Research and complete the following questions:

1) What is done at each stage of the Waterfall life cycle?

The Waterfall life cycle stages includes:

Requirements Definition

Constraints, demands, necessities, needs, and parameters that must be met and designed during the life cycle. In other words, it's a checklist of things that must be done.

System and Software Design

Creating flowcharts and algorithms that will meet the requirements specified in Requirement Definition. It determines the order.

Implementation and Unit Testing

Development of the software in small units with functional testing. In another words, testing the interface between the modules which are interconnected with each other.

Integration and System Testing

Testing the entire system for any fault

Operation and Maintenance

Fixing issues and release new version with the issue patches as required.

2) Why is it called a cycle?

It is called a cycle because it does not attempt to start with a full specification of requirements. Instead developments begin by specifying and implementing just a part of the software. Which is then reviewed in order to identify further requirements and better the system. The cycle is then repeated producing a new version of the software for each cycle of the model.

3) What are the benefits and the risks of using the Waterfall model?

The benefits of using the Waterfall model is that it is more systematic meaning that more programmers can learn and adapt to this system easily as well as it is more reliable, efficient and accurate to control the high-risk tasks.

The disadvantages of using the Waterfall model is that it is more expensive as it requires special qualified people for each activity as well as the complexity of the software increases it might arise to newer problems.

4) Discuss why the following is true: The further into the lifecycle, the greater the cost of the stage.

The following is true because the further into the lifecycle, the greater the cost of the stages will be as newer complex problems will arise which will require special qualified people which will essentially cost a plenty

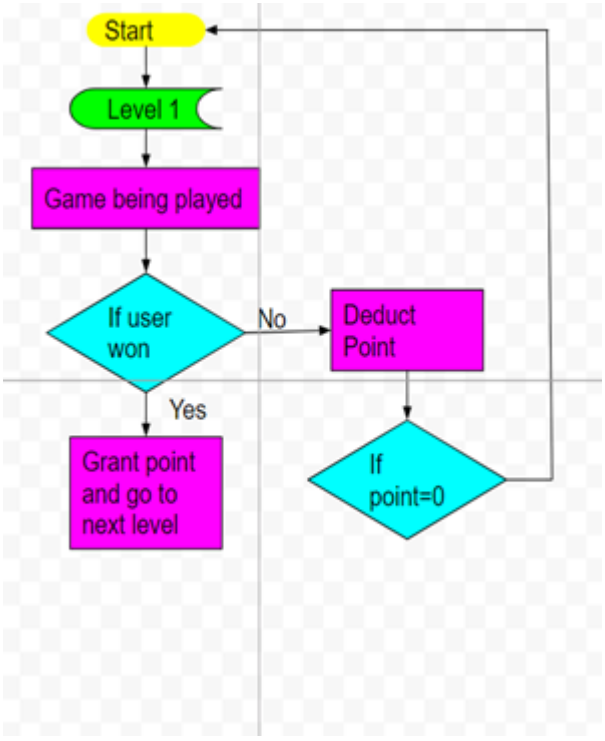
5) You have recently been hired to develop a video game. Trace the process of developing your game through the Waterfall life cycle. Think of scenarios that would return you to the previous stages of the life cycle

Requirements Definition

- Create the characters (user and villain).
- If user kills villain grant user a point and go to next level and if villain kills user deduct user a point
- If user's point are zero restart the game from level 1

System and Software Design

Flowchart of the game



Implementation and Unit Testing

- Test whether certain levels work
- Test whether the villain behaves as it is programmed and intended to behave
- Test whether the game deducts and/or grants points accurately.

Integration and System Testing

When game is complete, play the game and detect any faults.

Operation and Maintenance

Add more features to the game in the future, such as advancing the levels, adding new characters, etc.