Question 1

Propose the most appropriate generic software process model that might be used as a basis for the development of the following systems. Give reasons for your answer.

a)A complex real-time system whose requirements can be relatively easily identified and are stable.

Answer

A complex real-time is a time bound system which has a well defined,fixed time constraints. A waterfall model will be suitable here it follows linear sequential phases and each phase must be completed before the next phase just like a complex real-time system. The waterfall model can be used here because the requirements are well known,clear and are not suppose to change in future. The complex real-time system follows the same procedure as the waterfall model. So one could say that it is suitable to use this model in this type of system.

b)A web-site for a local library. Requirements are vague and are likely to change in the future.

Answer

To develop a web-site for a local library following the requirements,a spiral model will be the suitable option. This is because the spiral model is used to develop projects that are large,medium to high-risks projects and to develop a web-site for a local library might have these characteristics . We have to take into consideration the risks and costs evaluation and the requirements which are unclear and complex to develop this system. Therefore,one could say that following the characteristics ,the spiral model is the best option.

c)An order processing system with a web-site for a local business. Requirements are vague but stable(that is unlikely to change in near future)

Answer

The agile model will be suitable to use in a web-site for a local business. This is because this type of system needs team work and and demands solutions and customers . That is why the customer's requirement are vague and stable. The customer needs to know or be aware of the progress . This is why the agile model is best in this scenario because it needs team work that will make the project have a higher quality product.

Question 2

Describe the software process model that you have proposed in question 1(a)highlighting its strength and weaknesses.

Answer

The Waterfall Model was the first Process Model to be introduced. It is also referred to as a linear-sequential life cycle model. It is very simple to understand and use. In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases. The Waterfall model is the earliest SDLC approach that was used for software development. Some of its advantage include;

No working software is produced until late during the life cycle.

•This model is simple and easy to understand and use.

•It is easy to manage due to the rigidity of the model – each phase has specific deliverables and a review process.

•In this model phases are processed and completed one at a time. Phases do not overlap.

• Waterfall model works well for smaller projects where requirements are clearly defined and very well understood.

Some disadvantages include;

•No working software is produced until late during the life cycle.

•High amounts of risk and uncertainty.

•Not a good model for complex and object-oriented projects.

•Poor model for long and ongoing projects.

•Not suitable for the projects where requirements are at a moderate to high risk of changing.