Review Process Models

1. What are the fundamental activities that are common to all software processes?

2. Explain why the waterfall model of the software process is not an accurate reflection of software development activities.

3. Why are iterations usually limited when the waterfall model is used?

4. Give an example of a software project that would benefit from using the waterfall model. Explain your reasoning.

5. When is it appropriate to use prototyping in the SDLC?

6. For throwaway prototyping:

   Outline the strengths and problems.

   Describe the sort of project that would be an ideal application. Now describe the type of situation where the model may lead to difficulties.

7. Give an example of a software project that would benefit from using the spiral model. Explain your reasoning.

8. Explain the difference between iterative and incremental development.

9. For incremental:

   Outline the advantages and disadvantages.

   Describe the sort of project that would be an ideal application. Now describe the type of situation where the model may lead to difficulties.

10. Giving reasons for your answer based on the type of system being developed, suggest the most appropriate software process model which might be used as a basis for developing the following systems:

    - A virtual reality system to support software maintenance. Requirements will change and there will be an extensive user interface component;

    - A College accounting system that replaces an existing system Requirements are fairly well-known and are stable;

- An interactive system for railway passengers that finds train times from terminals installed in stations complex user interface but which must be stable and reliable.

11. You work in an organisation which develops diverse software applications ranging from traditional well documented business applications, to highly interactive products and other products which the customer wants delivered to the market as soon as possible with additional functionality being delivered in subsequent releases. Your manager has decided to standardise on one process model the waterfall model, how would you respond?