

CYCLE 1

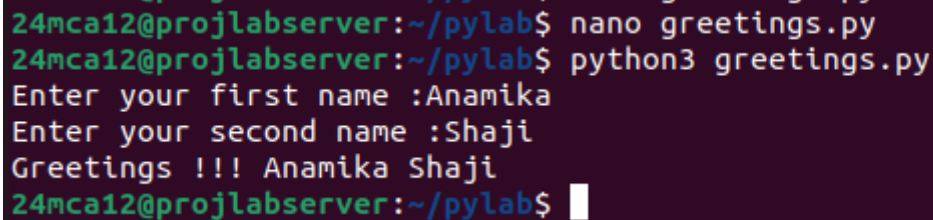
PROGRAM 1

Aim : Program to print greetings message

Source code :

```
first_name=input("Enter your first name :")
second_name=input("Enter your second name :")
print(f"Greetings !!! {first_name} {second_name}")
```

Output :



```
24mca12@projlabserver:~/pylab$ nano greetings.py
24mca12@projlabserver:~/pylab$ python3 greetings.py
Enter your first name :Anamika
Enter your second name :Shaji
Greetings !!! Anamika Shaji
24mca12@projlabserver:~/pylab$
```

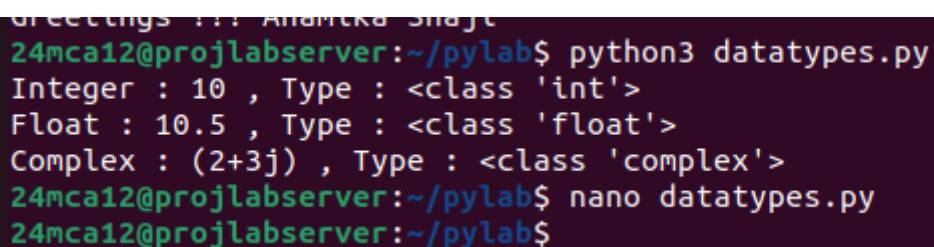
PROGRAM 2

Aim : Program to demonstrate different number datatypes

Source code :

```
int_num=10
float_num=10.5
complex_num=2+3j
print(f"Integer : {int_num} , Type : {type(int_num)}")
print(f"Float : {float_num} , Type : {type(float_num)}")
print(f"Complex : {complex_num} , Type : {type(complex_num)}")
```

Output :



```
Greetings !!! Anamika Shaji
24mca12@projlabserver:~/pylab$ python3 datatypes.py
Integer : 10 , Type : <class 'int'>
Float : 10.5 , Type : <class 'float'>
Complex : (2+3j) , Type : <class 'complex'>
24mca12@projlabserver:~/pylab$ nano datatypes.py
24mca12@projlabserver:~/pylab$
```

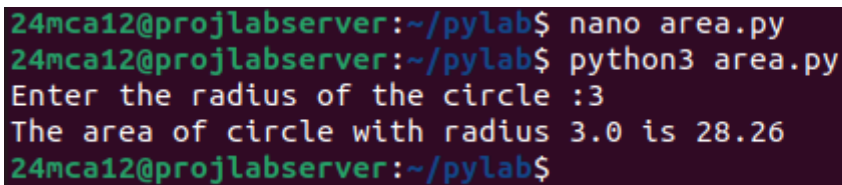
PROGRAM 3

Aim : Program to calculate area of circle

Source code :

```
radius=float(input("Enter the radius of the circle :"))
area=3.14*radius**2
print(f"The area of circle with radius {radius} is {area}")
```

Output :



```
24mca12@projlabsrver:~/pylab$ nano area.py
24mca12@projlabsrver:~/pylab$ python3 area.py
Enter the radius of the circle :3
The area of circle with radius 3.0 is 28.26
24mca12@projlabsrver:~/pylab$
```

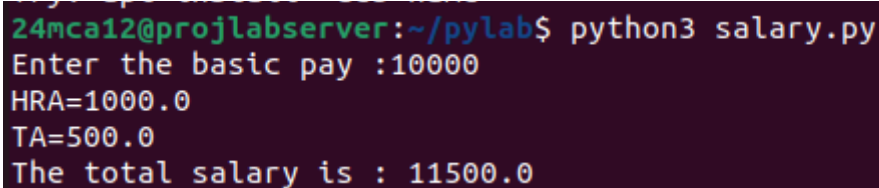
PROGRAM 4

Aim : Program to calculate the salary of an employee

Source code :

```
basic_pay=float(input("Enter the basic pay :"))
hra=0.10*basic_pay
ta=0.05*basic_pay
total_salary=basic_pay+hra+ta
print(f"HRA={hra}\nTA={ta}\nThe total salary is : {total_salary}")
```

Output :



```
24mca12@projlabsrver:~/pylab$ python3 salary.py
Enter the basic pay :10000
HRA=1000.0
TA=500.0
The total salary is : 11500.0
```

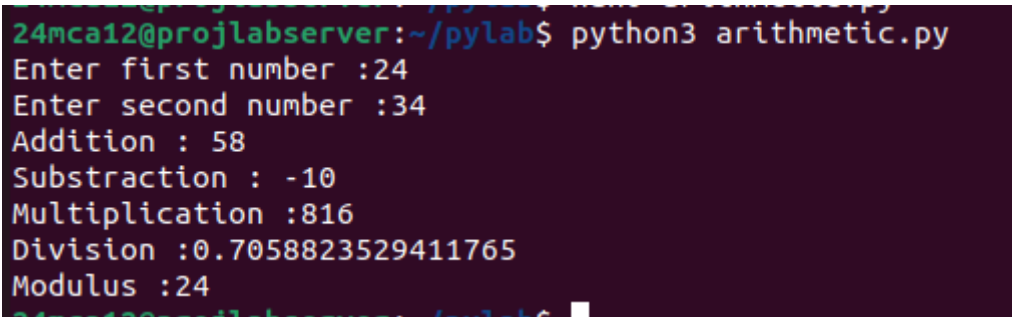
PROGRAM 5

Aim : Program to perform arithmetic operations on 2 integers

Source code :

```
num1=int(input("Enter first number :"))
num2=int(input("Enter second number :"))
print(f"Addition : {num1+num2}")
print(f"Substraction : {num1-num2}")
print(f"Multiplication :{num1*num2}")
print(f"Division :{num1/num2}")
print(f"Modulus :{num1%num2}")
```

Output :



```
24mca12@projlabserver:~/pylab$ python3 arithmetic.py
Enter first number :24
Enter second number :34
Addition : 58
Substraction : -10
Multiplication :816
Division :0.7058823529411765
Modulus :24
```

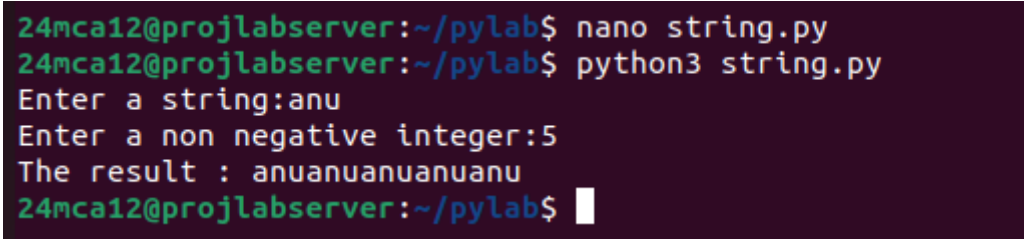
PROGRAM 6

Aim : Program to print n copies of a given string

Source code :

```
string=input("Enter a string:")
n=int(input("Enter a non negative integer:"))
result= string*n
print(f"The result : {result}")
```

Output :



```
24mca12@projlabserver:~/pylab$ nano string.py
24mca12@projlabserver:~/pylab$ python3 string.py
Enter a string:anu
Enter a non negative integer:5
The result : anuanuanuanuanu
24mca12@projlabserver:~/pylab$
```

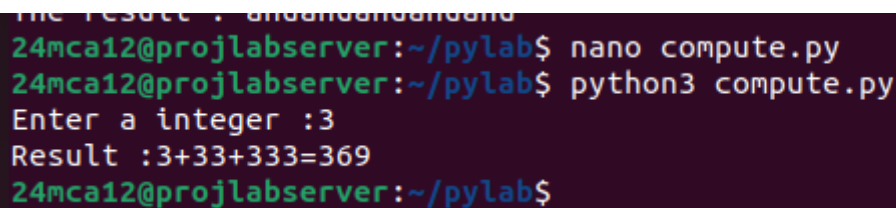
PROGRAM 7

Aim : Program to accept an integer and compute $n+nn+nnn$

Source code :

```
n=int(input("Enter a integer :"))
result=n+(n*10+n)+(n*100+n*10+n)
print(f"Result :{n}+{n}{n}+{n}{n}{n}={result}")
```

Output :

A terminal window showing the execution of a Python script. The user enters '3' as the integer. The output is 'Result :3+33+333=369'. The prompt is '24mca12@projlabserver:~/pylab\$'.

```
24mca12@projlabserver:~/pylab$ nano compute.py
24mca12@projlabserver:~/pylab$ python3 compute.py
Enter a integer :3
Result :3+33+333=369
24mca12@projlabserver:~/pylab$
```

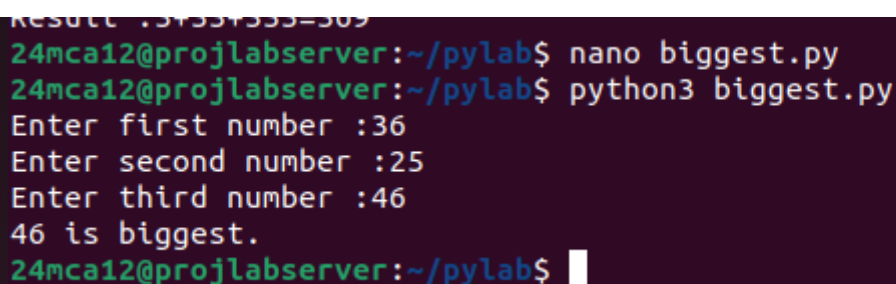
PROGRAM 8

Aim : Program to find biggest of 3 numbers

Source code :

```
num1=int(input("Enter first number :"))
num2=int(input("Enter second number :"))
num3=int(input("Enter third number :"))
if num1>num2 & num1>num3:
    print(f"{num1} is biggest.")
elif num2>num3:
    print(f"{num2} is biggest.")
else:
    print(f"{num3} is biggest.")
```

Output :

A terminal window showing the execution of a Python script. The user enters three numbers: 36, 25, and 46. The output is '46 is biggest.'. The prompt is '24mca12@projlabserver:~/pylab\$'.

```
24mca12@projlabserver:~/pylab$ nano biggest.py
24mca12@projlabserver:~/pylab$ python3 biggest.py
Enter first number :36
Enter second number :25
Enter third number :46
46 is biggest.
24mca12@projlabserver:~/pylab$
```

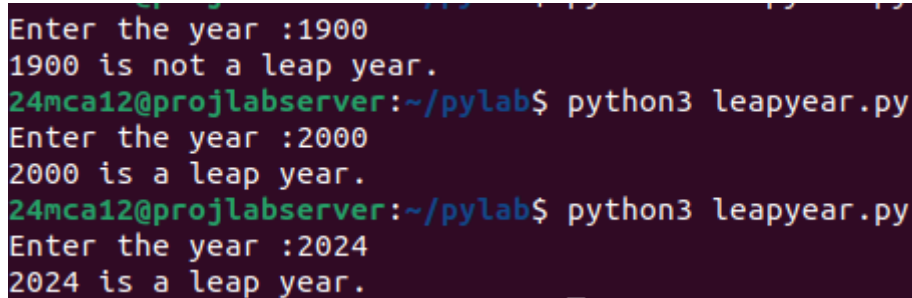
PROGRAM 9

Aim : Program to determine whether a year is leap year or not

Source code :

```
year=int(input("Enter the year :"))
if(year%400==0) or (year%100!=0 and year%4==0):
    print(f"{year} is a leap year.")
else:
    print(f"{year} is not a leap year.")
```

Output :



```
Enter the year :1900
1900 is not a leap year.
24mca12@projlabsrver:~/pylab$ python3 leapyear.py
Enter the year :2000
2000 is a leap year.
24mca12@projlabsrver:~/pylab$ python3 leapyear.py
Enter the year :2024
2024 is a leap year.
```

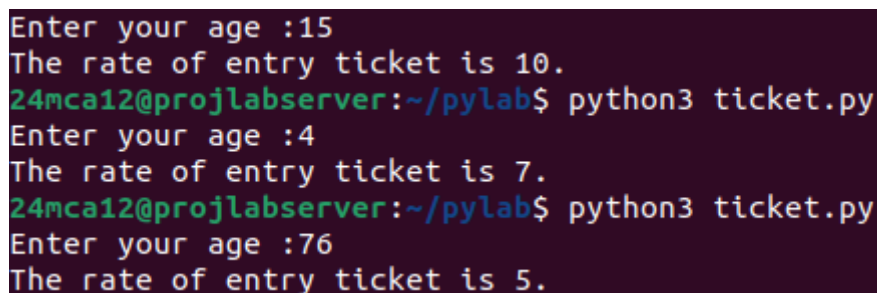
PROGRAM 10

Aim : Program to determine the rate of entry ticket in a trade fair based on age.

Source code :

```
age=int(input("Enter your age :"))
if age<10:
    rate=7
elif age>=10 and age<60:
    rate=10
else:
    rate=5
print(f"The rate of entry ticket is {rate}.")
```

Output :



```
Enter your age :15
The rate of entry ticket is 10.
24mca12@projlabsrver:~/pylab$ python3 ticket.py
Enter your age :4
The rate of entry ticket is 7.
24mca12@projlabsrver:~/pylab$ python3 ticket.py
Enter your age :76
The rate of entry ticket is 5.
```

PROGRAM 11

Aim : Program to solve a quadratic equation

Source code :

```
import math
a=float(input("Enter coefficient of a :"))
b=float(input("Enter coefficient of b :"))
c=float(input("Enter coefficient of c :"))
d=b**2-4*a*c
if d>0:
    root1=(-b+math.sqrt(d))/(2*a)
    root2=(-b-math.sqrt(d))/(2*a)
    print(f"The roots are real and different : {root1} {root2}")
elif d==0:
    root=-b/(2*a)
    print(f"The roots are real and same :{root}")
else:
    real=-b/(2*a)
    imaginary=(math.sqrt(-d))/(2*a)
    print(f"Equation has Two complex roots {real}+{imaginary}i and {real}-{imaginary}i")
```

Output :

```
24mca12@projlabserver:~/pylab$ python3 quadratic.py
Enter coefficient of a :2
Enter coefficient of b :8
Enter coefficient of c :8
The roots are real and same :-2.0
24mca12@projlabserver:~/pylab$ python3 quadratic.py
Enter coefficient of a :1
Enter coefficient of b :-5
Enter coefficient of c :-14
The roots are real and different : 7.0 -2.0
24mca12@projlabserver:~/pylab$ python3 quadratic.py
Enter coefficient of a :2
Enter coefficient of b :2
Enter coefficient of c :2
Equation has Two complex roots -0.5+0.8660254037844386i and -0.5-0.8660254037844386i
```