

SOFTWARE ENGINEERING LAB TASKS

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Problem Statement – 1:

You are a manager at a large MNC. You and your team have been working closely with a client to develop their product. Through this project you have developed a good business relationship and friendship with the client. On the eve of the product release, your team notifies you about a major bug in the code that had been overlooked before. Your client asks you if the product is defect free.

Keeping in mind personal, business & professional ethics, how would you tackle this situation as a manager? Brainstorm ideas which would lead to a defect free product release without jeopardizing the good relationship with your client. Make use of ethical frameworks and principles in your answer.

Problem Statement – 2:

In line with the four pillars of DevOps – Collaboration, Tools, Scaling and Affinity, your team has to come up with innovative solutions to tackle social issues such as child safety for example (each team is free to choose their own topic based on social issues). This will be done using techniques such as Crazy 4s and S.C.A.M.P.E.R. You are then required to provide a list of tools for an end-to-end technical solution for the best idea you generated. You are also required to provide information regarding scaling in terms of teams, Infrastructure, workload, organization and complexity.

Crazy 4s:

- 1) Open a new text editing document.
- 2) Set a timer for four minutes.
- 3) In these four minutes each participant is required to come up with four rough ideas as solutions for the problem. You can note your ideas down as small points instead of entire sentences.
- 4) At the end of four minutes, you are required to discuss your ideas with your teammates to come up with the best possible solution.

NOTE: This can be extended to Crazy 6s or Crazy 8s with six minutes for six ideas or eight minutes for eight ideas depending on team size.

S.C.A.M.P.E.R:

In order to further improve your ideas ideated using Crazy 4s, use this technique. Answer these following questions as a team to improve your idea.

Substitute: What can I substitute to make an improvement?

Combine: What ideas, features, processes, or components can I combine?

Adapt: What processes, features, or components should I adapt?

Modify: What can I make larger or make smaller?

Put to another use: What else can it be used for? Who else could use it?

Eliminate: What would happen if I removed a feature or part of it?

Reverse/rearrange: How can we rearrange the current status for an improved solution? What would happen by reversing the process?

Problem Statement – 3:

For your SE projects, convert your software architecture into a business roadmap and devise a Service strategy by including service value definition, business case development, service assets, market analysis and service provider types.