

Quiz

1. Consider the following software process models we discussed and their constituent technologies
 1. Waterfall
 2. PSP/TSP
 3. UDP/RUP
 4. Cleanroom
 5. Extreme Programming

Consider the following software development activities

1. Requirements gathering and analysis
2. Design
3. Implementation and unit testing
4. Integration, system and acceptance testing
5. Maintenance and evolution

Prepare a table with process models as rows and activities as columns where the content of each table cell is the technology used by that process model on that activity

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2. It is your job to devise the software development process that your group (7-10 developers) will use to develop a series of related systems for controlling consumer electronic devices in the home. That is, the consumer will have one controller in their home that is capable of controlling most of the home's electronic devices and appliances. Think of the process as itself being a program. The inputs to the program are the product requirements, the delivery schedule and the resources available to you. The output is the delivered software
 1. Describe a notation to express processes like the one you devised. What are its statements, values and control structures?
 2. How would you debug such process programs?

Homework

- Consider the five process models we discussed: waterfall, PSP/TSP, UDP/RUP, Cleanroom and Extreme Programming
- Devise five scenarios, one for each process model. Each scenario should describe a situation in which it would be appropriate to use that model
- You should include the following factors in your consideration
 - What is the organizational setting in which the software development will be done: business, subcontract, consulting, etc.
 - What sort of application is being developed?
 - What kinds and amounts of resources are available?
 - What are the productivity/scheduling constraints?
 - What are the quality constraints?
 - What non-functional requirements obtain?
- Each scenario should be one page in length, describing the hypothetical circumstances in which the relevant process model is appropriate
- You may do this exercise alone or in groups of two or three