CASE STUDIES - SOFTWARE PROJECT MANAGEMENT

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Q1. Prototyping

Before building a software product, your organisation wants to demonstrate its capabilities and obtain feedback to provide features required in the product. You are asked to develop prototype for the product. What are the four types of prototyping normally done? What are the purposes of each one of the type? Suppose you are requested to show a demo on the project titled "Student Information System" in an educational institution, which prototype you will select and why?

A1.

Prototype: Prototyping Model is a software development model in which a prototype is built, tested and reiterated until the the prototype satisfies largely it's intended use. It's used as a blueprint to produce the final prototype/design. It works best when the project requirements are not known in detail. Prototyping is an iterative trial and error method which takes place between every major stakeholder.

- Types of Prototypes:
  - Rapid Throwaway prototypes
  - Evolutionary prototype
  - Incremental prototype
  - Extreme prototype
- Rapid Throwaway Prototype: Rapid throwaway is based on the preliminary requirement. It is quickly developed to show how the requirement will look visually. The customer's feedback helps drive changes to the requirement, and the prototype is again created until the requirement is baselined. In this method, a developed prototype will be discarded and will not be a part of the ultimately accepted prototype. This technique is useful for exploring ideas and getting instant feedback for customer requirements.
- Evolutionary Prototyping: Here, the prototype developed is incrementally refined based on customer's feedback until it is finally accepted. It helps you to save time as well as effort. That's because developing a prototype from scratch for every interaction of the process can sometimes be very frustrating. This model is helpful for a project which uses a new technology that is not well understood. It is also used for a complex project where every functionality must be checked once. It is helpful when the requirement is not stable or not understood clearly at the initial stage.
- Incremental Prototyping: In incremental Prototyping, the final product is decimated into different small prototypes and developed individually. Eventually, the different prototypes are merged into a single product. This method is helpful to reduce the feedback time between the user and the application development team.
- Extreme Prototyping: Extreme prototyping method is mostly used for web development. It consists of three sequential phases.
  - Basic prototype with all the existing pages is present in the HTML format.
  - You can simulate a data process using a prototype services layer.
  - The services are implemented and integrated into the final prototype.

Prototype for "Student Information System" For the purposes of a "Student Information System" I would select Evolutionary Prototyping, mainly due to the fact that the customer/case study reveals very less about the requirments of the system. While the customer must have a clear understanding of what they want (as the administration in an educational institute do routine work that they wish to replace with software) `Evolutionary`

`prototyping` could be done to ease the developement process over every iteration. The initial demo can be made with best efforts

`Q2.` Customer Survey Questionnaire

Your organisation produces general purpose software products and sells to various outfits for use. You have been asked by your management to conduct a customer survey on the products sold. In preparing for the survey, you have found that there are 12 software products developed and sold to 150 customers. A help desk is available to assist customers during 9:00 A.M to 6 P.M. on weekdays. The help desk gets on an average 30 calls per day. The help desk informs that most of the calls relates to insufficient documentation and operational problems. Based on the above, prepare a Customer Survey Questionnaire.

`A2.`

- `Q1.` Are you content with our customer support service?
  - Bad
  - Good
  - Great
- `Q2.` Are our products aligned with what we market?
  - Yes
  - No
- `Q3.` How well do our products meet your needs?
  - Bad
  - Good
  - Great
- `Q4.` How would you rate the value for money of our products?
  - Bad
  - Good
  - Great
- `Q5.` How would you rate our documentation?
  - Bad
  - Good
  - Great
- `Q6.` What can we do to improve your experience?
  - _____
- `Q7.` To what extent do our FAQs solved your queried
  - _____ [1-10]
- `Q8.` How easy is to navigate our website?
  - Extremely Easy
  - Easy
  - Somewhat Easy
  - Not So Easy
  - Not Easy at All
- `Q9.` To what extent do you agree with the following statement: The company made it easy for me to handle my issue.
  - Disagree
  - Neutral
  - Agree
- `Q10.` On a scale from 0 to 10, how likely are you to recommend our company to a friend or colleague?
  - _____[1-10]
- `Q11.` How likely are you to buy again from us?
  - Not Likely
  - Likely
  - Very Likely
- `Q12.` What else would you like us to know?
  - _____