Lab4
9

```python
def add_numbers(*args):
    """
    This function takes any number of integer arguments
    and returns their sum.
    """
    total = 0
    for x in args:
        total = total + x
    return total


nums = input("Enter integers separated by spaces: ")
parts = nums.split()
int_list = []
for p in parts:
    int_list.append(int(p))

result = add_numbers(*int_list)
print("Sum is:", result)
```

```
25mca30@mcaserver:~/linux25/lab4$ python3 doc.py
Enter integers separated by spaces: 2 3 2 4 2
Sum is: 13
```

10

```
25mca30@mcaserver:~/linux25/lab4$ python3 pnr.py
Enter the details to find permutation nPr :
n: 7
r: 2
7p2=42.0
Enter the details to find Combination nCr :
n: 8
r: 2
8C2=28.0
```

```
def fact(n):
        if n==1:
                return 1
        else:
                return n*fact(n-1)
def p(n,r):
        return fact(n)/fact(n-r)
def c(n,r):
        return p(n,r)/fact(r)
print("Enter the details to find permutation nPr :")
n=int(input("n: "))
r=int(input("r: "))
print(f"{n}p{r}={p(n,r)}")
print("Enter the details to find Combination nCr :")
n=int(input("n: "))
r=int(input("r: "))
print(f"{n}C{r}={c(n,r)}")
```

lab 5

1

```
import calendar
year=int(input("Enter a year...."))

if calendar.isleap(year):
        print(f"{year} is a leap year")
else:
        print(f"{year} is not a leap year")
```

```
25mca30@mcaserver:~/linux25/lab5$ python3 leap.py
Enter a year....2000
2000 is a leap year
25mca30@mcaserver:~/linux25/lab5$ python3 leap.py
Enter a year....2025
2025 is not a leap year
25mca30@mcaserver:~/linux25/lab5$
```

2

```python
import time
from datetime import datetime

now=datetime.now()

print("Current date and time :",now)

print("Current year : ",now.year)

print("Month of the year : ",now.month)

print("Week no of the year : ",now.isocalendar()[1])

print("Weekday of the week :",now.isocalendar()[2])

print("Day of year : ", now.timetuple().tm_yday)

print("Day of the month :",now .day)

print("Day of week:", time.strftime("%A"))
```

```
25mca30@mcaserver:~/linux25/lab5$ python3 now.py
Current date and time : 2025-11-27 16:15:52.818547
Current year :  2025
Month of the year :  11
Week no of the year :  48
Weekday of the week : 4
Day of year :  331
Day of the month : 27
Day of week: Thursday
25mca30@mcaserver:~/linux25/lab5$
```

3

```
25mca30@mcaserver:~/linux25/lab5$ python3 today.py
Yesterday: 2025-11-26
Today: 2025-11-27
Tomorrow: 2025-11-28
```

```
from datetime import date, timedelta

today = date.today()
yesterday = today - timedelta(days=1)
tomorrow = today + timedelta(days=1)

print("Yesterday:", yesterday)
print("Today:", today)
print("Tomorrow:", tomorrow)
```

4

palindrome.py

```
def ispalin(s):
        return s==s[::-1]
```

pal.py

```
from palindrome import ispalin

def longest_palindrome(s):
    n = len(s)
    longest = ""

    for i in range(n):
        for j in range(i + 1, n + 1):
            substring = s[i:j]
            if ispalin(substring) and len(substring) > len(longest):
                longest = substring

    return longest


data = input("Enter the text: ")
print("Longest palindromic substring:", longest_palindrome(data))
```

```
25mca30@mcaserver:~/linux25/lab5$ python3 pal.py
Enter the text: hai well noon
Longest palindromic substring: noon
25mca30@mcaserver:~/linux25/lab5$
```

5

```
import graphics.rect as rect
import graphics_3d.conoid as con
import graphics.circle as cir
from  graphics_3d.sphere  import *
l=int(input("enter the length of rectangle..."))
b=int(input("enter the breath of rectangle..."))

print("area ....",rect.area(l,b))
print("perimeter...",rect.perimeter(l,b))


r=float(input("Enter the radius...."));

print("area  of  circle is ..",cir.area(r))

print("Perimeter of the circle is ... ",cir.perimeter(r))


he=int(input("Enter the height of the cuboid...."))
be=int(input("Enter the breadth of the Cuboid...."))
le=int(input("Enter the lengthof the  Cuboid...."))


print("Area of cuboid is...",con.area(he,be,le))

print("Perimetr of cuboid is ...",con.perimeter(he,be,le))


ra=float(input("Enter the radius of the sphere..."))

print("Area of the sphere is...",area(ra))

print("Perimeter of the the sphere is ...",perimeter(ra))
```

```
drwxrwxr-x 3 25mca30 25mca30 4096 Nov 20 10:21 graphics
drwxrwxr-x 3 25mca30 25mca30 4096 Nov 20 10:36 graphics_3d
-rw-rw-r-- 1 25mca30 25mca30  878 Nov 20 10:42 main.py
```

```
import math
def area(r):
        return math.pi * r *r
def perimeter(r):
        return 2 * math.pi * r
```

```
def area(l,b):
        return l * b
def perimeter(l,b):
        return 2 * (l+b)
```

```
def area(l,b,h):
        return 2 * (l*b + b*h + h*l)
def perimeter(l,b,h):
        return 4*(l + b+ h)
```

```
import math
def area(r):
        return 4 * math.pi *r *r
def perimeter(r):
        return 2 * math.pi *r
```

```
25mca30@mcaserver:~/linux25/lab5/graphics_project$ python3 main.py
enter the length of rectangle...4
enter the breath of rectangle...2
area .... 8
perimeter... 12
Enter the radius....4
area  of  circle is .. 50.26548245743669
Perimeter of the circle is ...  25.132741228718345
Enter the height of the cuboid....6
Enter the breadth of the Cuboid....3
Enter the lengthof the  Cuboid....4
Area of cuboid is... 108
Perimetr of cuboid is ... 52
Enter the radius of the sphere...7
Area of the sphere is... 615.7521601035994
Perimeter of the the sphere is ... 43.982297150257104
25mca30@mcaserver:~/linux25/lab5/graphics_project$
```