PROGRAMMING IN PYTHON

CIE – 322P

Faculty Name:

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Semester: 6th (3rd year)

Group: 6C13

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PRACTICAL RECORD

PAPER CODE	**:**	**CIE – 322P**
Name of Student	:	GAUTAM TUTEJA
University roll	:	04196402721
Semester	:	6th (3rd year)
Group	:	6C13

PRACTICAL DETAILS

Experiments according to the lab syllabus prescribed by GGSIPU

Exp. no	Experiment Name	Date of performance	Date of checking	R1 (3)	R2 (3)	R3 (3)	R4 (3)	R5 (3)	Total Marks (15)	Signature

Experiments according to the lab syllabus prescribed by GGSIPU

Exp. no	Experiment Name	Date of performance	Date of checking	R1 (3)	R2 (3)	R3 (3)	R4 (3)	R5 (3)	Total Marks (15)	Signature

Experiment -1

Aim: Create a program that prompts the user for their name and age and prints a personalized message.

Theory:

Source Code:

```
name = input("Enter your name: ")
age = input("Enter your age: ")
print("Hello," ,name ,"You are",age," years old. Have a great day!")
```

Output:

Shell

```
Enter your name: Gautam
Enter your age: 20
Hello, Gautam You are 20  years old. Have a great day!
```

Experiment -2

Aim: Create a program that prompts the user for their age and tells them if they can vote in the next election.

Theory:

Source Code:

```
age = int(input("Enter your age: "))
if(age<18):
    print("You are Ineligible for Voting.")
else:
    print("You are Eligible for Voting.")
```

Output:

Shell

```
Enter your age: 16
You are Ineligible for Voting.
```

Shell

```
Enter your age: 20
You are Eligible for Voting.
```

Experiment -3

Aim: Create a program that calculates the factorial of a number entered by the user using a loop.

Theory:

Source Code:

```
num = int(input("Enter a number: "))
if(num == 0 or num == 1):
    print("Factorial for",num,"is 1.")
else:
    mul =1
    for i in range (1,num+1):
        mul *=i;
    print("Factorial for",num,"is",mul,".")
```

Output:

Shell

```
Enter a number: 5
Factorial for 5 is 120 .
```

Shell

```
Enter a number: 0
Factorial for 0 is 1.
```

Experiment -4

Aim: Create a program that prompts the user for a list of numbers and then sorts them in ascending order.

Theory:

Source Code:

```
num = int(input("Enter the size of list: "))
arr=[]
for i in range (0,num):
    a=int(input("Enter an element for list: "))
    arr.append(a)
```

```
arr.sort()
print(arr)
```

Output:

```
Enter the size of list: 5
Enter an element for list: 142
Enter an element for list: 352
Enter an element for list: 12
Enter an element for list: 53
Enter an element for list: 45321
[12, 53, 142, 352, 45321]
```

Experiment -5

Aim: Create a program that prompts the user for a string and then prints out the string reversed.

Theory:

Source Code:

```
str = input("Enter a String: ")
reverse = ""
for i in range(len(str)-1,-1,-1):
    reverse +=str[i]
print("Reverse String for",str,"is",reverse)
```

Output:

Shell

```
Enter a String: gautam
Reverse String for gautam is matuag
```

Shell

```
Enter a String: gianhaeaap
Reverse String for gianhaeaap is paaeahnaig
```

Experiment -6

Aim: Create a program that defines a function to calculate the area of a circle based on the radius entered by the user.

Theory:

Source Code:

```
def area_circle(radius):
    area = (22/7)*(radius**2)
    print ("Area of the Circle is",area)
rad = int(input("Enter Radius of the Circle: "))
area_circle(rad)
```

Output:

Shell

```
Enter Radius of the Circle: 7
Area of the Circle is 154.0
```

Shell

```
Enter Radius of the Circle: 31
Area of the Circle is 3020.285714285714
```

Experiment -7

Aim: Classes and objects: Create a program that defines a class to represent a car and then creates an object of that class with specific attributes.

Theory:

Source Code:

```
class Car:
    def __init__(self, company, model, color):
        self.company = company
        self.model = model
        self.color = color


car = Car(company="Toyota",model="Camry",color="Blue")
```

```
print(car.company)
print(car.model)
print(car.color)
```

Output: