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Software is a program, when it is executed

the associated functionality must be satisfied.

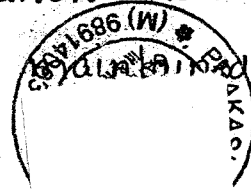
S/w is a data structure used to manipulate the information

S/w consist the operational procedure, used to indicate

the operational guideline of the s/w. ...

ie... user manual, beginners guide, system overview... etc

Software consists the documentation manual, used to indicate the list of the activities to develop the s/w. ...



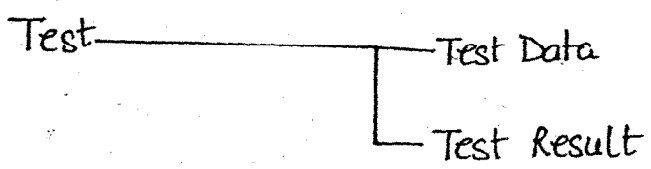
Software consists the documentation manual, used to indicate the list of the activities maintained to develop the s/w

ie. ...

Analysis Specification	Formal specification Context Program Data flow Diagram
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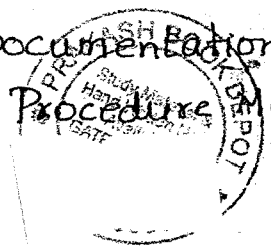
Design	Flow chart ER Diagram
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Code ————— Logical Inst



S/w is a combination of Program, operational Procedure & Instruction Manuals, Finally we can conclude the s/w is a logical component rather than physical component.

Software = Programs + Operational + Documentation, Procedure Manuals

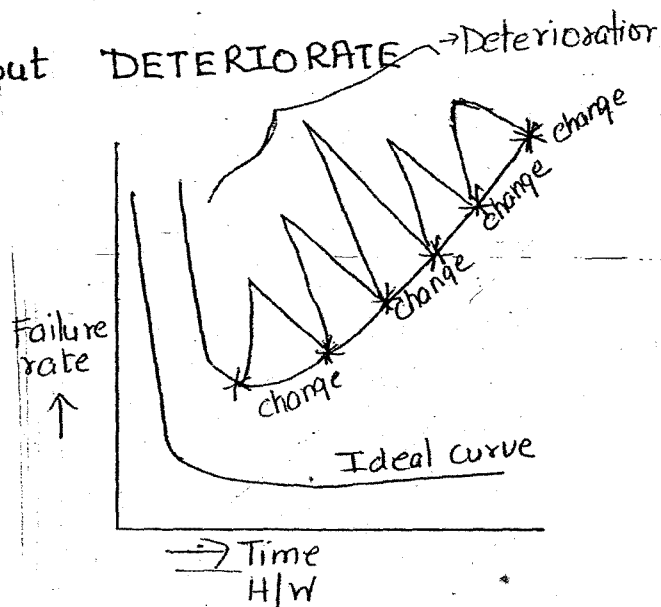
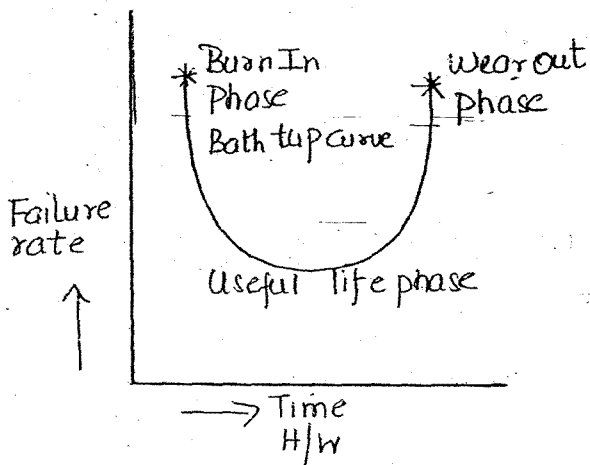


Character of Software-

- I. s/w. is developed or engineered but not manufactured in the classic sense.
 - i) s/w development doesn't have the assembly line.
 - ii) Logic of the program is developed only once & that can be copied into any no. of the copies.
 - iii) Physical Components consists the assembly line to manufacture the product, during this process every time raw materials are included.
 - iv). After implementation of design document. if it is generate the logical component called as the development

Process else that process is called as manufacture.

2. s/w doesn't WEAROUT but DETERIORATE → Deterioration



The life cycle of H/w component consists of the 3 stages :-

Burn in Phase

In the early stage of development due to the more numbers of errors the product failure rate is high.

In the Burn-In-Phase the product is present in the developer's site.

After various test operations the failure rate is decrease & it will be established at one point.

Later deployee the product into customer's place.

Useful life Phase

In this Phase the product is there in operational state.

Wear Out Phase

After the continuous users of the product over a period of a time the life time of the product is decreases due to the environmental changes.

ie... Temp, Vibrations, Dust Etc...

Therefore the failure rate of the product increases.

NOTE :-

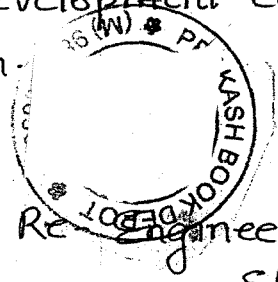
When the H/W component is undergoes wear out condition, then replace the component with new component.

S/W is undergoes deterioration

ie... At the early stage of operation the product failure rate is high.

After the testing operation the product will be deployed in to the customer's site.

S/W doesn't get affected by the environmental changes but the customer requirements are not static. When the customer requirements are changed frequently then the maintenance cost of the S/W becomes twice or thrice than the development cost. This condition is called deterioration.



Note :-

When the S/W is deteriorate then Re-engineer the S/W

3. Industry is moving towards component based development. Still the S/W is customer build.

Component is a reusable code or error free code or risk free code or fully tested code.

During the physical component manufacturing process we can directly use the component without changes. ie Working models contains different I.C to implement the model directly purchase the I.C from market.

In the S/W development process, application to application the functionality will be differ therefore the S/W components are undergoes customization according to project functionality.

In the S/W development 4 types of components are used :-