Vy Mai
CSC495 M/W 2:30-5:15PM
Assignment 2

Q1: Defining the organization's quality policy.

The definition and development of the organization's quality policy will include the roles and responsibilities of SQA in the organization, and the obligatory status of SQA processes to be performed in the organization's software projects.

Establishing the organization's SQA processes.

The organization's SQA processes should be defined and developed for all the SQA processes required for achieving adequate quality of software products and services.

Defining tasks to those responsible for SQA processes.

Doing the SQA procedures involves identifying roles and duties for people in the software project departments and for people in the software quality control of the enterprise. These people will be responsible for the operation of the SQA procedures.

Defining the management's overseeing tool/method.

It is crucial that management has the whole picture of the SQA performance of the organization. A method for reporting to management about SQA processes performance and the outcomes of reviews and tests should be developed.

Developing a follow-up and review method for the SQA function.

The data collected about the quality performance of software projects, including problems, enables the SQA function to identify process improvement opportunities and to plan their implementation.

Q2: **Compare these documents with reference to the subjects reviewed.**

The topics discussed in the draft review draft plan are clustered according to the objectives. The contrast illustrates that the idea draft committee reviews a much greater variety of issues than the project plan team.

Compare these documents and explain the need and purpose of preparing the individual documents.

The goals of the draft review document are to evaluate the possibilities for a wide variety of subjects included in a potential initiative, while the implementation plan focuses on a narrower range of subjects and focuses solely on the materialization of the proposals drawn up at the point of the proposal.

Q3: The costs of control refer to the expenses incurred while implementing measures to ensure software quality. The costs of failure of control refer to the expenses incurred due to defects and errors that have been missed during the quality control process. The idea guiding this classification is to differentiate between the costs to implement measures to cut costs.

Q4: Prevention costs are costs that are incurred in advance to prevent poor quality products.

Examples: Investments in development of new SQA infrastructure, regular implementation of SQA preventive activities, and control of the SQA system through performance of quality audits.

Appraisal costs are costs associated with ensuring the quality of processes, materials.

Examples: Reviews, cost of software testing, costs of assuring the quality of work performed by external participants.

Internal failure costs are when products are defective before it is shipped.

Examples: Debugging, more testing, and

External failure costs are when products are shipped and defects are detected later.

Q5: The most common types of development risks are requirement, team members, organizational, development methodology and tool, and estimation risks. The following activities can be used for risk management: risk identification, risk evaluation, RMAs, implementations of RMAs, and monitoring implementation of risk management plan.

Q6: It is assumed that any quality assurance activity filters a certain percentage of existing defects. In most cases, the percentage of removed defects are lower than the percentage of detected defects. The model is based on three types of data: defect origin distribution, defect removal effectiveness, and cost of defect removal.

Q7: Yes it is possible because there might be differences in requirements or methodologies.

Example one: Differences in development methodologies: Projects using agile methods may have different defect distribution and removal costs compared to projects following waterfall approaches.

Example two: Varied technology stacks: Projects involving modern technologies may have different defect characteristics and costs compared to projects using legacy systems.

Example three: Varying project complexities: Larger, more complex projects may require different V&V strategies compared to smaller, simpler projects due to differences in defect distribution and removal effectiveness.

Q8: The issues addressed by the procedures are deciding document types, defining format, analyzing findings and initiating updates, and changes. These issues contribute by ensuring that the documents are compliant to the structure and usage instruction, allow future development of the software system, and support any investigation of software failures.