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Computer Science 120 e

Lab#5

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Step 1: What is the reason for this code

This code will be giving the user a fortune. This will require them to answer 4 questions being their Name, Age, Favorite Color and Favorite number. Upon this there will be calculations completed to tell the user what their fortune is.

Step 2: The Pseudocode

Variables

userAge = 0

userNumber = 0

userName = ""

userColor = ""

userColorLower = “”

fort1 = "I am sensing... You should go and give your parents a hug!"

fort2 = "I am sensing... You enjoy the cold weather!"

fort3 = "I am sensing... That your left knee is hurting! You should get that checked out."

fort4 = "I am sensing... There is a reason you need a yes or no, the answer is YES!"

fort5 = "I am sensing... You do not know where your jacket is!"

fort6 = "I am sensing... That you should go on a nice walk and relax!"

fort7 = "I am sensing... Your favorite animal is a cat!"

fort8 = "I am sensing... That you need to go and drink a nice glass of water!"

fort9 = "I am sensing... You are very bored and need something fun to-do! Have a party!"

Step 1 Start

Step 2 Display the program purpose.

Step 3 Ask the user for their age and store that into userAge as an int

Step 4 Ask the user for their name and store that into userName

Step 5 Ask the user for their favorite color and store that into userColor

Step 6 Ask the user for their favorite number store that into userNumber as an int

Step 7 assign userColor to userColorLower as all lower case letters to correct any typos

Step 8 See if the user is below 18

Step 9 If not skip to Step 17

Step 10 userColorLower’s first three characters and see if they are equal to red. (The reason for checking the first 3 chars is that is the lowest amount of characters one of the colors has, and this will prevent any memory leaks. As well as if helping if the user typed a space after)  
Step 11 if so return fort 2 and skip to the end.

Step 12 if not equal to red check for blu with the first three characters

Step 13 if so return fort 1 and skip to the end

Step 14 if not check if the userNumber is equal to or greater than 62

Step 15 if so return fort4 and skip to the end

Step 16 if not return fort 5 and skip to the end (if the number is not greater than or equal to 62 we can assume its 61 or lower.)

Step 17 Check to see if the userAge is 18 exactly

Step 18 check if userNumber is exactly 2

Step 19 if so return fort9 and skip to the end

Step 20 return fort8 and skip to the end

Step 21 Check to see if the userAge is greater than 18 (this must be the case at this point)

Step 22 Check to see if the userColorLower’s first 3 characters are “gre”

Step 23 check if the user number is greater than 8

Step 24 if so return fort 6 and skip to end

Step 25 else return 5 and skip to end

Step 26 return fort 7 and skip to end (favorite color is not green)

Step 27/END

Step 3 Code

<https://onlinegdb.com/dVgU-1ace>

Step 4 Testing

age 20 with the color green and number 5. Should return fort5 working

Age 16 with the color red and number 12. Should return fort2 working

Age 18 with the color purple and the number 2 Should return fort9 working

Step 5 Documentation/User Guide

The first thing this program will do is ask for your Age, followed by your Name, your favorite color from a list, and your favorite number.

Example inputs the user can do

20

Samuel

Green

7

After the user inputs these things a calculation will happen to see what “fortune” you have been given. Depending on the different factors you will be given one of nine factors.

The order of the code goes

-Showing the user what the program is going to do

-Asking the user for their age

-Asking the user for their name

-Asking to pick a color from a list of colors

-Asking the users favorite number

-Doing a handful of if else statements to figure out which fortune the user should be given.

-Being told their fortune that was selected for them.

What I learned from this coding experience is how to take user inputs, convert strings into lowercase in order to help make inputs more consistent depending on the user. How to handle if and else statements to make them all resolve into different ending that will then told to the user. I am happy with not having to do a flow chart as that is the most tedious part for me personally. I had a lot of fun writing this code, I wish this was able to be done in an IDE so I could add a GUI and do art for it to customize it.