```
vol = "aeiouAEIOU"
user = input(" Enter you charecter: ")
if user in vol:
    print("Vowel")
else:
    print("Consonant")
```

```
 Enter you charecter: A
Vowel
```

```
num = ['1', '2', '4', '8', '16', '32', '64', '128']
user = input(" Enter your num: ")
if user in num:
    print(" YES ")
else:
  print(" NO")
```

```
 Enter your num: 33
 NO
```

1. Write a programme to find the largest of three nubers entered by the user.

```
user_num1 = input(" Enter your number ")
user_num2 = input(" Enter your number ")
user_num3 = input(" Enter your number ")
if user_num1 > user_num2 and user_num1 > user_num3:
    print(user_num1)
elif user_num2 > user_num1 and user_num2 > user_num3:
    print(user_num2)
elif user_num3 > user_num1 and user_num3 > user_num2:
    print(user_num3)
else:
  print(" Equal ")
```

```
 Enter your number 45
 Enter your number 56
 Enter your number 89
89
```

1. Write a programme to check if a number is divisible by both 5 and 11

```
user_num = input(" Enter your number ")
if int(user_num) % 5 == 0 and int(user_num) % 11 == 0:
 print(" yes it is divisible by 5 and 11 ")
else:
  print(" no it is not divisible by 5 and 11 ")
user_num1 = input(" Enter your number ")
if int(user_num1) % 5 == 0 and int(user_num1) % 11 == 0:
 print(" yes it is divisible by 5 and 11 ")
else:
  print(" no it is not divisible by 5 and 11 ")
```

```
 Enter your number 55
 yes it is divisible by 5 and 11
 Enter your number 89
 no it is not divisible by 5 and 11
```

1. Write a Python program to check whether the input character is an alphabet, digit, or special character.

```
user_char1 = input(" Enter your character ")
if user_char1.isalpha():
  print("ALPHABET")
elif user_char1.isdigit():
  print("DIGIT")
else:
  print("SPECIAL CHARACTER")
user_char2 = input(" Enter your character ")
if user_char2.isalpha():
  print(" ALPHABET ")
elif user_char2.isdigit():
  print(" DIGIT ")
else:
  print(" SPECIAL CHARACTER ")
```

```
 Enter your character faheem
ALPHABET
 Enter your character ,
 SPECIAL CHARACTER
```

1. Write a Python program to check if three sides can form a valid triangle.

```
a = input(" Enter your value ")
b = input(" Enter your value ")
c = input(" Enter your value ")
if (a + b > c):
  print(" IT FORMS A TRIANGLE ")
elif (a + c > b):
   print(" IT FORMS A TRIANGLE ")
elif (b + c > a):
   print(" IT FORMS A TRIANGLE ")
else:
  print(" NO IT DOES NOT FORM A TRIANGLE ")
```

```
 Enter your value 10
 Enter your value 20
 Enter your value 15
 IT FORMS A TRIANGLE
```

1. Write a Python program to find the absolute value of a number.

```
a = input(" Enter your value ")
b = input(" Enter your value ")
c = input(" Enter your value ")
print(abs(int(a))) #Here first we are converting a to int and then
call abs()
print(abs(int(b)))
print(abs(int(c)))
```

```
 Enter your value -67
 Enter your value -78
 Enter your value -045
67
78
45
```

1. Write a program to determine whether a given year is a century year or not.

```
year = input(" Enter your year ")
if int(year) % 100 == 0:      # A century is an year divided by the
100
  print(" IT IS A CENTURY YEAR ")  # so here we check whether the year
is divisible by 100
else:                                # and print the century year or
not
  print(" IT IS NOT A CENTURY YEAR ")
year = input(" Enter your year ")
if int(year) % 100 == 0:
  print(" IT IS A CENTURY YEAR ")
else:
  print(" IT IS NOT A CENTURY YEAR ")
```

```
 Enter your year 2023
 IT IS NOT A CENTURY YEAR
 Enter your year 2000
 IT IS A CENTURY YEAR
```

1. Write a Python program to determine whether a person's BMI (Body Mass Index) falls under underweight, normal weight, overweight, or obese categories.

```
Person1_weight = int(input(" Enter your weight in kilograms "))
person1_height = float(input(" Enter your height in meters "))
def calculate_bmi(weight, height):
 bmi = weight / (height ** 2)
 return bmi
bmi = calculate_bmi(Person1_weight, person1_height)
#underweight = BMI < 40:
#Normal weight = 40 <= BMI <= 74.9
#Over weight = 75 <= BMI <= 89.9
#Obese = BMI >= 90
if bmi <= 40:
```

```
 print(" Your Body is Underweight ")
elif 40 <= bmi <= 74.9:
 print(" Your Body is Normal Weight ")
elif 75 <= bmi <= 89.9:
 print(" Your Body is Over Weight ")
elif bmi >= 90:
 print(" Your Body is Obese ")
else:
  print(" Enter correct details ")
```

```
 Enter your weight in kilograms 90
 Enter your height in meters 1.88976
 Your Body is Underweight
```

1. Write a Python program to check if a given character is an uppercase or lowercase letter.

```
char = input(" Enter your character ")
def check_case(char):
 if char.isupper():
  print(" Uppercase ")
 elif char.islower():
  print(" Lowercase ")
 else:
  print(" Invalid character ")
  if len(char) > 1:
   print(" Enter only one character ")
check_case(char)
```

```
 Enter your character f
 Lowercase
```

1. Write a program to classify a number as small, medium, or large based on given thresholds.

```
user_num1 = input(" Enter your number ")
small_threshold = 10
medium_threshold = 100
large_threshold = 1000
if int(user_num1) < small_threshold:
  print(" SMALL ")
elif int(user_num1) < medium_threshold:
  print(" MEDIUM ")
elif int(user_num1) < large_threshold:
  print(" LARGE ")
else:
  print(" INVALID ")
```

```
 Enter your number 989
 LARGE
```

1. Write a Python program to determine the type of triangle based on the lengths of its sides (equilateral, isosceles, or scalene).

```
a = float(input(" Enter your value "))
b = float(input(" Enter your value "))
c = float(input(" Enter your value "))
if a == b == c:
  print(" IT IS AN EQUILATERAL TRIANGLE ")
elif a == b or b == c or c == a:
  print(" IT IS AN ISOSCELES TRIANGLE ")
else:
  print(" IT IS A SCALENE TRIANGLE ")
```

```
 Enter your value 6
 Enter your value 6
 Enter your value 4
 IT IS AN ISOSCELES TRIANGLE
```

1. Write a Python program to check if a number is a palindrome.

```
user_num1 = input(" Enter your number ")
user_num2 = input(" Enter your number ")
if user_num1 == user_num1[::-1]:
  print(" IT IS A PALINDROME ")
if user_num2 == user_num2[::-1]:
  print(" IT IS A PALINDROME ")
else:
  print(" IT IS NOT A PALINDROME ")
```

```
 Enter your number 98789
 Enter your number 345
 IT IS A PALINDROME
 IT IS NOT A PALINDROME
```

1. Write a program to determine if a given angle is acute, right, or obtuse.

```
user_angle1 = float(input(" Enter your input "))
#If the angle is between 0 and 90 degrees (exclusive), it's classified
as Acute.
#If the angle is equal to 90 degrees, it's classified as Right.
#If the angle is between 90 and 180 degrees (exclusive), it's
classified as Obtuse.
#If the input angle doesn't fall within these ranges, the program
returns "Invalid angle."
if user_angle1 > 0 and user_angle1 < 90:
  print(" IT IS AN ACUTE ANGLE ")
elif user_angle1 == 90:
  print(" IT IS A RIGHT ANGLE ")
elif user_angle1 > 90 and user_angle1 < 180:
  print(" IT IS AN OBTUSE ANGLE ")
```

```
else:
  print(" INVALID ANGLE ")
```

```
 Enter your input 145
 IT IS AN OBTUSE ANGLE
```