SOFTWARE ENGINEERING

Lab 5

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Problem Statement 1:

As a manager of MNC, keeping in mind the personal, business and professional ethics I think I would inform the client about what exactly might be the bug in the product and how the company could tackle the situation.

The most important aspect of any client and employer relationship is the transparency of communication and delivery of the product. The Employer Team should be strong is every aspect such as optimisation and even debugging. But many at times due to minor reasons, the

developers might overlook some minute error which could later have a major impact in deploying the product. Some of the ways to develop a defect-free product without jeopardizing the relationship with the client are :

Designing the code for simplicity and reliability – A clean well-structured design simplifies producing reliable code. Finding and fixing a bug is fast and saves time and money.

Trace every code when written – Using debuggers to trace every like of code and trying to predict the outcome before each line is executed.

Review code by Peers and fellow Programmers – allows more than one engineer to perceive the code while it is still easy to change. Encouraging cross-training and collaboration helps delivery of a better optimised code.

Build Automated QA into the code – Automated tests help utilise the power of

modern computing power and also human error.

Build and test daily – Updating the code with feedback loops help the developer better understand the product and future estimates.

Use Automated Checking – Set complier's warning level to the maximum. Use memory trace subsystems and other tools.

Problem statement 2 :

Problem at hand being human sustainability.

Ideas generated, the crazy 4's :

- Wastefull advertisement

- Resource constriction in wartime situation

- Efficiency requirements in corporate worlds.

betterment :

- Unaware power wastage (resouces in general)
- Monopoly of companies due to higher investment potential
- Food wastage in resturant facing situation
- dress climate smart

- Make a slow transistion from petrol to electric/sustainable power sources.
- Focus on planet-friendly investments

Substitute: often time, this leads to inhuman design. Changing evaluation criteira in workplacces can help.

Combine: combining the monopoly problem with gureilla marketing tatic can help. Start with applying limits in advertisement for monopoly.

Adapt : the best feature that anyone can adapt is planting more trees which could help in attaining sustainability

Modify : Changing the inherity nature of businesses can help.

Eliminate: Something as simple as replacing and eliminating all fossil fuel machines, would lead to even larger carbon footprint.

Reverse/rearrange: As for the proposed solution, rearrainging or reversing doesn't effect anything to our outcome.

Problem statement 3 :

we are currently a level 2 company, given that we have a project that guides us but arent proactively in the improvement stage. We aim to reach level 5 by the following steps :
- Form a orignisation with proactive processes
- Quantitatively measuring processes and results
- Focusing on optimising the above processes.

We plan on making this a open source software, this imploes that we cant monetise on the application itself. This put's out service model in 2 places :
- Pay for support, and
- Pay for hosting

We can provide services for hosting the service and supporting in case of any errors. Given we see this running in server environments, this is bound to work.

Implying that we will be focusing on service model as per ITSM.