Exp 2 - Conditional Statements

Github Repo Link https://github.com/krishika0503/PythonExperiment

Q) Check whether the given number is divisible by 3 and 5 both

```
num = int(input("Enter a number: "))

if num % 3 == 0 and num % 5 == 0:
    print("Number is divisible by both 3 and 5")
else:
    print("Number is NOT divisible by both 3 and 5")

Enter a number: 15
Number is divisible by both 3 and 5
```

Q) Check whether a given number is multiple of five or not

```
num = int(input("Enter a number: "))

if num % 5 == 0:
    print("Number is a multiple of 5")
else:
    print("Number is NOT a multiple of 5")

Enter a number: 24
Number is NOT a multiple of 5
```

Q) Find the greatest among the two numbers. If numbers are equal than print "numbers are equal"

```
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))

if a > b:
    print("Greatest is:", a)
elif b > a:
    print("Greatest is:", b)
else:
    print("Numbers are equal")
```

```
Enter first number: 10
Enter second number: 100
Greatest is: 100
```

Q) Find the greatest among three numbers assuming no two values are same

```
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("Greatest is:", a)
elif b > c:
    print("Greatest is:", b)
else:
    print("Greatest is:", c)
```

```
Enter first number: 1
Enter second number: 2
Enter third number: 5
Greatest is: 5
```

Q) Check whether the quadratic equation has real roots or imaginary roots. Display the roots

```python
import math

a = float(input("Enter value of a: "))
b = float(input("Enter value of b: "))
c = float(input("Enter value of c: "))

D = b*b - 4*a*c

if D > 0:
    print("Real and distinct roots")
    r1 = (-b + math.sqrt(D)) / (2*a)
    r2 = (-b - math.sqrt(D)) / (2*a)
    print("Roots are:", r1, r2)

elif D == 0:
    print("Real and equal roots")
    r = -b / (2*a)
    print("Root is:", r)

else:
    print("Imaginary roots")
```

```
Enter value of a: 13
Enter value of b: 2
Enter value of c: 5
Imaginary roots
```

Q) Find whether a given year is a leap year or not

```python
year = int(input("Enter year: "))

if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
    print("Leap year")
else:
    print("Not a leap year")
```

```
Enter year: 2007
Not a leap year
```

Q) Write a program which takes any date as input and display next date of the calendar

```
day = int(input("Enter day: "))
month = int(input("Enter month: "))
year = int(input("Enter year: "))

# Days in months
days = [31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31]


if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
    days[1] = 29

day += 1

if day > days[month-1]:
    day = 1
    month += 1

if month > 12:
    month = 1
    year += 1

print("Next Date:")
print("Day =", day)
print("Month =", month)
print("Year =", year)
```

```
Enter day: 09
Enter month: 08
Enter year: 07
Next Date:
Day = 10
Month = 8
Year = 7
```

Q)Print the grade sheet of a student for the given range of cgpa. Scan marks of five subjects and calculate the percentage

```python
m1 = float(input("Enter marks of subject 1: "))
m2 = float(input("Enter marks of subject 2: "))
m3 = float(input("Enter marks of subject 3: "))
m4 = float(input("Enter marks of subject 4: "))
m5 = float(input("Enter marks of subject 5: "))

total = m1 + m2 + m3 + m4 + m5
percentage = total / 5
cgpa = percentage / 10

print("Percentage:", percentage)
print("CGPA:", cgpa)

if 0 <= cgpa <= 3.4:
    grade = "F"
elif 3.5 <= cgpa <= 5.0:
    grade = "C+"
elif 5.1 <= cgpa <= 6:
    grade = "B"
elif 6.1 <= cgpa <= 7:
    grade = "B+"
elif 7.1 <= cgpa <= 8:
    grade = "A"
elif 8.1 <= cgpa <= 9:
    grade = "A+"
else:
    grade = "Invalid"

print("Grade:", grade)
```

```
Enter marks of subject 1: 100
Enter marks of subject 2: 90
Enter marks of subject 3: 80
Enter marks of subject 4: 70
Enter marks of subject 5: 60
Percentage: 80.0
CGPA: 8.0
Grade: A
```