#Q1 Write a program that takes an integer input from the user and checks whether the number is odd or even..

```
num = int(input("Enter the value of num:"))
print(num)
if(num%2==0):
   print("Even")
else:
print ("odd")
```

#Q2 Write a program that takes three numbers as input and prints the largest of the three.

```
a=int(input("enter value of a:"))
b=int(input("enter value of b:"))
c=int(input("enter value of c:"))
if(a>b and a>c):
    print("a is greatest")
elif(b>c and b>a):
    print("b is greatest")
else:
    print("c is greatest")
```

#Q3 Write a program to check if a given year is a leap year. A leap year is divisible by 4 but not by 100

#unless it is also divisible by 400.

```
year=int(input("enter value of year:"))
print(year)
if(year%4==0 and (year%100!=0 or year%400==0)):
   print("leap year")
else:
```

```
    print("Not leap year")'''
```

Q4 Write a program that takes a percentage (integer) as input and prints the corresponding grade based

on the following criteria:

>= 90: Grade A

>= 80: Grade B

>= 70: Grade C

>= 60: Grade D

< 60: Grade F

'''

```
marks=int(input("Enter the value of marks:"))
if(marks>=90):
        print("A")
elif(marks>=80):
        print("B")
elif(marks>=70):
        print("C")
elif(marks>=60):
        print("D")
else:
    print("Fail")
```

#Q5 Write a program that checks if a given letter is a vowel (a, e, i, o, u) or a consonant.

```
ch=str(input("Enter the value of character:"))
if(ch=='a' or ch=='e' or ch=='i' or ch=='o' or ch=='u'):
      print("Vowel")
else:
```

```
    print("Consonant")


'''
Q6 Write a basic calculator program that takes two numbers and an operator (+, -, *, /) as input and
performs the specified operation. Print the result based on the operation.
'''
a=int(input("enter value of a:"))
b=int(input("enter value of b:"))
c=a+b
d=a-b
e=a/b
f=a*b
g=a%b
print("additon:",c)
print("subtraction:",d)
print("division:",e)
print("multiplication:",f)
print("remainder:",g)


#Q7 Write a program that takes a number as input and checks whether it is positive, negative, or zero.
a=int(input("enter value of a:"))
if(a<0):
   print("Negative")
elif(a==0):
   print("Zero")
else:
   print("Positive")
```

'''

Q8 Write a program that checks if a username and password entered by the user match the pre-set values

username = "admin" and password = "1234". If both match, print "Login Successful", otherwise print

"Login Failed".

'''

```
username=str(input("Enter the username:"))
password=int(input("Enter the password"))
if(username=='admin' and password==1234):
    print("Login successful")
else:
    print("Login failed")
```

'''

Q9 Write a program that takes three sides of a triangle as input and checks if those sides form a valid

triangle. A triangle is valid if the sum of any two sides is greater than the third side.

Check conditions like a + b > c, b + c > a, and a + c > b

'''

```
a=int(input("enter value of a:"))
b=int(input("enter value of b:"))
c=int(input("enter value of c:"))
if(a + b > c or b + c > a or a + c > b):
    print("Valid Triangle")
else:
    print("Not Valid Triangle")
```

'''

Q10 Write a program that calculates the Body Mass Index (BMI) based on user input for weight (in

kilograms) and height (in meters). Then categorize the BMI into:

Underweight (BMI < 18.5)

Normal weight (18.5 <= BMI < 24.9)

Overweight (25 <= BMI < 29.9)

Obesity (BMI >= 30)

Use the formula: BMI = weight / (height ** 2)

'''

```
weight=int(input("Enter the value of weight:"))
height=float(input("Enter the value of height:"))
bmi=weight/(height**2)
if(bmi<18.5):
    print("Underweight")
elif(bmi>=18.5 and bmi<24.9):
    print("Normal weight")
elif(bmi>=25 and bmi<29.9):
    print("Overweight")
else:
   print("Obesity")
```