SOS IN COMPUTER SCIENCE & APPLICATION
JIWAJI UNIVERSITY

Class : MBA (E-Commerce) II Semester

Subject: Principles Of Management

Paper Code : (206)

Topics : (i) Software quality assurance

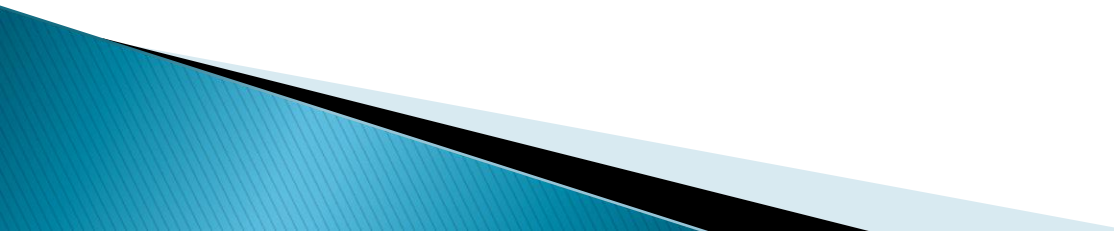**(ii) Factors in software quality assurance**

(iii) Difference b/w s/w quality assurance

and s/w quality control

Software Quality Assurance

Software Quality Assurance (SQA) is simply a way to assure quality in the software. It is the set of activities which ensure processes, procedures as well as standards suitable for the project and implemented correctly.

Software Quality Assurance is a process which works parallel to development of a software. It focuses on improving the process of development of software so that problems can be prevented before they become a major issue. Software Quality Assurance is a kind of an Umbrella activity that is applied throughout the software process.

Software Quality Assurance have:

- A quality management approach
- Formal technical reviews
- Multi testing strategy
- Effective software engineering technology
- Measurement and reporting mechanism

Factors In Software Quality Assurance

1) SQA Management Plan

Make a plan how you will carry out the SQA through out the project. Think which set of software engineering activities are the best for project. check level of SQA team skills.

2) Set The Check Points

SQA team should set checkpoints. Evaluate the performance of the project on the basis of collected data on different check points.

3) Multi testing Strategy

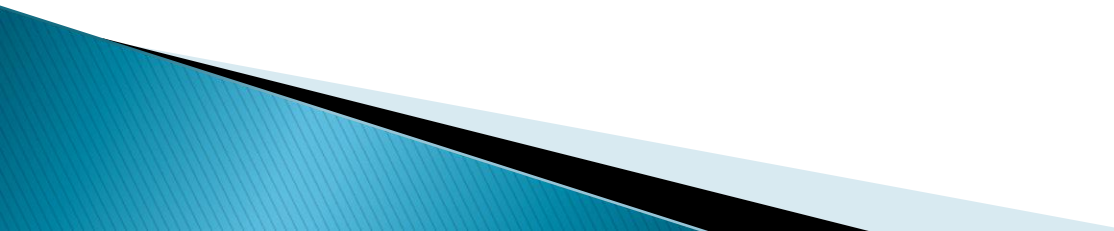Do not depend on single testing approach. When you have lot of testing approaches available use them.

4) Major Change Impact

   The changes for making the correction of an error sometimes re introduces more errors keep the measure of impact of change on project. Reset the new change to change check the compatibility of this fix with whole project.

5) Manage Good Relations

   In the working environment managing the good relation with other teams involved in the project development is mandatory. Bad relation of SQA team with programmers team will impact directly and badly on project.

Benefits of Software Quality Assurance (SQA)

- SQA produce high quality software.
- High quality application saves time and cost.
- SQA is beneficial for better reliability.
- SQA is beneficial in the condition of no maintenance for long time.
- High quality commercial software increase market share of company.
- Improving the process of creating software.
- Improves the quality of the software.

There are many differences between software Quality Assurance and software Quality Control –

QUALITY ASSURANCE (QA)	QUALITY CONTROL (QC)
1)It focuses on providing assurance that quality requested will be achieved.	1) It focuses on fulfilling the quality requested.
2) It is the technique of managing quality .	2) It is the technique to verify quality.
3) It does not include the execution of the program.	3) It always includes the execution of the program.
4) It is a managerial tool.	4) It is a corrective tool.
5) It is process oriented.	5) It is process oriented.
6) It is a preventive technique	6) It is a corrective technique

This figure shows the difference b/w software quality assurance and software quality control –

Quality Assurance
1. Prevent Bug
2. Plan
3. Verify

Quality Control
1. Detect Bug
2. Act
3. Validate