Software Project Management

Lecture 27

Software Quality

Topics Covered

- Introduction

- Place of Software Quality in project planning

- Importance of software quality

- Defining software quality

Introduction

- While quality is generally agreed to be ' a good thing' , in practice what people really mean by the 'quality' of a system can be vague

- We therefore need to define precisely what qualities we require of a system

- However this is not enough- we need to judge objectively whether a system meets our quality requirements and this need measurement

The place of software quality in project planning

- Quality will be of concern at all stages of project planning and execution, but will be particular interest at Stepwise framework

The place of software quality in project planning

- Step 1 : Identifying project scope and objectives

  Some objective could relate to the quality of the application to be delivered

- Step 2 : Identifying project infrastructure

  Within this step activity identifies installation standards and procedures. Some of these will almost certainly be about quality requirements.

The place of software quality in project planning(Cont..)

- Step 3 : Analyze project characteristics

  In this activity the application to be implemented will be examined to see if it has any special quality requirements.

The place of software quality in project planning(Cont..)

- Step 4 : Identify the product and activities of the project. It is at that point the entry, exit and process requirement are identified for each activity

- Step 8 : Review and publicize plan. At this stage the overall quality aspects of the project plan are reviewed

The importance of software quality

- Increasingly criticality of software: The final customer or user is naturally anxious about the general quality of software.

- The intangibility of software : This makes it difficult to know that a particular task in a project has been completed satisfactory

The importance of software quality(Cont..)

- Accumulating errors during software development : As computer system development is made up of a number osf steps where the output from one step is the input to the next steps, the error in the earlier deliverable will be added to those in the later step, leading to an accumulating detrimental effect

Application

- *Example Problem: A wide range of safety equipment such as gas masks, hazmat suits, etc. are used by military and law enforcement* personnel for protection from chemical and biological agents. Effective testing of these materials requires test gas mixtures, both at toxic levels and safe levels. Toxic levels are used to challenge the safety equipment. Safe levels are used to calibrate analyzers which test for breakthrough.

- *Solution: KIN-TEK's FlexStream™ and 491M gas standards generators are versatile enough to create the required test atmospheres for* both toxic and safe levels

Research

- ***Quality Control Research Inc. is a Site*** Management Organization comprised of dedicated research professionals with decades of combined Clinical Research experience. We offer trained, knowledgeable and experienced Investigators and staff members. At Quality Control Research, our top priority is the care and safety of our study volunteer patients, and we offer various Patient Assistance Programs that are customized for the needs of each study patient