(https://www.darshan.ac.in/)

Python Programming - 2101CS405

Lab - 1

01) WAP to print “Hello World”

In [1]:
```
print("Hello World")
```

```
Hello World
```

02) WAP to print your address i) using single print ii) using multiple print

In [15]:
```
print("Mahika Gam, \nnear Aajidem Chokdi, \nPincode: 360003")

print("==============")

print("Mahika Gam,")
print("near Aajidem Chokdi,")
print("Pincode: 360003")
```

```
Mahika Gam,
near Aajidem Chokdi,
Pincode: 360003
==============
Mahika Gam,
near Aajidem Chokdi,
Pincode: 360003
```

03) WAP to print addition of 2 numbers (without input function)

In [13]:
```
print("The sum of two number = ",5+5)
```

```
The sum of two number =  10
```

04) WAP to calculate and print average of 2 numbers (without input function)

In [12]:
```
print("The average of two number = ",(5+5)/2)
```

```
The average of two number =  5.0
```

05) WAP to add two number entered by user.

In [11]:
```
a = int(input("Enter The Nimber 1 = "))
b = int(input("Enter The Nimber 2 = "))

print("The sum of two Numbers = ",a+b)
```

```
Enter The Nimber 1 = 5
Enter The Nimber 1 = 5
The sum of two Numbers =  10
```

06) WAP to calculate simple interest.

In [14]:
```
p = int(input("Enter p = "))
n = int(input("Enter n = "))
r = int(input("Enter r = "))

print("The simple interest = ",p*n*r/100)
```

```
Enter p = 5
Enter n = 5
Enter r = 5
The simple interest =  1.25
```

07) WAP Calculate Area and Circumfrence of Circle

In [17]:
```
radis = int(input("Enetr the redis = "))

print("The Area and Circumfrence of Circle = ", 2*3.14*radis)
```

```
Enetr the redis = 5
The Area and Circumfrence of Circle 78.5
```

08) WAP to print Multiplication table of given number without using loops.

In [21]:
```
n = int(input("Enter The Number = "))

print(n, "* 1 =", n)
print(n, "* 2 =", n*2)
print(n, "* 3 =", n*3)
print(n, "* 4 =", n*4)
print(n, "* 5 =", n*5)
print(n, "* 6 =", n*6)
print(n, "* 7 =", n*7)
print(n, "* 8 =", n*8)
print(n, "* 9 =", n*9)
print(n, "* 10 =", n*10)
```

```
Enter The Number = 5
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
5 * 7 = 35
5 * 8 = 40
5 * 9 = 45
5 * 10 = 50
```

09) WAP to calculate Area of Triangle (hint: a = h * b * 0.5)

In [22]:
```
h = int(input("Enter h = "))
b = int(input("Enetr b = "))

print("The Area of Triangle = ",h*b*0.5)
```

```
Enter h = 5
Enetr b = 5
The Area of Triangle =  12.5
```

10) WAP to convert degree to Fahrenheit and vice versa.

In [28]:
```
celsius = float(input("Enter Temp in celsius = "))
fahrenheit = celsius * (9/5) +32
print("Temp in fahrenheit = ",fahrenheit)

fahrenheit = float(input("Enter Temp in fahrenheit = "))
celsius = fahrenheit-32*(5/9)
print("Temp in celsius = ",celsius)
```

```
Enter Temp in celsius = 100
Temp in fahrenheit =  212.0
Enter Temp in fahrenheit = 212
Temp in celsius =  194.22222222222223
```

11) WAP to calculate total marks and Percentage.

In [31]:
```
math = int(input("Enter math mark = "))
enghish = int(input("Enter English mark = "))
hindi = int(input("Enter hindi mark = "))

total_marks = math+enghish+hindi
percentage = total_marks*100/300

print("Your total marks = ",total_marks)
print("Your percentage = ",percentage)
```

```
Enter math mark = 50
Enter English mark = 50
Enter hindi mark = 50
Your total marks =  150
Your percentage =  50.0
```

12) Compute distance between two points taking input from the user (Pythagorean Theorem).

In [2]:
```
x1 = int(input("Enter x1 = "))
x2 = int(input("Enter x2 = "))
y1 = int(input("Enter y1 = "))
y2 = int(input("Enter y2 = "))

distance = ((((x2-x1)**2)+((y2-y1)**2))**0.5)

print("Distance between",(x1,x2), "and", (y1,y2), "is = ",distance)
```

```
Enter x1 = 6
Enter x2 = 0
Enter y1 = 4
Enter y2 = 6
Distance between (6, 0) and (4, 6) is =  6.324555320336759
```

13) WAP to convert seconds into hours, minutes & seconds and print in HH:MM:SS

[e.g. 10000 seconds mean 2:46:40 (2 Hours, 46 Minutes, 40Seconds)]

In [3]:
```
second = int(input("Enter Time in Second = "))

hour = second//3600
x = second%3600
minutes = x//60
y = x%60
second = y

print(hour,"Hour",minutes,"Minutes",second,"Second")
```

```
Enter Time in Second = 10000
2 Hour 46 Minutes 40 Second
```

14) WAP to enter distance into kilometer and convert it into meter, feet,inches, and centimeter

In [4]:
```
kilo_meters = int(input("Enter Distance in Kilometer = "))

print("Meters = ",kilo_meters*1000)
print("Feets = ",kilo_meters*3280.84)
print("Inches = ",kilo_meters*39370.1)
print("Centimeter = ",kilo_meters*100000)
```

```
Enter Distance in Kilometer = 50
Meters =  50000
Feets =  164042.0
Inches =  1968505.0
Centimeter =  5000000
```

Darshan UNIVERSITY

योगः कर्मसु कौशलम्

(https://www.darshan.ac.in/)

Python Programming - 2101CS405

Lab - 2

if..else..

01) WAP to check whether the given number is positive or negative.

In [1]:
```
number = int(input("Enter the number = "))

if(number > 0):
    print(number,"is positive")
elif(number < 0):
    print(number,"is Negative")
else:
    print("Zero")
```

```
Enter the number = -11
-11 is Negative
```

02) WAP to check whether the given number is odd or even

In [2]:
```
number = int(input("Enter the number = "))

if(number % 2 == 0):
    print(number,"is Even.")
else:
    print(number,"is Odd.")
```

```
Enter the number = 17
17 is Odd.
```

03) WAP to find out largest number from given two numbers using simple if and ternary operator.

In [3]:
```
number1 = int(input("Enter the number = "))
number2 = int(input("Enter the number = "))

# Using Simple If
if(number1 > number2):
    print("number1 is Largest.")
if(number2 > number1):
    print("number2 is Largest.")
if(number1 == number2):
    print("Both are Equal")

#Using Ternary Operator
largest = number1 if number1 > number2 else number2
print(largest,"is larjest")
```

```
Enter the number = 5
Enter the number = 10
number2 is Largest.
10 is larjest
```

04) WAP to find out largest number from given three numbers.

In [4]:
```
number1 = int(input("Enter the number = "))
number2 = int(input("Enter the number = "))
number3 = int(input("Enter the number = "))

if(number1 > number2 and number1 > number3):
    print("number1 is Larjest.")
elif(number2 > number1 and number2 > number3):
    print("number2 is Larjest.")
else:
    print("number3 is Larjest.")
```

```
Enter the number = 56
Enter the number = 85
Enter the number = 23
number2 is Larjest.
```

05) WAP to check whether the given year is leap year or not.

[If a year can be divisible by 4 but not divisible by 100 then it is leap year but if it is divisible by 400 then it is leap year]

In [5]:
```
year = int(input("Enter the number = "))

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

```
Enter the number = 2012
2012 is Leap Year
```

06) WAP in python to display the name of the day according to the number given by the user

In [6]:
```
number = int(input("Enter Numner = "))

if(number == 1):
    print("Sunday")
elif(number == 2):
    print("Monday")
elif(number == 3):
    print("Tuesday")
elif(number == 4):
    print("Wednesday")
elif(number == 5):
    print("Thrusday")
elif(number == 6):
    print("Friday")
elif(number == 7):
    print("Saturday")
else:
    print("Please Enter between 1 to 7")
```

```
Enter Numner = 4
Wednesday
```

07) WAP to implement simple calculator which performs (add,sub,mul,div) of two no. based on user input.

In [7]:
```
number1 = int(input("Enter the number = "))
number2 = int(input("Enter the number = "))
choice = input("Enter your Choice => (add,sub,mul,div)")

if(choice == "add"):
    print("Sum of",number1,"and",number2,"=",number1+number2)
elif(choice == "sub"):
    print("Sub of",number1,"and",number2,"=",number1-number2)
elif(choice == "mul"):
    print("Mul of",number1,"and",number2,"=",number1*number2)
elif(choice == "div"):
    print("Div of",number1,"and",number2,"=",number1/number2)
else:
    print("Please Enter the valid Operation")
```

```
Enter the number = 50
Enter the number = 50
Enter your Choice => (add,sub,mul,div)mul
Mul of 50 and 50 = 2500
```

08) WAP to calculate electricity bill based on following criteria. Which takes the unit from the user.

a. First 1 to 50 units – Rs. 2.60/unit
b. Next 50 to 100 units – Rs. 3.25/unit
c. Next 100 to 200 units – Rs. 5.26/unit
d. above 200 units – Rs. 8.45/unit

In [8]:
```
unit = int(input("Enter the Unit"))

if(unit >= 1 and unit <= 50):
    print("Your bill = ",unit*2.60)
elif(unit > 50 and unit <= 100):
    print("Your bill = ",unit*3.25)
elif(unit > 100 and unit <= 200):
    print("Your bill = ",unit*5.26)
else:
    print("Your bill = ",unit*8.45)
```

```
Enter the Unit177
Your bill =  931.02
```

01) WAP to read marks of five subjects. Calculate percentage and print class accordingly.

Fail below 35
Pass Class between 35 to 45
Second Class
between 45 to 60
First Class between 60 to 70
Distinction if more than 70

In [10]:
```
sub1 = int(input("Eneter Sub 1 Marks = "))
sub2 = int(input("Eneter Sub 2 Marks = "))
sub3 = int(input("Eneter Sub 3 Marks = "))
sub4 = int(input("Eneter Sub 4 Marks = "))
sub5 = int(input("Eneter Sub 5 Marks = "))

percentage = (sub1+sub2+sub3+sub4+sub5)*100/500

if(percentage < 35):
    print("You are Fail")
elif(percentage >=35 and percentage < 45):
    print("Pass")
elif(percentage >=45 and percentage < 60):
    print("Second Class")
elif(percentage >=60 and percentage < 70):
    print("First Class")
else:
    print("Distinction")
```

```
Eneter Sub 1 Marks = 58
Eneter Sub 2 Marks = 88
Eneter Sub 3 Marks = 99
Eneter Sub 4 Marks = 77
Eneter Sub 5 Marks = 59
Distinction
```

02) WAP to find out the Maximum and Minimum number from given 4 numbers.

In [12]:
```
num1 = int(input("Eneter Sub 2 Marks = "))
num2 = int(input("Eneter Sub 3 Marks = "))
num3 = int(input("Eneter Sub 1 Marks = "))
num4 = int(input("Eneter Sub 4 Marks = "))

if(num1 > num2 and num1 > num3 and num1 > num4):
    print("Number '1' is Larjest")
elif(num2 > num1 and num2 > num3 and num2 > num4):
    print("Number '2' is Larjest")
elif(num3 > num2 and num3 > num1 and num3 > num4):
    print("Number '3' is Larjest")
else:
    print("Number '4' is Larjest")
```

```
Eneter Sub 2 Marks = 56
Eneter Sub 3 Marks = 58
Eneter Sub 1 Marks = 59
Eneter Sub 4 Marks = 68
Number '4' is Larjest
```

03) WAP to input an integer number and check the last digit of number is even or odd.

In [13]:
```
number = int(input("Enter the number = "))

last_digit = number%10

if(last_digit%2 == 0):
    print("Last Digit is",last_digit,"and it is Even")
else:
    print("Last Digit is",last_digit,"and it is Odd")
```

```
Enter the number = 569
Last Digit is 9 and it is Odd
```

04) WAP to determine the roots of the equation ax2+bx+c=0.

In [14]:
```
import cmath

a = float(input('Enter a: '))
b = float(input('Enter b: '))
c = float(input('Enter c: '))

d = (b**2) - (4*a*c)

if d > 0:
    print("Real Roots")
    print(-b+d)/(2*a)
    print(-b-d)/(2*a)
elif d == 0:
    print("Real & Same Roots : ", (-b)/(2*a))
elif d < 0:
    print("Complex Roots")
    print(-b/(2*a), "+i", d)
    print(-b/(2*a), "-i", d)
```

```
Enter a: 5
Enter b: 7
Enter c: 6
Complex Roots
-0.7 +i -71.0
-0.7 -i -71.0
```

Type *Markdown* and LaTeX: α^2