Practice Questions

Write Pseudo Code for below requirements

1) Write logic in english format, to swap two variables
2) Convert FAHRENHEIT to CENTIGRADE. Get the Fahrenheit value from User
   a) C = (F-32) * (5/9)
3) Get an input from the keyboard , and based on that use keywords like if and else to determine if the given input is equal to "DataScience" and print appropriate messages.
4) Determine if the person is eligible to vote. Print appropriate messages.
5) Check if a given input number is EVEN or not, and print appropriate messages.
6) Assume a container of numbers, write pseudo code to get each number from the container and print its square.
7) Get a series of 10 numbers from the user and print each of them as soon as you receive it.
8) Print multiplication tables of any user input number from 1 to 10
   a) Write a reusable procedure, and reuse it for different numbers.

2

Q

1) Consider the block of code below, where variables Athlete , beautician and carpenter each have integer values.
   a) Under which condition will the value in variable Athlete be printed?

```
If athlete < beautician:
    if beautician < carpenter:
            print (carpenter)
    else :
            print (beautician)
elif athlete < carpenter:
    print (carpenter)
else :
    print (athlete)
```

1) Athlete is 1, beautician is 2 and carpenter is 3
2) Athlete is 1, beautician is 3 and carpenter is 2
3) Athlete is 3, beautician is 2 and carpenter is 1
4) Athlete is 2, beautician is 1 and carpenter is 3
5) Under no circumstances, because variable Athlete's value can never be printed by this code

3

Q

1) Write Program to evaluate below situation:

- We have a loud talking parrot.
- The "hour" parameter is the current hour time in the range 0..23.
- The 'talking' parameter indicates if Parrot is talking or not.

- We are in trouble if the parrot is talking and the hour is before 7 or after 20.

- If we are in Trouble then Return True else return False
- Write the required function.

2) Test the function for all possible conditions.

4

Q

1) Outline a program that will prompt a user to enter a temperature as an integer. Your program will print:
   a) "it is hot" is the temperature is over 100,
   b) "it is cold" if the temperature is under 60, and
   c) "it is just right" if the temperature is between 61 and 99 inclusive.

2) Create a program which will ask for your recent exam score out of 100.
   a) The program should print what grade you got and how many more marks you would have needed to get the next possible higher grade.
   b) Grade Boundaries:
      - >=70 "Distinction"
      - >=60 <70 "First Class"
      - >=50 < 60 "Second Class"
      - >=35 <50 "Pass Class"
      - <35 "Fail".
   c) Test the program for all possible conditions at least once.

5

Q

1) Accept date in DD/MM/YYYY format, as a string.
   a) Write two functions to convert it to:
      - MM/DD/YYYY string format
      - YYYY/MM/DD string format.
      - And print the new date

2) Create a program that will allow the user to enter a line/quote.
   a) Output this quote in uppercase, lowercase, capitalize and title formats.

3) Write a function called countUp that accepts two integer parameters.
   a) The function will print out all integers between the two parameters (excluding both parameters!), from lower parameter to higher parameter in ascending order.

6

Q

1) Which of the following loops prints "Welcome to Python" 10 times?

```
for count in range(1, 10):
    print("Welcome to Python")

for count in range(0, 10):
    print("Welcome to Python")

for count in range(1, 11):
    print("Welcome to Python")

for count in range(1, 12):
    print("Welcome to Python")
```

7

Q

1) What will be displayed by the following program?

```
values = [[3, 4, 5, 1], [33, 6, 1, 2]]

v = values[0][0]
for row in range(0, len(values)):
    for column in range(0, len(values[row])):
                if v < values[row][column]:
                        v = values[row][column]
print(v)
```

2) Translate the following while loop into a for loop

```
i = 20
while (i > 0):
        print ("i = ", i)
        i =- 1
```

8

Q

1. Write a program to Accept a String from the User using relevant keyboard input method, and count the number of lower case letters in that string, and print the count.
   a) Test the program for three different input strings.

2. Write a function to Print Multiplication Tables of 1 to 10.
   a) 1x1 to 10x10 using relevant loop keywords.
   b) Test the function

3. Write a Function char_count which counts the number of times a specified character appears in a given string.
   a) Test the function

4. Given a String as parameter, write a function to reverse the string and return the reversed string. Print the return value
   a) Test the function

9

Q

1. Write a function to print the first 50 Odd numbers.
2. Write a function to print the first 100 even numbers
3. Write a function to print odd numbers from num1 to num2
4. Write a function to print Even numbers from num1 to num2
5. Write a function to check if a given number is a prime number or not.
6. Write a function to print first Prime numbers from 2 to 100.
7. You are given with a list of integer elements. Make a new list which will store square of elements of previous list.
8. From a list containing ints, strings and floats, make three lists to store them separately
9. Write a Python program that prints all the numbers from 0 to 100 except multiple of 3 and 5.
10. Write a Python program to get the Fibonacci series between 0 to 50.
11. Write a python program to count the number of vowels in a user input string.

10

Q

1) Create a program that will keep track of items for a shopping list.
   a) The program should keep asking for new items until "endshopping" is entered.
   b) The program should then display the full shopping list.
   c) Test the above program for 5,8 and 10 items.

2) Create a function that will ask the user for a number and then print out a list of numbers from 1 to the number entered and the square of the number.
   a) For example, if the user entered '3' then the program would output:
   b) 1 squared is 1.
   c) 2 squared is 4.
   d) 3 squared is 9

3) How many elements are in:
   a) m = [[x, y] for x in range(0, 4, 1) for y in range(0, 5, 2)]

11

Q

1. Define a function called fnString:
   a) This function will read a string from the user, into a variable named varstr.
   b) Print the string variable as per the format given below.
      - For e.g, if the user input in varstr is "helloworld"
      - Then the print output should be: **the user input is helloworld**

1) Define a function called fnNumber:
   a) This function will read a integer from the user, into a variable named varint.
   b) Print the integer variable as per the format given below.
      - For e.g, if the user input in varint is 22
      - Then the print output should be: **the user input is 22**

2) Define a function called fnStringMirror:
   a) This function will get an input string as a parameter and returns its mirror image.
   b) For e.g if input string is "blue", the mirror image is "blueeulb"

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1) Write a program that accepts a sentence and calculate the number of letters and digits.
2) Write a program to compute the frequency of the words from the input sentence. Display the frequency of each word from the sentence.
3) Write a function which will:
   a) Create a list of 10 random integers.
   b) Then find the largest of the list of numbers, using a loop.

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1) Write a program that accepts a sequence of whitespace separated words as input and prints the words after removing all duplicate words and sorting them alphanumerically.

   Suppose the following input is supplied to the program:

   hello world and practice makes perfect and hello world again

   Then, the output should be:
   again and hello makes perfect practice world

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1) Write a function to print n random numbers.

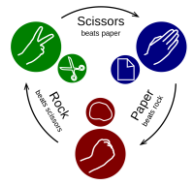
2) A **palindrome** is a word, phrase, number, or other sequence of characters which reads the same backward or forward. E.g "MALAYALAM".
   a) Write a program to accept a string as input.
   b) Check if the String is a Palindrome and print relevant messages.
   c) The Program is in loop, and will end if user input string is "end"

3) Write a function to:
   a) Accept Two strings from the user into two variables.
   b) Concatenate both the above strings into a third string.
   c) Print all the three strings.
   d) Print the third string from 3rd character onwards.
   e) Print the third string from beginning till penultimate character
   f) Print the third string from second to penultimate character.

15

Q

1) Game Rock, Paper Scissors is as described in the diagram.
2) 2 players play the game.
   a) Accept their names as input.
3) The game is in a loop for Num1 number of times.
   a) Num1 is accepted by the user
4) The Player's choice is within below range.
   a) 0 for Rock
   b) 1 for Paper
   c) 2 for Scissor
5) The Results are:
   a) Tie or one player would win.
   b) Display the player's name and choice
   c) Display winners name.
6) Write Truth Table and Program for the game.



16

Banking

1) acnum = Create_account(acname, idnum)
2) balance=doCredit(acnum,amount)
3) balance=doDebit(acnum,amount)
4) balance=getBalance(acnum)
5) details=getDetails(acnum)

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