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SUBJECT : Software engineering.



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QUESTION : 2

Q: 2.2

Define the following terms

- (1) Unit testing
- (2) System testing
- (3) black box Testing.
- (4) White box Testing.

ANS :

UNIT TESTING:

DEF:

it can be define as focusing on the smallest element Software design

IMPORTANCE :

- (1) it make heavy use of white box testing.

WHITE BOX TESTING:

The testing done on internal structure

EXAMPLE :

calculator

UNIT TESTING:

So the testing done on the individual module is called unit testing.



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(ii) SYSTEM TESTING:

DEF:

The system as a whole is tested to uncover requirement errors.

IMPORTANCE:

(i) The system testing is done to verify all the elements work properly and that overall system function and performance is achieved.

(iii) BLACK BOX TESTING:

DEF:

It is the method of software testing that examines the functionality of an application without looking into the internal structure or working.

Mechanism:

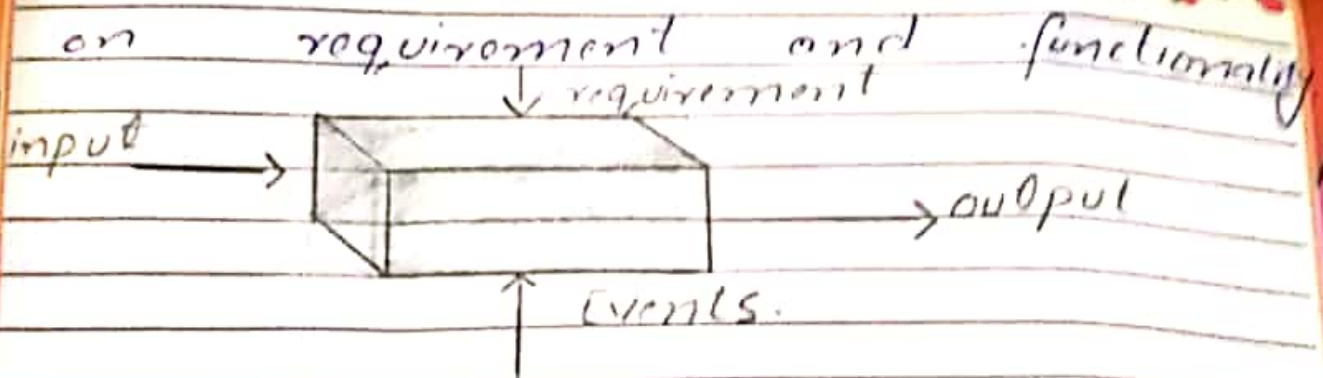
(1) The method is applied on every level of software testing. e.g.; unit, integration, system and acceptance.

(2) It is based on

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(iv) WHITE BOX TESTING:

DEF:

Testing on the internal structure and analysis done on the internal structure

OTHER NAMES:

White box testing is also known as clear box testing, glass box testing, transparent box testing, and structural based testing.

IMPORTANCE:

(i) It is applied on all level of SDLC.

DISADVANTAGES:

The defects are most of found.

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in unit , Component, and
integration level through
wide bed.

~~_____~~
~~_____~~
~~_____~~



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Q2.1 : Explain why testing can only detect the presence of error not their absence

ANS :

REASON:

The testing can only explain the presence of error not their absence. because.

EXPLANATION:

The testing can only detect the presence of error not their absence because the main goal of testing is to observe the behavior of the particular software and to check whether it meet its requirement expectation. or not. The testing is a part of broader process of software verification and validation. It consist of set of activities. where the tester try to make the software behave anomalous in order to detect or anomaly.



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in order to detect or
anomaly to be detected
Testing cannot demonstrate
The facilities other than
Specified in every circumstance.

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Q3.1:

There are three main type of Software

① CORRECTIVE:

Corrective maintenance of a Software product is necessary to rectify the bugs observed while the system is in use.

② ADAPTIVE:

A Software product might need maintenance when the customers need the product to run on a new platform - on new operating system. or when they need the product to interface with new hardware or software.

(3) PERFECTIVE:

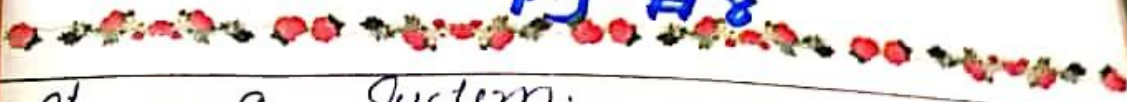
A Software product need maintenance to support or change of different functionalities of the system according to customer demands. or to enhance the performance



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of a System.

REASON:

It is sometimes difficult to distinguish between the different type of maintenance because they are often given different names. There is not a clear-cut distinction between these type of system when the system adapt to new to new environment then add. functionality. to take advantage of new environment. feature software faults are often exposed because user use the system in unanticipated ways.



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Q3.2 :

What are the principal factors which affect the cost of systems. The help of Business process design

ANS:

REARRANGING COST FACTORS:

The quality of the software to be rearranged. The Tool Support availability for merging. Extent of the data conservation which is required. The availability of expert staff for re-engineering.

A part of the cost of the re-engineering. The principal factor that affect re-engineering.

Cost are : 22 Cost of

Re-engineering engineering:

The quality of a software to re-engineered.

The power of quality of the software and

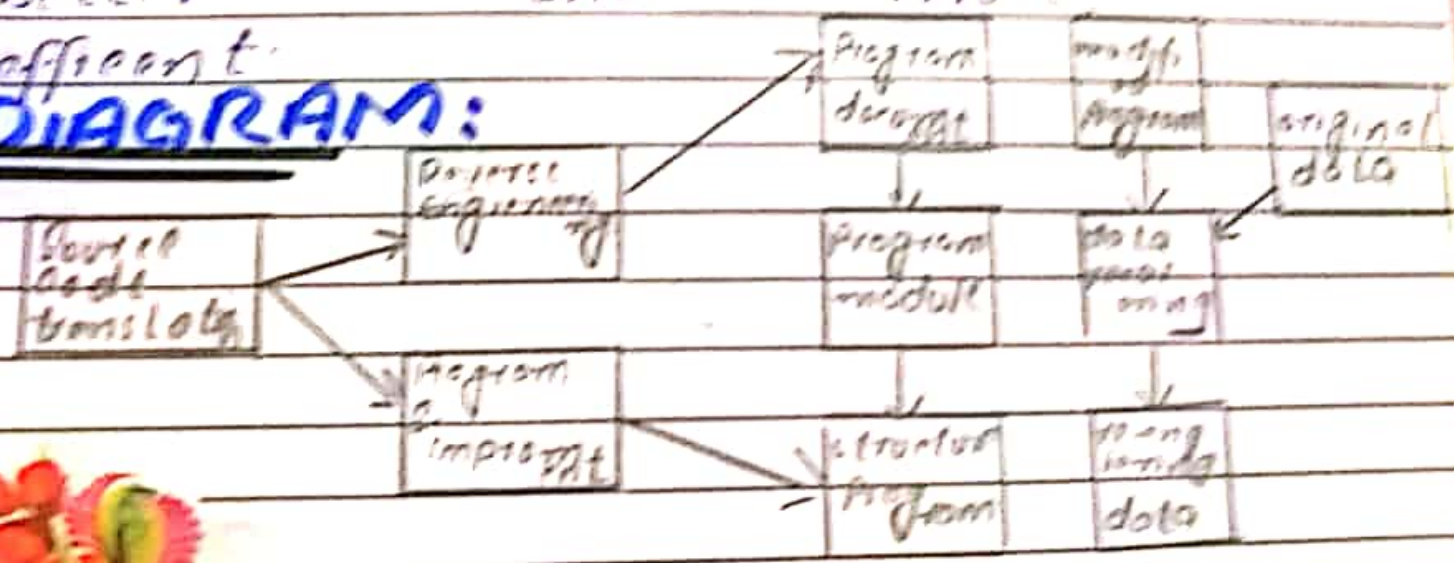
its associated documents. The higher re-engineering



SOFTWARE RE-ENGINEERING PROCESS:

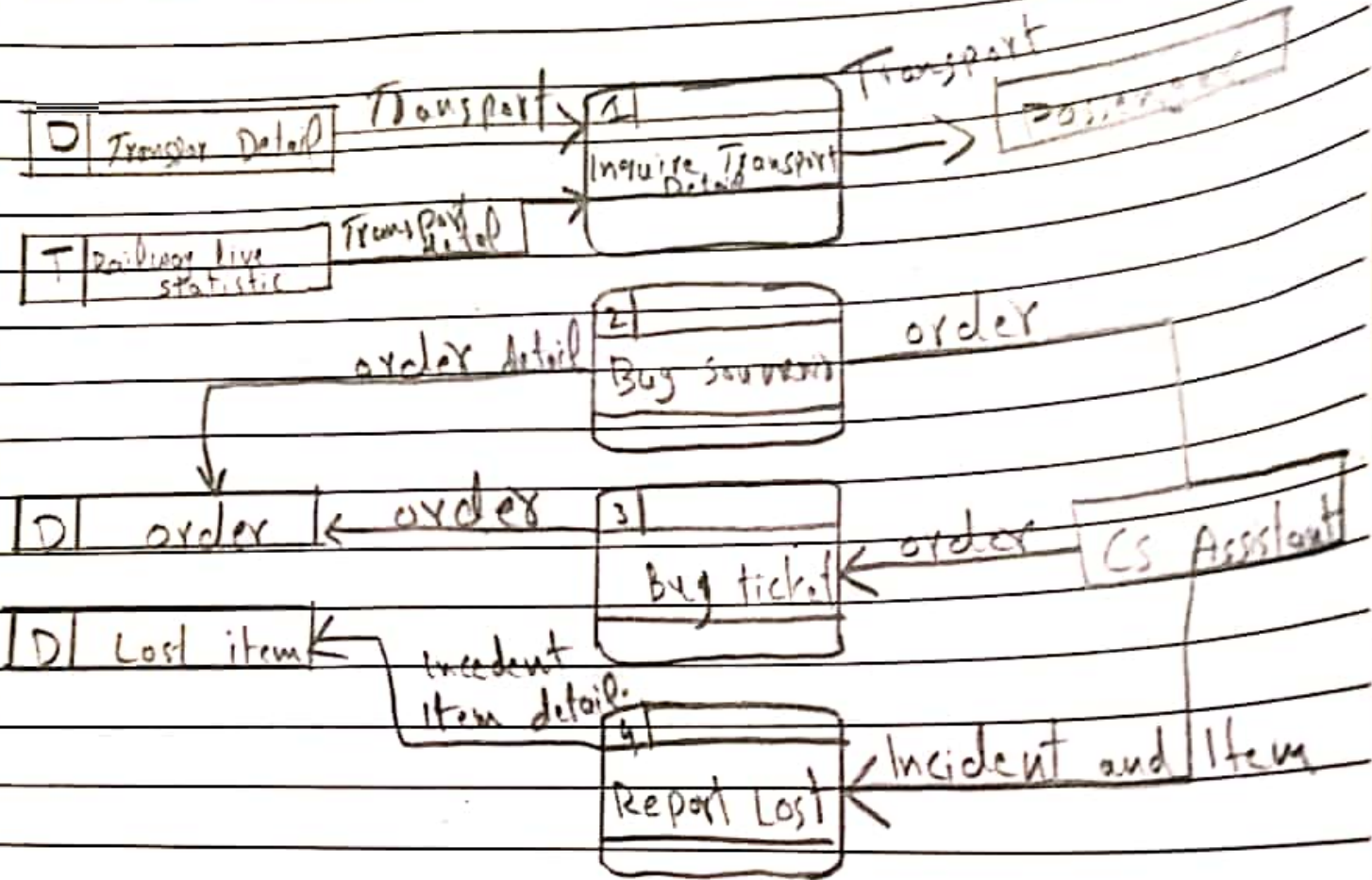
Software re-engineering is the process of updating software without affecting its functionality. This process may be done by developing additional features on the software and required but considered to make the software more efficient.

DIAGRAM:



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Q.3.3: Draw a Level 2 (DFD) for registration process ...?

