**Conditional Statements and Loops:**

1. Leap Year Checker:

1. a = int(input("Enter an year:"))
2. if a%4==0:
3. print("It is a leap year")
4. else:
5. print("It is not a leap year")

2. Grade Calculator

marks = int(input("Enter your marks between 0-100 rounded to integer value to calculate grade:"))

if marks==100:

    print("You have O")

elif 100>marks>=90:

    print("You have A")

elif 90>marks>=80:

    print("You have B")

elif 80>marks>=70:

    print("You have C")

elif 70>marks>=60:

    print("You have D")

elif 60>marks>=50:

    print("You have E")

elif 50>marks>=40:

    print("You have P")

elif 40>marks>=0:

    print("You have Failed")

else:

    print("Please input an integer between 0-100")

3. Temperature Conversion

check1=input("Enter \'C\' to convert from Celsius to Farenheit or \'F\' to convert from Farenheit to Celsius")

if check1.upper() == "C":

    temp1=int(input("Enter temperature in Celsius"))

    temp2=temp1\*(9/5) + 32

    print("Ferenheit:",temp2)

elif check1.upper() == "F":

    temp1=int(input("Enter temperature in Farenheit"))

    temp2=(temp1 - 32)\*(5/9)

    print("Celsius:",temp2)

else:

    print("You entered a wrong character")

4. Triangle Type Checker

a=int(input("Enter the length of side a"))

b=int(input("Enter the length of side b"))

c=int(input("Enter the length of side c"))

if a==b==c:

    print("It's an Equilateral Triangle")

elif a==b!=c or a!=b==c or a==c!=b:

    print("It's an Isosceles Triangle")

else:

    print("It's an Scalene Triangle")

5. Password Strength Checker

pw1=input("Enter your password to check it's strength:")

print("Password length is:",len(pw1))

if len(pw1)>=12 and pw1.isalnum() and not (pw1.isalpha() or pw1.isdigit()):

    print("Password Strength: Strong")

elif (len(pw1)>=12 and (pw1.isalpha() or pw1.isdigit())) or (8<=len(pw1)<12 and pw1.isalnum() and not (pw1.isalpha() or pw1.isdigit())):

    print("Password Strength: Moderate")

elif 8<=len(pw1)<12 and (pw1.isalpha() or pw1.isdigit()):

    print("Password Strength: Weak")

elif len(pw1)<8:

    print("Enter a password of 8 or more characters")

else:

    print("Unknown Error")

6. Factorial Calculation

f=int(input("Enter a number to find factoral:"))

fact=1

for i in range(1,f+1):

    fact=fact\*i

print(fact)

7. Multiplication Table

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

for i in range(1,11):

    p=a\*i

    print(a,"x",i,"=",p)

8. Reverse a String

char=input("Enter your string:")

rev=""

for i in char:

    rev=i+rev

print("Reverse is",rev)

9. Count Vowels in a String

s=input("Enter you string:")

l1=["a","e","i","o","u"]

count=0

for i in s:

    if i.lower() in l1:

        count+=1

print("There are",count,"number of vowels in the string")

10. Pattern Printing

n=int(input("Enter the number of stars you need:"))

for i in range(1,n+1):

    print("\*"\*i)

11. Considering the following dictionary, write a program to find total marks:

marks\_dict = {

    "Mathematics": 95,

    "English": 88,

    "Science": 92,

    "History": 85,

    "Geography": 90}

marks\_dict = {

    "Mathematics": 95,

    "English": 88,

    "Science": 92,

    "History": 85,

    "Geography": 90}

total = 0

for i in marks\_dict.values():

    total=total+i

print(total)