**Program Development Cycle**

**Define the Problem**

Create an adventure space game. Required input: Name of the player, Final Answer. Required processing: Total score per quiz, Total Fuel. Required Output: Total Fuel

**Plan the Solution**

|  |  |  |
| --- | --- | --- |
| INPUT | PROCESSING | OUTPUT |
| Assign: Name of the Captain  Players last words.  Input from User: Name  Answer | Calculate: Total score per quiz  Total fuel amount | Display: Fuel Amount  Name |

**Testing and Debugging**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **intScore** | **intScoreQ1** | **intScoreQ2** | **intScoreQ3** | **intScoreQ4** | **intScoreQ5** | **intScoreQ6** | **intFuel** |
| **1** | **1** | **0** | **0** | **0** | **0** | **0** | **100** |
| **5** | **1** | **1** | **1** | **1** | **1** | **1** | **100** |
| **3** | **1** | **-1** | **-1** | **1** | **1** | **1** | **103** |

There were bountiful problems and errors, mainly logical, with the program. First the individual score counter were not getting values even though the answer was correct. That was later solved by using separate IF statements as before I was using one IF statement, now instead of one thing happening all would happen. All the score counters added up and display the proper score. There was another problem however the program would not add the overall score to the players fuel. It would do it the first time though and not again. The problem was that I was hiding the form thus is would never update the new fuel amount. I unloaded the form now and everything worked as it should of.

**Documentation**

The program is called Galactic adventures and is provided on a CD. When run, the program will have an input box after the press if a button for the user to input their name stored in a variable called strPlayerName. After that the user is "distracted" with a mini-introduction. In the background the program is setting up variables. More specifically the player is given 100 gallons of fuel to start with. The fuel is stored in a variable called intFuel.

Now the player is presented with a map, this is the game board / galaxy map. When the player clicks on a spacial object the player loses 7 gallons of fuel. Once the planet is clicked the player is displayed a brief information screen on the planet. The player learns what they can on it then clicks the refuel button where they have the chance to increase their fuel with question based on the information given. For each question right the player receives 1 gallon. For every wrong they lose 1 gallon.

**Calculations are as follows:**

*'Determines the users overall score for the current quiz.*

frmGalaxy3.intScore = frmGalaxy3.intScoreQ1 + frmGalaxy3.intScoreQ2 + frmGalaxy3.intScoreQ3 + frmGalaxy3.intScoreQ4 + frmGalaxy3.intScoreQ5 + frmGalaxy3.intScoreQ6

*'Adds the users score to the fuel.*

frmGalaxy1.intFuel = frmGalaxy1.intFuel + frmGalaxy3.intScore

After the completion of the quiz the player is returned to the galaxy map where the process is repeated in the hope of finding a lost clue in space and learn in the process about the wonders of space and the objects that inhabit it.