**Assignment 2**

1. **What is SQA?**

Software quality assurance (SQA) is a process that ensures that developed software meets and complies with defined or standardized quality specifications.

SQA is an ongoing process within the software development life cycle (SDLC) that routinely checks the developed software to ensure it meets desired quality measures.

1. **What are the SQA principles?**

The following are some of the most powerful principles that can be used for proper execution of software quality assurance:

**Feedback** – In gist, the faster the feedback the faster the application will move forward. An SQA principle that uses rapid feedback is assured of success.

**Multiple Objectives**– This is partly a challenge as well as risk for the SQA team. At the start of the SQA planning, the team should have more than one objective. As much as possible a matrix should be built by the SQA so that it could track the actual actions that relates to the objective.

**Evolution** – Reaching the objective is really easy but every time something new happens, it should be always noted. Evolution is setting the benchmark in each development. Since the SQA team is able to mark every time something new is done, evolution is monitored.

**Quality Control–** By the name itself, Quality Control is the pillar for Software Quality Assurance. Everything needs to have quality control – from the start to the finish. With this principle there has to be an emphases on where to start. The biggest and the tightest quality control should be executed as early as possible.

**Process Improvement–** Every project of the SQA team should be a learning experience. Process improvement fosters the development of the actual treatment of the project.

**Persistence** – There is no perfect application. The bigger they get, the more error there could be. The SQA team should be very tenacious in looking for concerns in every aspect of the software development process. Even with all the obstacles everyone would just have to live with the fact that every part should be scrutinized without hesitation.

**Different Effects of SQA**– SQA should go beyond software development. A regular SQA will just report for work, look for errors and leave. The SQA team should be role models in business protocols at all times. This way, the SQA does not only foster perfection in the application but also in their way of life. That seemed to be quite off topic but believe me; when people dress and move to success, their work will definitely reflect with it.

**Result-focused**– SQA should not only look at the process but ultimately its effect to the clients and users. The SQA process should always look for results whenever a phase is set.

1. **What are the benefits of SQA?**

**SQA Benefits**

SQA has a host of benefits. It ensures that that software built as per SQA procedures are of specified quality. SOA helps to

* Eliminate errors when they are still inexpensive to correct
* Improves the quality of the software
* Improving the process of creating software
* Create a mature software process

Also, it has the following benefits:  
- Increased productivity of the development team.  
  
- Improved Product Quality: Test statistics and defect tracking are more precise and up to date.  
  
- Decreased re-work costs as the detection of defects are found earlier in the software project development lifecycle in every stage.  
  
- Increased confidence levels in existing product management and future product development.  
  
- Increased credibility as the software produced will be highly qualitative.

1. **Why SQA is needed?**

**SQA is needed for:**

1. Maintaining the quality of the project as per the specifications and business requirements.

2. Defect Prevention. And formal methods for other defect prevention techniques.

3. Defect Reduction.

4. Inspection, formal and informal reviews: Direct fault detection and removal without executing the project scenario.

5 Testing the project for Failure observation and bug removal.

6. Risk identification.

7. Defect tracking techniques and methods.

8. Software fault tolerance.

9. Concluding Remarks and maintaining reports.

1. **What is the budget of SQA?**

40% TO 50%. It can vary from industry to industry.

1. **What is quality Assurance?**

**Quality assurance** (**QA**) is a way of preventing mistakes or defects in manufactured products and avoiding problems when delivering solutions or services to customers; which [ISO 9000](https://en.wikipedia.org/wiki/ISO_9000) defines as "part of [quality management](https://en.wikipedia.org/wiki/Quality_management) focused on providing confidence that quality requirements will be fulfilled"