15 Python Conditional Statement Tasks with Explanations(13 Done)

1. Check if a number is positive, negative, or zero

Task: Write a program to check whether a number is positive, negative, or zero.

ANS:

```
num = int(input("Enter a number: "))
if num > 0:
    print("The number is positive")
elif num < 0:
    print("The number is negative")
else:
    print("The number is zero")
```

Output:

Enter a number: -12

The number is negative

2. Find the largest among three numbers

Task: Write a program to find the largest of three given numbers.

Code:

```
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
c = int(input("Enter third number: "))
if a >= b and a >= c:
    print("The largest number is:", a)
elif b >= a and b >= c:
    print("The largest number is:", b)
else:
    print("The largest number is:", c)
```

Output:

Enter first number: 34

Enter second number: 23

Enter third number: 87

The largest number is: 87

3. Check if a character is a vowel

Task: Check if the entered character is a vowel: (a, e, i, o, u).

Code:

```
char = input("Enter a character:").lower()
if char in ['a','e','i','o','u']:
   print(char,"is a vowel")
else:
   print("not a vowel")
```

Output:

Enter a character:b

not a vowel

4. Check whether a number is even and divisible by 5

Task: Write a program to check if a number is both even and divisible by 5.

Code:

```
num = int(input("Enter a number: "))
if num % 2 == 0 and num % 5 == 0:
   print (num," is even and divisible by 5")
else:
   print (num," is not even and divisible by 5")
```

Output:

Enter a number: 20

20 is even and divisible by 5

5. Electricity Bill Calculator

Task: Calculate the total bill based on units consumed: - 0–100 → ₹5/unit

- 101–200 → ₹7/unit

- Above 200 → ₹10/unit

6. Student Grade Calculation

Task: Input percentage and print:

- 90+ → A

- 75–89 → B

- 50–74 → C

- Below 50 → Fail

Code:

```
percentage = float(input("Enter your percentage: "))
if percentage >= 90:
   print("Grade: A")
elif percentage >= 75:
   print("Grade: B")
elif percentage >= 50:
   print("Grade: C")
else:
   print("Grade: Fail")
```

Output:

```
Enter your percentage: 90
Grade: A
```

7. Check Login Credentials

Task: Take a username and password and validate them with predefined values.

Code:

```
username=input("Enter the username:")
```

```
print("The name entered:",username)
password=int(input("Enter the password:"))
print("The password entered:",password)
if(username=="admin" and password==1234):
   print("Login Successful")
else:
   print("Login Failed")
```

Output:

```
Enter the username:aamin
The name entered: aamin
Enter the password:1234
The password entered: 1234
Login Failed
Enter the username:admin
The name entered: admin
Enter the password:1234
The password entered: 1234
Login Successful
```

8. Simple Calculator

Task: Take two numbers and an operator (+, -, *, /) and print the result.

Code:

```
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))
operator = input("Enter operator (+, -, *, /): ")

if operator == '+':
   print("Result:", num1 + num2)
elif operator == '-':
```

```
    print("Result:", num1 - num2)
elif operator == '*':
    print("Result:", num1 * num2)
elif operator == '/':
    if num2 != 0:
        print("Result:", num1 / num2)
    else:
        print("Error: Cannot divide by zero")
else:
    print("Invalid operator")
```

Output:

```
Enter first number: 5
Enter second number: 6
Enter operator (+, -, *, /): *
Result: 30.0
```

9. Check if number is in a list

Task: Check if a number exists in a predefined list.

Code:

```
list = [42, 23, 31, 52, 71]
num = int(input("Enter a number: "))
if num in list:
    print("number in list")
else:
    print("not in list")
```

output:

```
Enter a number: 23
number in list
Enter a number: 34
```

not in list

10. Check if a string is a palindrome

Task: Check if the given string reads the same backward.

11. Check if a number is within a range

Task: Check if a number lies between 10 and 50 (inclusive).

Code:

```
num=int(input("enter a number:"))
if (10 <= num <= 50):
   print("This number lies between 10 to 50")
else:
   print("This number not in between 10 to 50")
```

Output:

```
 enter a number:43
This number lies between 10 to 50

enter a number:52
This number not in between 10 to 50
```

12. Determine age group Task: Categorize age into: -

<13 → child
13-19 --> Teen
20-59 → Adult
60+ → Senior

Code:

```
age = int(input("Enter your age: "))
if age < 13:
   print("Category: Child")
elif age >= 13 and age <= 19:
```

```
    print("Category: Teen")
elif age >= 20 and age <= 59:
    print("Category: Adult")
else:
    print("Category: Senior")
```

Output:

Enter your age: 50

Category: Adult

13. Compare two strings ignoring case

Task: Check if two strings are equal (case-insensitive)

Code:

```
string1=input("enter first string:")
string2=input("enter second string:")
if string1.lower() == string2.lower():
    print("both strings are equal")
else:
    print("both strings are not equal")
```

output:

enter first string:hello

enter second string:HELLO

both strings are equal

14. Traffic Light Simulator

Task: Given a signal color (red , yellow , or green), print appropriate action

Code[]:

```
color = input("Enter traffic light color: ").lower()
if color == "red":
    print("Stop")
```

```
elif color == "yellow":
    print ("Get Ready")
elif color == "green":
     print("Go")
else:
    print("Invalid color")
```

Output: Enter traffic light color: yellow

Get Ready

15. ATM Withdrawal Simulation

Task: Check if the entered withdrawal amount is a multiple of 100 and within the available balance

Code:

```
balance = float(input("Enter your account balance: "))
withdraw = float(input("Enter amount to withdraw: "))

if withdraw % 100 != 0:
   print("Withdrawal amount must be a multiple of 100")
elif withdraw > balance:
   print("Insufficient balance")
else:
   balance -= withdraw
   print("Withdrawal successful. Remaining balance:", balance)
```

Output:

Enter your account balance: 2000

Enter amount to withdraw: 500

Withdrawal successful. Remaining balance: 1500.0