Spiral Model

- Combination of waterfall and prototyping models
- 4 main steps repeated
- Good for large scale projects
- Focuses on risk analysis

Waterfall Model

- Simple and classic model
- Linear progression
- A review process after each step
- Not useful for big ongoing projects

Analysis

The Waterfall SDLC model is the simplest of all of the software development lifecycle models. This model follows a linear progression where each step must be fully completed before moving on to the next step. To ensure that the development process is on track, a review process is assessed after each step in the model. This is due to a large emphasis on time scheduling. Since this model is straight to the point it's easy to understand and therefore a model best used for smaller projects since each of the steps is finalized individually. A prototype usually comes into play in the later steps of the lifecycle. Since this model can sometimes bring many risks, it's not suggested for ongoing projects. Since this model follows a strict approach, it's be criticized that there's really no flexibility into going back and fixing something once a step has been finalized and approved.

The Spiral SDLC model is derived from a combination of the Waterfall and Prototyping software development lifecycle models. The reason behind combining both models together is to take advantage of using both the bottom-up and top-down approaches. This model uses four main steps, which are iterated through various times in the progression of the project: Determining objectives, Identifying and resolving risks, Development and testing, and Planning the next iteration. Each step begins with an overall goal in mind and then the progress is reviewed before moving on to the next steps to know what should be improved on the next iteration. The Spiral model places a big emphasis on risk analysis and works very well for large scale and ongoing projects where sequential prototypes are being generated. Most importantly, the overall success of a project using this model depends on assessing vulnerability risks. A bigger budget is also needed when using the Spiral model and is one of the reasons why it's not recommended for smaller projects.