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Paper C

Q1) Requirement Elicitation:-

The problems that are encountered during requirement elicitation are:-

1) Problem of Scope:-
It is difficult to analyze scope during requirement elicitation. Sometimes the boundary of the system is not defined correctly. It is also possible that sometimes unnecessary information is given instead of necessary information.

2) Problem of understanding:-
These problems arises when users don't have complete understanding of their needs, it is also possible that analyst have poor knowledge of the problem domain. Users and analyst both speak different languages and this may lead to misunderstandings. It is also possible that someone omits "obvious" information. Some requirements are not completely testable e.g robustness etc.

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3) Problems of volatility:-

Requirements keep on evolving as it is incremental process, which makes difficult to account previous requirements and to counter their effects

Q2

Domain requirements come from application domain and it represent the domain in which product will work. whereas inverse requirements means what is not expected from the system.

Lets distinguish this with example:

Suppose we are making COVID-19 detection app for general people this project will come into medical domain whereas it is made clear that we can't use dark or vibrant colors in this app this comes under inverse requirements.

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Importance to elicit domain requirements:-

It is very important to consider domain knowledge & their requirements in order to make a system which will be used in that domain

Lets assume our previous COVID-19 app, we should consider to have domain expert from medical background who will continuously guide us about COVID symptoms etc.

Sometimes domain expets find something "obvious" and forget that thing to tell requirement engineers which can cause significant dissatisfaction and confusion. That's why it is important to take a good care while collecting domain requirements.

It is important to access ~~business~~ domain expert to elicit domain requirements

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Q3

Dimensions of Inspection:-

There are 5 dimensions of inspections:

1) Technical
2) Managerial
3) Orgatizational
4) Assesment
5) Tool support

Inspections are very helpful in defect removal. If we don't inspect our process we would be having a great chaos situation at maintenance level. Requirements error detected during inspection saves a lot money and time as requirements errors will not flow into other (design, development, testing phase) This thing can be clearing explained by these illustration below:-

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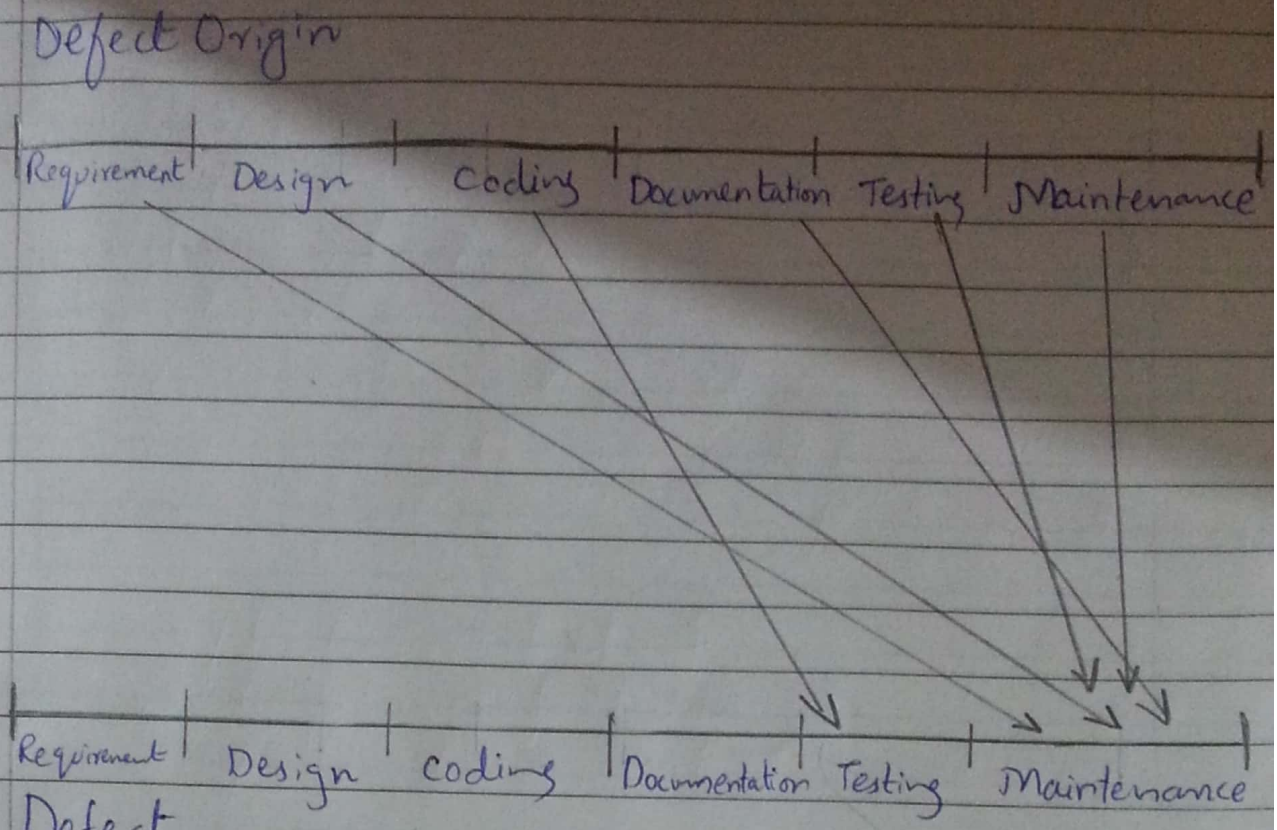
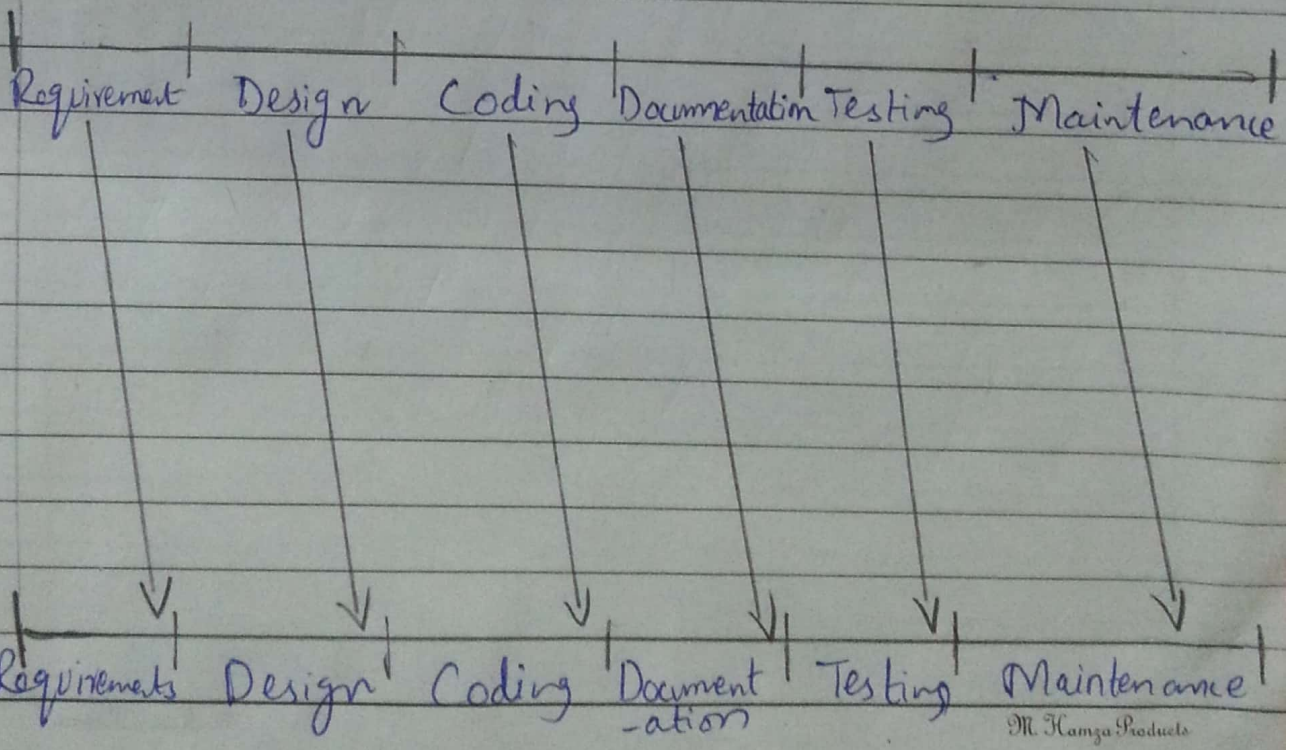
Defect Detection Without Inspection:-



Defect Detection With Inspection



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Q4

Interaction Matrix:-

Interaction matrix shows us how requirements interact with each other. In this matrix a requirement is compared with all the other requirements, and the matrix is filled based on if there is

- conflict → fill 1
- overlap → fill 1000
- independent → fill 0

Interaction matrix can be very helpful in resolving conflict. because of the fact that we are analyzing requirements on numerical values and finding the number of conflicts, overlapping requirements at initial level. Lets take this example:- Suppose we have 4 requirements we will find to which requirements they are conflicting or overlapping.

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Requirement	R1	R2	R3	R4
R1	0	1	1	1000
R2	0	0	1000	0
R3	1	0	0	1
R4	0	0	0	0

Now we will sum columns and rows result to find the number of conflicts and number of overlaps. We will also cater those requirements first which have high values for one or both of them.

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