# CITE Managed Services Quality Insurance

## What is software Quality Assurance

Software quality assurance is a process which assures that all software engineering processes, methods, activities and work items are monitored and comply against the defined standards. Software quality assurance incorporates all software development process starting from defining requirements to coding until release. Its prime goal is to ensure quality. The whole process of software quality assurance revolves around two concepts, verification and validation.

## software Verification

Verification is the process of checking or verifying the credentials, data or information to confirm their credibility and accuracy. In software engineering, verification is defined as the process of evaluating software products, to ensure that the development phase is being carried out accurately. It’s performed during the ongoing phase of software development to ensure the detection of defects and faults at an early stage of the life cycle and to determine whether the initial specifications are satisfied.

## Software Validation

Software validation is a process of evaluating software product, to ensure that the software meets the pre-defined and specified business requirements as well as the end users/customers’ demands and expectations. It is performed with the intent to check that the developed software is built as per decided requirements specifications and if it caters to fulfil the customers’ actual needs in the real environment.

## Verification vs validation

Verification refers to the assessment and evaluation of the process or approach while validation is about examination of the developed software product to ensure the fulfilment of the pre-defined and specified requirements, such as software specifications.

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| Verification | validation |
| Verification evaluates the ongoing development phase and the software product | Validation involves the examination of finally developed software product with respect to pre-defined specified requirements |
| The motive is to check the path and progress of the software development at each stage of the life cycle to ensure the incorporation of all the requirements in the software product | The purpose of carrying out the validation process is to determine whether the final product achieved the requirements that were stated prior to the development or it may need improvement. |
| It is performed over software product which is under the development stage | It takes on final software product, produced after the completion of the development process. |
| Includes static activities such as: reviews, inspections, walkthrough and meetings | Include dynamic testing techniques such as: black box testing, white box testing, grey box testing and acceptance testing. |