13/3

WEEK-1

SOFTWARE ENGINEERING

Software engineering is an engineering discipline that is concerned with all aspects of software production.

There are two key phrases:

Engineering discipline engineers apply theories, methods and tools where these are appropriate. However, they use them selectively and always try to discover solutions to problems.

All aspects of s/w production s/w engineering is not just concerned with the technical processes of s/w development. It also includes activities such as s/w project management and the development of tools, methods and theories to support s/w production.

Need of Software Engineering

1. changes in requirement - with frequent changes in the business requirements and the environment, a properly documented and well defined system of s/w development is required which makes it eminent to use s/w engineering.

2. Large and complex software - with large and complex s/w, it becomes difficult to handle the s/w product ~~but~~ with the concept of s/w engineering, it is comparatively easier to build and manage them.

3. Scalability -

If the software process were ~~to be~~ not based on scientific and engineering concepts, it would be easier to recreate new s/w than to scale an existing one.

4. Cost -

As the hardware industry has demonstrated its skills and huge manufacturing has let down the cost of computer and electronic hardware. But the cost of programming remains high if the ~~proper~~ process is not adapted.

5. Quality management - Better procedure of s/w development provides a better and quality s/w product.

6. More and more, individuals and society rely on advanced software systems. We need to be able to produce reliable and trustworthy systems economically and quickly.