print ("welcome to EDS lab")

write python programe to a read value from keyboard and print msg n times

In [4]:
```python
n=int(input("Enter the value of n:"))
for i in range (n):
    print("welcome to EDS lab")
```

```
welcome to EDS lab
welcome to EDS lab
welcome to EDS lab
welcome to EDS lab
welcome to EDS lab
```

write python programe to find area of rectangle

In [5]:
```python
l=int(input("Enter length"))
w=int(input("Enter width"))
area=l*w
print("Area of rectangle;",area)
```

```
Area of rectangle; 20
```

write python program to find area of circle

In [9]:
```python
r=int(input("enter radius"))
area=3.14*r*r
print("area of circle",area)
```

```
area of circle 314.0
```

write python program to find area of circle

In [10]:
```python
import math
r=int(input("enter radius"))
area=math.pi*r*r
print("area of circle",area)
```

```
area of circle 31415.926535897932
```

In [ ]:

1. to accept an object mass in kilogram and velocity in meters per second and display its momentum . momentum is calculated at E=MC where M is mass and c is velocity

In [5]:
```python
mass = float(input("Enter mass in kilograms: "))

velocity = float(input("Enter velocity in meters per second: "))

momentum = mass*velocity

print(f"The momentum of the object is: {momentum}")
```

```
The momentum of the object is: 144.0
```

2. Write a Python program for following conditions. If n is single digit print square of it if n is two digit print square root of it. If n is three digit print cube root of it.

In [11]:
```python
import math
n = int(input("Enter a number: "))
if 0 <= n < 10:
    print(f"Square of {n}: {n**2}")
elif 10<= n < 100:
    print (f"Square root of {n} : {math.sqrt(n):.2f}")
elif 100<= n < 1000:
    print(f"Cube root of {n} : {n**(1/3):.2f}")
else:
    print("Please enter a number between 0 and 999.")
```

```
Square root of 69 : 8.31
```

3. Read the birth date and salary in rupees of employees. Perform data transformation for birthdate to age and also salary which is in rupees to salary in dollars using functions

In [13]:
```python
from datetime import datetime
def calculate_age(birthdate):
    today = datetime.now()
    birthdate = datetime.strptime(birthdate, "%Y-%m-%d")
    return today.year - birthdate.year - ((today.month, today.day) < (birthdate
```

```
def salary_in_dollars(salary_in_rupees, conversion_rate=87.56):
    return salary_in_rupees/conversion_rate

birthdate = input("Enter birthdate (YYYY-MM-DD): ")
salary = float(input("Enter salary in rupees: "))

age = calculate_age(birthdate)
salary_usd = salary_in_dollars(salary)

print(f"Age: {age} years")
print(f"Salary in USD: ${salary_usd:.2f}")
```

```
Age: 18 years
Salary in USD: $1.14
```

4. Print the reverse number of a given number

In [17]:
```
number = int(input("Enter a number: "))
reverse_number = int(str(number)[::-1])
print(f"Reversed number: {reverse_number}")
```

```
Reversed number: 13
```

5. Print multiplication table of number n

In [20]:
```
n = int(input("Enter a number: "))




for i in range(1, 11):
    print(f"{n} x {i} = {n*i}")
```

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

6.To accept students five courses marks and compute his/her result. Student is passing if he/she scores maris equal to and above 40 in each course. If student scores aggregate greater than 75 percentage, then the grade is distinction.

If aggregate is greater than or equal to 60 and less than 75 then the grade if first division if aggregate is greater than or equal 50 and less than 60, then the grade is second division. If aggregate is greater than or equal 40 and less than 50. then the grade is third division.

In [21]:
```python
def compute_grade(marks):
    if any(mark < 40 for mark in marks):  # Check if any subject has marks below
        return "Fail"

    aggregate = sum(marks) / len(marks)  # Calculate aggregate percentage

    if aggregate > 75:
        return "Distinction"
    elif 60 <= aggregate <= 75:
        return "First Division"
    elif 50 <= aggregate < 60:
        return "Second Division"
    elif 40 <= aggregate < 50:
        return "Third Division"
    else:
        return "Fail"
marks = []
for i in range(5):
    mark = int(input(f"Enter marks for subject {i+1}: "))
    marks.append(mark)

grade = compute_grade(marks)

print("\nStudent's Result:")
print(f"Marks: {marks}")
print(f"Aggregate Percentage: {sum(marks)/5:.2f}%")
print(f"Grade: {grade}")
```

```
Student's Result:
Marks: [90, 39, 45, 47, 24]
Aggregate Percentage: 49.00%
Grade: Fail
```

7.Write a the Fibonacci sequence using recursive function in Python

In [22]:
```python
def fibonacci(n):
    if n <= 1:
        return n
    return fibonacci(n-1) + fibonacci(n-2)
terms = int(input("Enter the number of terms:"))
for i in range(terms):
    print(fibonacci(i),end=" ")
```

```
0 1 1 2 3 5 8 13 21
```

In [ ]:

program the print different pattern

```
In [70]: rows = 10
         for i in range (1,rows + 1):
             print("*" * i)
```

```
*
**
***
****
*****
******
*******
********
*********
**********
```

find factorial of numbers

```
In [80]: num = int(input("Enter a number"))

         factorial = 1

         for i in range (1, num + 1):
             factorial *= i

         print(f"The factorial of {num} is : {factorial}")
```

```
The factorial of 40 is : 815915283247897734345611269596115894272000000000
```

```
In [ ]:
```

```
In [ ]:
```

```
In [ ]:
```