**SOFWTARE DESIGN**

The design of software which contains all the theory, concepts and points is structured to help in the development of a quality product. The principles of designing help and guides us in the making of the product. Before designing the product – we should keep in mind the principles that are needed to make the product. Designing is the place where quality software is established.

Design is all about creativity – all of the stakeholder requirements, business needs and technical requirements are formulated while designing the product. It represents the software product and provides detail about software architecture, data structures, interfaces and components that are required in implementing the system. It is the software engineer who does all the designing.

The steps in designing are –

* Architecture must be represented.
* Interfaces connecting elsewhere must be modulated.
* Software components that are required must be designed.

Good software is said to have –

* Firmness = No bugs
* Commodity = Suitable
* Delight = Good experience

There can be many design models that can be created but ultimately, we have to choose one model finally and use that in implementing the model.

**DESIGN IN THE CONTEXT OF SOFTWARE ENGINEERING**

As we know – the software process framework as activity, action and task. In activity – design is the last task that is there in software engineering.

The architectural design brings out the relationship between major structural elements of the software, the architectural styles and design patterns that are used to fulfil the requirements. This design is derived from the requirement model.

The interface design tells us how the software communicates with the system. It tells us the flow and behaviour of the system.

‘Quality’ can be the term that is used to mention the value of software design. During design, quality is fostered. The one and only way that can be translated from stakeholder’s requirements to a finished product is design. Designing is the basis and foundation of software engineering and the things that follow. If at all we do not have designing, there will be an unstable system and risks involved in it and so much of money and time wasted in that.