

Programming 1781 – RPG Assignment 1

By:

Maximillian Smith (602597)

Freerk Van den Bos (602074)

Ziyanda Ndaba (602784)

Question.1

The Term of Problem Solving:

In order to solve a problem, one must first define it, then determine its cause, place the potential solutions, choose the best ones, and put them into practice. This method seeks to identify solutions quickly and effectively without obstructing the process itself.

1.1 Four Problem Solving Techniques:

1) Process of Elimination

- Why is my calculator not functioning properly? It was working this monday morning but later in the afternoon it stoped functioning. Was the battery dead? I have replaced it with a new battery, but it was still not working. Was the circiut and wires lose? They were lose so I rearranged and put them back together, now it is working properly.

2) Solve-by-Analogy

- My computer has been going in an emergency shutdown frequently. I have seen this before as my friend had experienced an emergency shutdown when he was playing a high graphics game. So those emegency shutdowns could mean that I had previously played a game that was set on high graphics.

3) Divide-and-Conquer

- The cupbaord door has now broken off its hinges due to it being rusted and worn. When the cupbaord door broke, the hinges came off along with little pieces of tinder. The first step is to put on shoes, protective gloves and a mask. Then use a vacuum to collect all the dust and tinder. After all that is done pick up the rusted hingers that just came off, throw it away. Finaly replace them with new hinges onto the cupbaod door that came off and provide epoxy wood filler into the damaged area.

4) The Scientific Method

- A year later of designing a promotional advertising campaign for a restaurant, the manager decides to increase the original price of the campaign. You have researched that this will not succeed as the managers action will not increase their gains but lose a portion of it. Research proves that other restaurants have attempted this course of action yet instead of increasing profits they lost portions of their gains. Not only this but as well as the reputation of the restaurant will decrease because customers put their trust on something special such as campaigns, or promotional events. Thus, increasing the prices of promotional events will lead to a small decline of gains and cutomers trust.

Question.2

(a) Means-end Analysis:

Investigate the goal and figure out the best way to achieve it.

In this case the end goal is to make the WiFi connection faster and more consistent.

(b) 3 Possible reasons why the issue are being experienced:

1. The Wi-Fi hotspot is operating at maximum capacity
2. The area they are in may not have a strong signal. When travelling there are certain areas that will not have a strong connection especially in back roads and outside suburban areas.
3. Streaming. Streaming has a tendency to hog Wi-Fi and it is possible that the people streaming are consuming most of the WIFI's bandwidth leaving everyone else with slow internet.

(c) 3 possible reasons to solve the problems being experienced:

1. Restrict the number of people who can use the WiFi at a time. Set time blocks when a certain group can connect then another group can connect after that way everyone can stream, download, and chat without a lagging connection.
2. To help gain a connection in places where the signal isn't as strong you can optimize the placement of the WiFi device. Placing it on a higher surface or maybe sitting near the device might help you gain a signal.
3. To combat the streaming hog, set rules on when you can stream, how many people can stream at a time and how long you can stream will definitely remove some strain on the WiFi.

Question.3

4 types of casing with an example of each casting:

1. Camel Case: `studentName`
2. Snake Case: `student_name.`
3. Pascal Case: `StudentName`
4. Kebab Case: `student-Name`