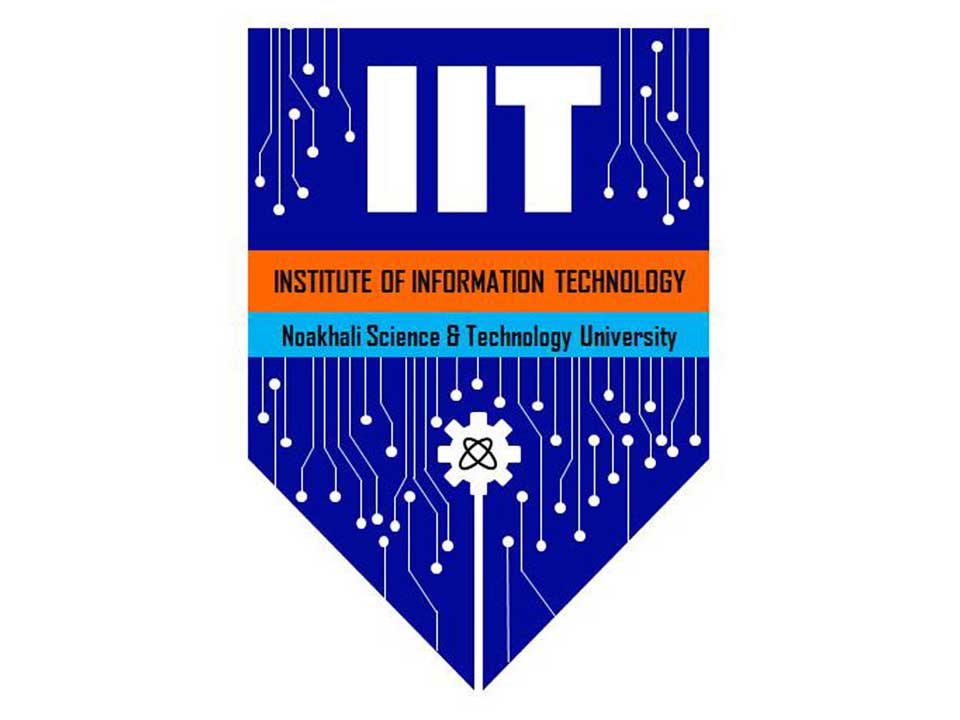
**Noakhali Science and Technology University**





Institute of Information Technology

**Software Engineering**

**Course Title: Software Testing and Quality Assurance**

**Course Code: SE3209**

**Assignment on: Introduction to Software Testing and Software Testing Terminology & Methodology**

* **Software Testing.**

Software testing is a process that detects important bugs with the objective of having better quality software.

* **Goals of Software Testing.**

The goals of software testing classified into three major categories:

1. Immediate Goals

* Bug Discovery
* Bug Prevention

1. Long-term Goals

* Reliability
* Quality
* Customer Satisfaction
* Risk Management

1. Post-implementation Goals

* Reduced Maintenance Cost
* Improved Testing Process
* Explaining These Goals

1. **Immediate Goals:** After performing a test, it gives an immediate result. It sets in every phase of the SDLC. Such as
   1. **Bug Discovery:** The Immediate Goals of testing is to find errors at any stage of the software development. Discovering more bugs at the early stage of software development, better will be success rate in software testing.
   2. **Bug Prevention:** Coding safely such that bugs discovered shouldn’t be repeated in later stages or future projects. From the behaviors and interpretations of bugs discovered, everyone in software development team should learn that. It’s true that, errors cannot be prevented to zero, its can be minimized. For this reason, bug prevention is superior of testing.
2. **Long-term Goals:** When one cycle of the SDLC is over, these goals affect the product quality for the long time. Such as
   1. **Quality:** Thorough testing ensures the superior quality of software products. The first goal of understanding and performing the testing process is to enhance the quality of software products. The software should be passed through rigorous reliability analysis to gain high quality standards. Reliability is the level of confidence increases with rigorous testing. The confidence and reliability increase the quality of software products.

**Figure: Testing produces reliability and quality**

* 1. **Customer Satisfaction:** The prime concern of testing is customer satisfaction only from the perspective of users. For customer satisfaction, testing should be complete and thorough. Testing should be complete in the sense that it must satisfy the user for all the specified requirements mentioned in the user manual, as well as for the unspecified requirements which are otherwise understood. A complete testing process achieves reliability, reliability enhances quality, and quality increases customer satisfaction.

Software testing Reliability Quality Customer Satisfaction Provides Figure 1.4 Quality leads to customer satisfaction

**Figure**: Quality leads to customer satisfaction

* 1. **Risk Management:** Risk is the probability that undesirable events will occur in a system. These undesirable events will prevent the organization from successfully implementing its business initiatives. Thus, risk is basically concerned with the business perspective of an organization. Risk Management is only discussed in spiral model. Software testing business ris