

CMPE-285 Homework

1. What process adaptations are required if the prototype will evolve into a delivery system or product?

Prototyping process models helps the developers and customers to understand what to build when the requirements are not clear and can keep changing. When the software developed through prototype has been accepted it is necessary to make some adaptations to the process to build a quality and deliverable product. Firstly, the process must apply rigorous design rules from the initial phase and communication with stakeholders to get hold of exact requirements from the prototype. Quality Checks must be enforced in process to make sure product has passed all requirements. It must be built by keeping extensibility in mind as later it becomes the framework for extensions.

2. Is it possible to combine process models? If so, provide an example.

Yes, it is possible to combine multiple process models while developing a product or system.

Spiral model is a combination of waterfall and prototyping model. Where it combines the systematic and controlled aspects of water fall and the iterative nature of prototyping.

3. What is a spike solution in XP?

In XP (Extreme programming) spike solution is a technique or a method to investigate the solution to a difficult design problem. The intent is to lower risk when true implementation starts. Goal of solution is to keep it simple and far from risk factors. Where one tries out different approaches in the code to make required solution.

The intent is to discard the solution as it is implemented as a prototype to evaluate the problem challenges. Used for evaluating and estimating the story. it reduces potential risk which we may face later and prepare for quality solutions.

4. Describe the XP concepts of refactoring and pair programming in your own words.

Refactoring is a process of changing the code of the software or product in a way that it does not change how the system behaves or works but to improve the quality of internal code written. It focuses on minimizing the bugs present and changing or improvising the design which helps in improving the performance or maintainability or extensibility. Refactoring occurs continuously as the product is being developed.

Pair programming is where two or more people work on a single workstation while writing the code for an story or feature. Ideally, one person writes the code and details associated to that and the other ensures that standards are enforced and will fit the requirement. This process takes in turns

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