## **PGDAC- A**

# **Assignment 1**

1. Discuss the prototyping model. What is the effect of designing a prototype on the overall cost of the project?

#### Ans-

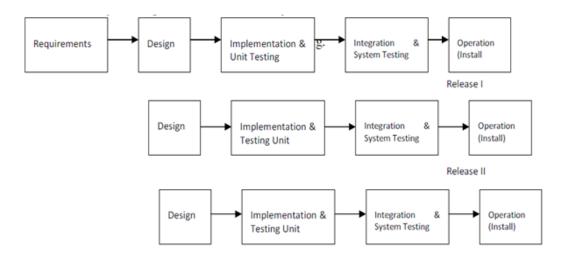
Prototyping basically means to practically implement the findings of a discovery phase in design development. It means to develop a model or a dummy website for a product that is partially functional and gives a great tangible idea of how the product will look and feel after its development.

the effect of designing a prototype on the overall cost of a software project?

Prototyping may have some initial costs of developing, but it reduces the overall budget by helping your product to be free of the errors or glitches that could have occurred if the idea was made from scratch without any prior user testing. Furthermore, prototyping also helps to understand the intrinsic flaws, shortcomings and drawbacks that can be improved during the product development process. If the prototyping process is ignored completely, it might result in the restructuring and redesigning of the entire product after spending all your resources on its development. So, the effect of designing a prototype on the overall cost of a software project is to actually reduce the additional costs of restructuring and reframing it after its full-fledged development- which might cost a fortune.

2. Compare iterative enhancement model and evolutionary process mode.

**Ans.** Iterative Enhancement Model: This model has the similar phases as the waterfall model, but with fewer restrictions. In general the phases occur in the same order as in the waterfall model but these may be conducted in several cycles. A utilizable product is released at the end of the each cycle with each release providing additional functionality.



Evolutionary Development Model: Evolutionary development model bear a resemblance to iterative enhancement model. The similar phases as defined for the waterfall model occur here in a cyclical fashion. This model is different from iterative enhancement model in the sense that this doesn't require a useable product at the end of each cycle. In evolutionary development requirements are implemented by category rather than by priority.

3. As we move outward along with process flow path of the spiral model, what can we say about software that is being developed or maintained.

### **Ans**

As work moves outward on the spiral, the product moves toward a more complete state and the level of abstraction at which work is performed is reduced (i.e., implementation specific work accelerates as we move further from the origin).

4. Explain the Scrum Agile methodology.

## Ans

One of the most popular agile methodologies in use today, Scrum is a lightweight software development methodology that focuses on having small time-boxed sprints of new functionality that are incorporated into an integrated product baseline. Scrum places an emphasis on transparent customer interaction, feedback and adjustments rather than documentation and prediction. Instead of phases, Scrum projects are broken down into releases and sprints. At the end of each sprint you have a fully functioning system that could be released.

With Scrum projects, the requirements for the project do not have to be codified up-front, instead they are prioritized and scheduled for each sprint. The requirements are composed of user stories that can be scheduled into a particular release and sprint.

## 5. Explain the utility of Kanban CFD reports.

Kanban is a popular project management framework that emphasizes visualizing work, limiting work-in-progress, and continuously delivering value to customers. Kanban teams often use Cumulative Flow Diagrams (CFDs) as a way to track their progress and identify areas for improvement.

A CFD is a graph that shows the number of work items in different stages of a process over time. It typically has a horizontal axis that represents time and a vertical axis that represents the number of items. The CFD can provide valuable insights into how work is flowing through the system, where bottlenecks may be occurring, and how long it takes for work to move through the different stages of the process. Here are some ways in which Kanban CFD reports can be useful:

- 1. Visualizing workflow: CFDs provide a visual representation of how work is flowing through the system. This allows the team to quickly identify any bottlenecks, areas of congestion, or other issues that may be hindering productivity.
- 2. Identifying process improvements: By analysing the CFD, the team can identify areas where work is taking longer than expected or where bottlenecks are occurring. This can help the team to make process improvements that can reduce cycle time, improve productivity, and increase throughput.
- 3. Predicting delivery dates: CFDs can help the team to predict when work items will be completed based on historical data. This can help the team to manage expectations and communicate with stakeholders about when work will be delivered.
- 4. Monitoring progress: CFDs provide a way to track progress over time. This can help the team to identify if they are on track to meet their goals or if they need to make adjustments to their process. In summary, Kanban CFD reports are a powerful tool for visualizing workflow,