' information was stored to register in this system, the voter should fill a registration form with the help of a user id and password. This information will be checked by the database server. Because all the information about the voter would be already there is anything wrong, the system will not allow the voter to poll his or her vote. This system is helpful to the voter's decreases the time of voting process **.**

2) Fingerprint based ATM system- Fingerprint Based ATM is a desktop application where fingerprint of the user is used as a authentication. The finger print minutiae features are different for each human being so the user can be identified uniquely. Instead of using ATM card Fingerprint based ATM is safer and secure. There is no worry of losing ATM card and no need to carry ATM card in your wallet.

3) Weather forecasting system- The global weather forecasting system and solutions market size was valued at USD 2.51 billion in 2016. It is expected to post a CAGR of 7.1% over the forecast period. These systems help enterprises in gaining real-time insights into atmospheric conditions, which in turn, enables enterprises to carefully plan all weather-sensitive operations to ensure security, sustainability, safety, and cost efficiency. Factors such as growing sea and air transportation, increasing stringency of norms pertaining to environmental protection, and high dependency on rainfall for water supply are among the key trends stimulating market growth.

What process adaptations are required if the prototype will evolve into a delivery

system or product?

If a prototype is evolved into a delivery system or product, it begins with communication.The software engineer and customer meet and define the overall objectives for the software, identify whatever requirements are known, and outline areas where further definition is mandatory.

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Q.5 What process adaptations are required if the prototype will evolve into a delivery system or product?

Answer :-

There are three process adaptations that are required if the prototype will evolve into a deliverable system or product. The processes are more rigorous design rules and SQA procedures must be applied from the beginning, the prototype must be designed with extensibility in mind, and then it becomes the framework for extensions that will cause it to evolve into a production system.

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Q.6 Provide three examples of software projects that would be amenable to the incremental model. Be specific.

Answer :-

Three examples of software project that are amenable to the increment model are smart sheet, work zone, and intervals.

Explanation:

- Incremental model is one which a software is developed through steps which begins from the initiation, development, design, and implementation.
- In the incremental model, the software development process are broken down into numerous steps.
- The incremental model uses an iterative process in the development of a particular software for an industry.

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Q.7 As you move outward along the spiral process flow, what can you say about the software that is being developed or maintained?

Answer :-

As you move outward along the spiral process flow, what can you say about the software that is being developed or maintained?

ANS: As work moves outward on the spiral the product moves toward a more complete state and the level of abstraction at which work is performed is reduced (implementation specific work accelerates as we move further from the origin).

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