

# **20MCA131-PROGRAMMING LAB**

## **LABORATORY RECORD**

*Submitted in partial fulfilment of the requirements for the award of*

*Masters of Computer Applications*

*At*

## **COLLEGE OF ENGINEERING POONJAR**

**Managed by I.H.R.D., A Govt. of Kerala undertaking**

*(Affiliated to APJ Abdul Kalam Technological University)*



**SUBMITTED BY**

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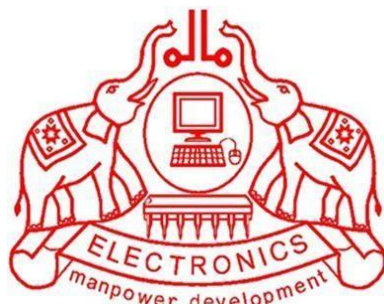
**Department of Computer Science**

**COLLEGE OF ENGINEERING POONJAR**

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## CERTIFICATE

Certified that this is a Bonafide record of practical work done in Programming Lab (20MCA131) by **SHAMEER SABEER Reg No.PJR24MCA-2017** of College of Engineering, Poonjar, during the academic year 2024- 2026.

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**INTERNAL EXAMINER**

**EXTERNAL EXAMINER**

## INDEX

Sl.No	List of programs	Page No.
1	Largest among three number	1
2	Accept a file name from user and print the extension	2
3	First and last character exchange in a string	3
4	From a List of colors ,display first and last color	4
5	Generate positive list of numbers from a given list of integers	5
6	Python program to find the square of N numbers	6
7	Count the occurances of each word in a line of text	7
8	Prompt the user for a list of integers. For all values greater than 100, store 'over' instead.	8
9	Store a list of first names. Count the occurrences of 'a' within the list	9
10	Get a string from an input string where all occurrences of first character replaced with '\$'	10
11	From a list of integers, create a list removing even numbers	11
12	Check whether the list are same length, same sum, any value occur in both	12
13	Read two list ,print out all colors from colorlist1 not contained in colorlist2	14
14	Find GCD of 2 numbers.	16
15	Generate all factors of a number.	17
16	Find the sum of all items in a list	18
17	Generate fibonnaci series of N terms	19
18	Add 'ing' at the end of a given string. If it already ends with 'ing', then add 'ly'	20
19	Accept a list of words and return length of longest word.	21
20	Sort dictionary in ascending and descending order	23
21	Merge two dictionaries	25
22	Program to find the factorial of a number using function	27
23	Generate all factors of a number using function	28
24	Lambda function to find area of square,rectangle,triangle	29
25	Create class with attribute name,age,display the name and age of a particular person	31
26	Use base class constructor and inheritance to display a book detail	32
27	Display bank details with withdraw, deposit, search features	34
28	Read each row from a CSV file and print the list of string	39

**PROGRAM-1**

**AIM:** Find the largest among three numbers

**ALGORITHM :**

- 1.Read numbers n1,n2,n3
- 2.If n1>n2 and n1>n3, Largest is n1 Else if n2>n1 and n2>n3, Largest is n2  
Else, Largest is n3  
End of if
- 3.Print largest

**SOURCE CODE :**

```
n1=int(input('Enter first Number:'))
n2=int(input('Enter second Number:'))
n3=int(input('Enter third Number:'))
if(n1>=n2) and (n1>=n3):
    largest=n1
elif(n2>=n1) and (n2>=n3):
    largest=n2
else:
    largest=n3
print('largest number is:',largest)
```

**RESULT:**

Program is executed and output is obtained

**OUTPUT:**

```
Enter first Number:23
Enter second Number:43
Enter third Number:53
largest number is: 53
```

**PROGRAM-2**

**AIM:** Accept a file name from user and print the extension of that file.

**ALGORITHM:**

1. Read a file name with extension
2. Using split('.')function extract the extension from the file
3. Print extension

**SOURCE CODE:**

```
fname=input('enter the file name:')  
exten=fname.split('.')  
print('extension is:',exten[-1])
```

**RESULT:**

Program is executed an output is obtained

**OUTPUT:**

```
enter the file name:program.html  
extension is: html
```

**PROGRAM-3**

**AIM:** Create a string from given string where first and last characters exchanged

**ALGORITHM:**

1. Read string str.
2. Print rearranged string sliced using index.

str= l + str[1:-1] + f

3. Print str

**SOURCE CODE:**

```
str=input('Enter a string:')  
f=str[0] l=str[-1]  
str=l+str[1:-1]+f  
print('New string is:',str)
```

**RESULT:**

Program is executed and output is obtained

**OUTPUT:**

```
Enter a string:program  
New string is: mrograp
```

## PROGRAM-4

**AIM:** Create a list of colors from comma-separated color names entered by user. Display first and last colors

### ALGORITHM:

1. read a list of colors in list.
2. Print first color, list[0]
3. Print last color list[-1]

### SOURCE CODE:

```
list=[] n=int(input('enter no element:'))  
for i in range(0,n):  
    element=input('enter the color:')  
    list.append(element)  
print('full list:',list) print('first  
element:',list[0]) print('last  
element:',list[-1])
```

### RESULT:

Program is executed and output is obtained

### OUTPUT:

```
enter the no of element:5  
enter the color:red  
enter the color:green  
enter the color:blue  
enter the color:yellow  
enter the color:black  
full list: ['red', 'green', 'blue', 'yellow', 'black']  
first element: red  
last element: black
```

## PROGRAM-5

**AIM:** Generate positive list of numbers from a given list of integers

### ALGORITHM:

1. Read a list of numbers from user
2. For each in list Check  $\text{list}[i] > 0$
3. If yes display positive number
4. End of for

### SOURCE CODE:

```
list=[]
n=int(input('Enter the no of elements:'))
print('Elements are:')
for i in range (0,n):
    element=int(input())
    list.append(element)
print('Positive Numbers are:')
for i in range(0,n):
    if(list[i]>=0):
        print(list[i])
```

### RESULT:

Program is executed and output is obtained

### OUTPUT:

```
Enter the no of elements:6
Elements are:
-12
43
22
0
-4
-7
Positive Numbers are:
43
22
0
```



## PROGRAM-6

**AIM:** Python program to find the square of N numbers.

### ALGORITHM:

- 1.Read numbers and append to the list
- 2.Square=list[i]\*\*2 for each number in the list
3. Display the squared number

### SOURCE CODE:

```
list=[]
n=int(input('Enter the no of elements:'))
print('Elements are:')
for i in range (0,n):
    element=int(input())
    list.append(element)
print('sqaure of elements:')
for i in range(0,n):
    print(list[i]**2)
```

### RESULT:

The program is executed and output is obtained

### OUTPUT:

```
Enter the no of elements:4
Elements are:
12
45
34
23
sqaure of elements:
144
2025
1156
529
```

**PROGRAM-7**

**AIM:** Count the occurrences of each word in a line of text

**ALGORITHM:**

1. Read a string str
2. Enter the element to be searched
3. Initialize count=0
4. Check each elements of string with search if it presen increment count
5. Display count

**SOURCE CODE:**

```
str=input('Enter the String:')
search=input('Enter the element to be searched:') x=str.split(" ")
count=0
for i in str:
    if(i==search):
        count=count+1
print(count)
```

**RESULT:**

Program is executed and output is obtained

**OUTPUT:**

```
Enter the String:programming
Enter the element to be searched:g
2
```

## PROGRAM-8

**AIM:** Prompt the user for a list of integers. For all values greater than 100, store 'over' instead.

### ALGORITHM:

1. Read list of numbers in values.
2. For each i in values do
3. If  $a \leq 100$  then Append i to x Else:  
Append "over" to x
4. Print x

### SOURCE CODE:

```
list=[]
n=int(input('Enter the no of elements:'))
print('Numbers are : \t')
for i in range(0,n):
    number=int(input())
    list.append(number) print("\n",
list)
for i in range(0, n):
    if(list[i]>100):
        list[i]='over'
print(list)
```

### RESULT:

Program is executed and output is obtained

### OUTPUT:

```
Enter the no of elements:6
Numbers are :
23
103
44
2
106
23

[23, 103, 44, 2, 106, 23]
[23, 'over', 44, 2, 'over', 23]
```

## PROGRAM-9

**AIM:** Store a list of first names. Count the occurrences of 'a' within the list

### ALGORITHM:

1. Read a list of names in a list
2. Initialize list = []
3. Initialize count=0
4. For name in list  
    Count=count+name.count('a')
5. print count

### SOURCE CODE:

```
list=[]
n=int(input('Enter the Limit:'))
for i in range(0,n):
    fname=input('Enter the first name:')
    list.append(fname)
print('Full List',list) count=0
for name in list:
    count=count+name.count('a')
print('occurance of a:',count)
```

### RESULT:

Program is executed and output is obtained

### OUTPUT:

```
Enter the Limit:3
Enter the first name:amal
Enter the first name:samson
Enter the first name:arnold
Full List ['amal', 'samson', 'arnold']
occurance of a: 4
```

**PROGRAM-10**

**AIM:** Get a string from an input string where all occurrences of first character replaced with '\$'

**ALGORITHM:**

1. read a string
2. assign \$ to first element  
    '\$'+str[1:]
3. print string

**SOURCE CODE:**

```
str=input('Enter a string:')  
str='$'+str[1:] print('String is :',str)
```

**RESULT:**

Program is executed and output is obtained

**OUTPUT:**

```
Enter a string:program  
String is : $rogram
```

## PROGRAM – 11

**AIM:** From a list of integers, create a list removing even numbers.

### ALGORITHM:

1. Read a list of integers in list.
2. Initialize a list, oddlist=[] 3. For each i in list do If list[i] mod 2 != 0 then
3. Append list[i] to oddlist
4. Print new list without even numbers
5. Print oddlist

### SOURCE CODE:

```
list=[]
n=int(input("Enter the no of elements:"))
print("numbers are:")
for i in range(0,n):
    number=int(input())
    list.append(number)
    oddlist=[]
for i in range(0,n):
    if((list[i]%2)!=0):
        oddlist.append(list[i])
print(oddlist)
```

### RESULT:

Program is executed and output is obtained

### OUTPUT:

```
Enter the no of elements:5
numbers are:
11
12
13
14
15
[11, 13, 15]
```

**PROGRAM-12**

**AIM:** Enter 2 lists of integers. Check

- (a) Whether list are of same length
- (b) whether list sums to same value
- (c) whether any value occur in both

**ALGORITHM:**

1. Read two list of numbers list1 and list2.
2. //check if the lengths of the two lists are equal.  
If length(list1)=length(list2) then  
Print the lists are same length Else:  
Print the lists are not same length
3. Print sum of elements in both list1 and list2 using sum() method.
4. //check sum of the two lists are same. If sum(list1)=sum(list2) then Print the sum of the lists are same Else:  
Print the sum of lists are not same
5. Initialize list common=[]
6. For each value in list1 do If value in list2 then  
Append value to common
7. //check if the common list is empty. If common then Print common value in both lists Else:  
Print no common values in both lists

**SOURCE CODE:**

```
list_1=input("Enter the first list of integers(seperated by comma):")
list1=[int(x) for x in list_1.split(',')]
list_2=input("Enter the second list of integers(seperated by comma):")
list2=[int(x) for x in list_2.split(',')]
if len(list1)==len(list2):
print("The lists are same length",len(list1))
else:
```

```
    print("The list are not same length")
print("The sum of elements of list1:",sum(list1))
print("The sum of elements of list2:",sum(list2))
if sum(list1)==sum(list2):
    print("The sums of list are same")
else:
    print("The sums of lists are not same")
common=[]
for value in list1:
    if value in list2:
        common.append(value)
    if common:
        print("The common value in both list:",common)
else:
    print("No common value found in both list")
```

**RESULT:**

Program is executed and output is obtained

**OUTPUT:**

```
Enter the first list of integers(seperated by comma):2,3,4
Enter the second list of integers(seperated by comma):3,4,5
The lists are same length 3
The sum of elements of list1: 9
The sum of elements of list2: 12
The sums of lists are not same
The common value in both list: [3, 4]
```



**PROGRAM-13**

**AIM:** Write a python program to read two lists color-list1 and color-list2. Print out all colors from color-list1 not contained in color-list2.

**ALGORITHM:**

1. Read two list of colors in color\_list1 and color\_list2
2. Initialize list, list1=[]
3. //Append values from color\_list1 to list1  
    For each item in color\_list1 do  
        Append item to list1  
    Initialize list,list2=[]
1. //Append values from color\_list2 to list2
2. For each item in color\_list2 do  
    Append item to list2
3. Initialize list,result=[]
4. For each item in list1 do If item not in list2 then  
    Append item to result
5. Print result

**SOURCE CODE:**

```
list1=[]
list2=[]
n=int(input("enter the no.of colours in list 1:"))
print("colours are:")
for i in range(0,n):
    color=input()
    list1.append(color)
n=int(input("enter the no.of colours in list 2:"))
print("colours are:")
for i in range(0,n):
    color=input()
    list2.append(color)
```

```
set1=set(list1)
set2=set(list2)
print("Original set are:\n",list1,"\n",list2)
print("Colour difference:",set1-set2)
```

**RESULT:**

Program is executed and output is obtained

**OUTPUT:**

```
enter the no of colours in list 1:4
colours are:
red
green
yellow
blue
enter the no of colours in list 2:3
colours are:
black
green
purple
Original set elements are:
['red', 'green', 'yellow', 'blue']
['black', 'green', 'purple']
Colour difference: {'blue', 'yellow', 'red'}
```

**PROGRAM-14**

**AIM:** Find GCD of 2 numbers.

**ALGORITHM:**

1. Read two numbers
2. Initialize gcd=1 and n=minimum(num1,num2)+1
3. For I in range 1,n  
    If num1%i==0 and num2%i==0  
    Then gcd=i
4. Print gcd

**SOURCE CODE:**

```
num1=int(input('enter number1:'))
num2=int(input('enter number2:'))
gcd=1
n=min(num1,num2)+1
for i in range(1,n):
    if((num1%i==0) and (num2%i==0))
        gcd=i
print("GCD",num1,num2,'is',gcd)
```

**RESULT:**

Program is executed and output is obtained

**OUTPUT:**

```
enter number1:45
enter number2:1675
GCD 45 1675 is 5
```

**PROGRAM-15**

**AIM:** Generate all factors of a number.

**ALGORITHM:**

1. Read a Number n
  2. If  $n \% 2 == 0$  then print element
- Iterate upto  $i \leq n$

**SOURCE CODE:**

```
n=int(input("enter a number:"))
print("factors of",n,"are:")
for i in range(1,n):
    if(n%i==0):
        print(i)
```

**RESULT:**

Program is executed and output is obtained

**OUTPUT:**

```
enter a number:34
factors of 34 are:
1
2
17
```

## PROGRAM – 16

**AIM:** Find the sum of all items in a list

### ALGORITHM:

1. Read the number of elements in the list, n.
2. Initialize a list, list=[] 3. For i=0 to n-1:
3. Get an element from the user
4. Append element to list
5. //Find the sum of the list  
sum= sum(list)
6. Print sum

### SOURCE CODE:

```
list=[]
n=int(input("enter the limit:"))
for i in range(0,n):
    num=int(input("enter the number:"))
    list.append(num)
sum=0
for i in range(0,n):
    sum=sum+list[i]
print("sum is",sum)
```

### RESULT:

Program is executed and output is obtained

### OUTPUT:

```
enter the limit:5
enter the number:23
enter the number:45
enter the number:6
enter the number:98
enter the number:55
sum is 227
```

## PROGRAM-17

**AIM:** Generate Fibonacci series of N terms

### ALGORITHM:

1. Read the limit of the series, n.

2. Initialize a:= 0 and b:= 1

3. For i=0 to n-1:

    Print a

    Store the value of 'a' in a temporary variable temp = a

    Update 'a' with the value of 'b' a =b

    Update 'b' with the sum of temp and 'b' b= temp+b

### SOURCE CODE:

```
n=int(input("enter the limit:"))
a=0
b=1
print("fibonacci series: \n",a,"\n",b)
for i in range(1,n-1):
    c=a+b
    a=b
    b=c
print(c)
```

### RESULT:

Program is executed and output is obtained

### OUTPUT:

```
enter the limit:10
fibonacci series:
0
1
1
2
3
5
8
13
21
34
```

## PROGRAM-18

**AIM:** Add 'ing' at the end of a given string. If it already ends with 'ing', then add 'ly'

### ALGORITHM:

1. Read a string str
2. Check the last 3 letter are ing if yes

Str=str+"ly"

Else str=str+"ing"

3. Print str

### SOURCE CODE:

```
str=input("enter a string:")
```

```
if(str[-3:]=='ing'):
```

```
    str=str+'ly'
```

```
else:
```

```
    str=str+'ing' print(str)
```

### RESULT

Program is executed and output is obtained

### OUTPUT

```
enter a string:work
working
```

```
enter a string:working
workingly
```

**PROGRAM – 19**

**AIM:** Accept a list of words and return length of longest word.

**ALGORITHM:**

- 1.Read a list of words in list.
- 2.Initialize longest\_length:=0
- 3.For each word in list do
- 4.If length(word) > longest\_length then  
    Longest\_length= length(word) //store the word as the longest word  
    long\_word= word
- 5.Print longest\_word
- 6.Print longest\_length

**SOURCE CODE:**

```
list=[]
n=int(input("eenter the limit:"))
for i in range(0,n):
    el=input("enter the value:")
    list.append(el)
print(list)
long=len(list[0])
str=list[0]
for i in range(1,n):
    if(len(list[i])>long):
        str=list[i]
        long=len(str)
print("longest word:",str)
print("length:",long)
```

**RESULT:**

Program is executed and output is obtained.



**OUTPUT:**

```
enter the limit:3
enter the value:python
enter the value:data structure
enter the value:web development
['python', 'data structure', 'web development']
longest word: web development
length: 15
```

**PROGRAM-20**

**AIM:** Sort dictionary in ascending and descending order

**ALGORITHM:**

1. Read the number of key-value pairs in the dictionary, n.
2. Initialize a dictionary, dict={ }
3. For i=0 to n-1 do
  - Get the key from the user
  - Get the value from the user
  - Assign dict[key]= value
4. Print the dictionary
5. //Sort the dictionary by keys in ascending order dict\_asc= sort dict.items() by item[0]
6. Print dict\_asc
7. //Sort the dictionary by keys in descending order
  - Dict\_desc= sort dict.items() by item[0] in reverse
8. Print dict\_desc

**SOURCE CODE:**

```
n=int(input("Enter the number of key value pairs in the dictionary:"))
dict={}
for i in range(n):
    key=input("Enter the key:")
    value=input("Enter the value:")
    dict[key]=value
print("The dictionary is:",dict) dict_asc=sorted(dict.items(),key=lambda
item:item[0])
print("sorted dictionary in ascending order:",dict_asc)
dict_desc=sorted(dict.items(),key=lambda item:item[0],reverse=True)
print("sorted dictionary in descending order:",dict_desc)
```

**RESULT:**

Program is executed and output is obtained

**OUTPUT:**

```
Enter the number of key value pairs in the dictionary:3
Enter the key:orange
Enter the value:3
Enter the key:apple
Enter the value:1
Enter the key:banana
Enter the value:2
The dictionary is: {'orange': '3', 'apple': '1', 'banana': '2'}
sorted dictionary in ascending order: [('apple', '1'), ('banana', '2'), ('orange', '3')]
sorted dictionary in descending order: [('orange', '3'), ('banana', '2'), ('apple', '1')]
```

**PROGRAM-21**

**AIM:** Merge two dictionaries.

**ALGORITHM:**

1. Read the number of key-value pairs in first dictionary, n1.
2. Initialize a dictionary, dict1={ }
3. For i=0 to n-1 do  
    Get the key from the user  
    Get the value from the user  
    Assign dict1[key]= value
4. Read the number of key-value pairs in second dictionary, n2.
5. Initialize a dictionary, dict2={ }
5. For i=0 to n-1 do  
    Get the key from the user  
    Get the value from the user  
    Assign dict2[key]= value
6. Print dict1
7. Print dict2
8. //Create a copy of the first dictionary  
    merge\_dict= dict1.copy()
9. //Update the copy with the key value pairs from the second dictionary  
    merge\_dict.update(dict2)
10. Print "merged dictionary", merge\_dic

**SOURCE CODE:**

```
n1=int(input("ENter the number of key value pairs in first dictionary:"))
dict1={}
for i in range(n1):
    key=input("Enter key:")
    value=input("Enter value:")
    dict1[key]=value
n2=int(input("Enter the number of key value paies in second dictionary:"))
dict2={}
for i in range(n2):
```

```
key=input("Enter key:")
value=input("Enter value:")
dict2[key]=value print(dict1) print(dict2)
merge_dict=dict1.copy()
merge_dict.update(dict2) print("Merged
dictionary:",merge_dict)
```

## RESULT:

Program is executed and output is obtained

## OUTPUT:

```
Enter the nuber of key value pairs in first dictionary:3
Enter key:a
Enter value:1
Enter key:b
Enter value:2
Enter key:c
Enter value:3
Enter the number of key value paies in second dictionary:3
Enter key:d
Enter value:4
Enter key:e
Enter value:5
Enter key:f
Enter value:6
{'a': '1', 'b': '2', 'c': '3'}
{'d': '4', 'e': '5', 'f': '6'}
Merged dictionary: {'a': '1', 'b': '2', 'c': '3', 'd': '4', 'e': '5', 'f': '6'}
```

**PROGRAM-22**

**AIM:** Program to find the factorial of a number using function

**ALGORITHM:**

1. Read a number
2. Call Factorial function factorial(n)
3. Define factorial
  - If n==0 return 1
  - If n==1 return 1
  - Initialize fact=1
  - For i=1 to n+1 do fact=fact\*i
4. Print fact

**SOURCE CODE:**

```
def factorial(n):  
    if(n==0):  
        return 1  
    if(n==1):  
        return 1  
fact=1  
for i in range(1,n+1):  
    fact=fact*i  
    return fact  
num=(int(input("enter a number :")))  
fact=factorial(num)  
print("factorial is ",fact)
```

**RESULT:**

Program is executed and output is obtained

**OUTPUT:**

```
enter a number :5  
factorial is 120
```

## PROGRAM – 23

**AIM:** Generate all factors of a number using function

### ALGORITHM:

1. Read a number to num
2. Call fuction factors(n)  
    Def factors(n)  
    For I =1 to n+1 check  $n \% i == 0$  if true print i

### SOURCE CODE:

```
def factors(n):  
for i in range(1,n+1):  
if(n%i==0):  
    print(i)  
num=int(input("enter a number:"))  
print("factors are:")  
factors(num)
```

### RESULT:

Program is executed and output is obtained

### OUTPUT:

```
enter a number:104  
factors are:  
1  
2  
4  
8  
13  
26  
52  
104
```

## PROGRAM – 24

**AIM:** Write lambda functions to find the area of square, rectangle and triangle

### ALGORITHM:

1. Read length of square, a
2. Call lambda function area1(a) Print area1(a)
3. Read length (l) and width(w) of rectangle .
4. call lambda area2(l,w) Print area2(l,w)
5. Read height (h) and base (b) of triangle
6. lambda area3(b,h) Print area3(b,h) lambda functions
7. Define lambda function area1(x)  
Return  $x*x$
8. Define lambda function area2(x,y)  
Return  $x*y$
9. Define lambda function area3(x,y)  
Return  $0.5*x*y$

### SOURCE CODE:

```
area1=lambda x:x*x
area2=lambda x,y:x*y
area3=lambda x,y:0.5*x*y

a=int(input("Enter the length of the square:"))
print("Area of the square is",area1(a))
l=int(input("Enter the length of the rectangle:"))
w=int(input("Enter the width of the rectangle:"))
print("Area of the rectangle is",area2(l,w))
h=int(input("Enter the height of the triangle:"))
b=int(input("Enter the base of the triangle:"))
print("Area of the triangle is",area3(h,b))
```

### RESULT:

Program is executed an output is obtained



**OUTPUT:**

```
Enter the length of the square:5
Area of the square is 25
Enter the length of the rectangle:6
Enter the width of the rectangle:4
Area of the rectangle is 24
Enter the height of the triangle:5
Enter the base of the triangle:7
Area of the triangle is 17.5
```

## PROGRAM – 25

**AIM:** Create class person with attribute name and age display the name and age of a particular person

### ALGORITHM:

1. Define a class person
2. Define a constructor that takes name and age as parameters
3. Define display function to print name and age of a person
4. Create an object of class person
5. call display function using object.display()

### SOURCE CODE:

```
class person:
def __init__(self,name,age):
    self.name=name
    self.age=age
def display(self):
    print("name is:",self.name)
    print("age is:",self.age)
p1=person("sanju",23)
p1.display()
```

### RESULT:

Program is executed and output is obtained

### OUTPUT:

```
name is: sanju
age is: 23
```

## PROGRAM-26

**AIM:** Create a class Publisher with attributes publisher id and publisher name. Derive class Book from Publisher with attributes title and author. Derive class Python from Book with attributes price and no\_of\_pages. Write a program that displays information about a Python book. Use base class constructor invocation and method overriding

### ALGORITHM:

1. Define a class publisher
2. Define a constructor that takes publisher\_id and publisher\_name as parameters.
3. Define a class ,book that inherits from publisher.
4. Define a constructor that takes publisher\_id,publisher\_name,title and author as Parameters.
5. Define a class python, that inherits from book.
6. Define a constructor that takes publisher\_id,publisher\_name,title and author, Price and no\_of\_pages a parameters.
7. Define a function display\_info with parameter self.
8. Read publisher id,publisher name,book title,author name,book price and number of pages.
9. Create a object of python class.
10. Call the function display\_info and display book information

### SOURCE CODE:

```
class Book(Publisher):  
    def  
__init__(self,name,title,author):  
    super().__init__(name)  
    self.title=title  
    self.author=author  
  
class Python(Book):  
    def  
__init__(self,name,title,author,price,no_of_pages):  
  
    super().__init__(name,title,author)  
    self.price=price
```

```
        self.no_of_pages=no_of_pages
def display(self):
print("publishername:",self.name,"\n
", "book title:",self.title,"\n", "book
author:",self.author,"\n", "book
price",self.price,"\n", "no_of_pages:"
,self.no_of_pages)
a=Python("Thomas", "python
fundamentals", "mark", 100, 200)
a.display()
```

**RESULT:**

Program is executed and output is obtained

**OUTPUT:**

```
publishername: Thomas
book title: python fundamentals
book author: mark
book price 100
no_of_pages: 200
```

## PROGRAM-27

**AIM:** Define a class to represent a bank account. Include the following details like name of the depositor, account number, type of account, balance amount in the account. Write methods to assign initial values, to deposit an amount , withdraw an amount after checking the balance, to display details such as name, account number, account type and balance

### ALGORITHM:

1. Define a class bank.
2. Define a function create with parameter self.
3. Define a function deposit with parameter self.
4. Define a function withdraw with parameter self.
5. Create a empty list, bank=[]
6. Print menu options.
1. Ask the user to enter a choice :
  - If choice is 1 then
    - Create an object of bank class. Call the create function. Append account to bank list. Else if choice 2 then
    - Set a flag to 1
    - Ask the user to enter an account number to search. For account in bank do
    - If account no == user input then
    - Set flag to 1
    - Break the loop. If flag = 1 then
    - Call the deposit function
    - Else:
    - Print “no such account” Else if choice is 3 then
    - Set a flag to 0
    - Ask the user to enter an account number
    - For account in bank do
    - If account no == user input then
    - Set flag to 1
    - Break the loop
    - If flag =1 then
    - Call the withdraw function
    - Else:
    - Print “no such account” Else if choice is 4 then
    - Set a flag to 0

Ask the user to enter an account number

For account in bank do

If account no == user input then

Set flag to 1

Break the loop

If flag = 1 then

Print your

balance Else:

Print "no such account" Else:

Print "invalid choice"

Create(self)

1. Read account no as input.

2. Read account holder name.

3. While True do

Read the FD amount

If FD<500 then

Print "deposit more then 500" Else:

Print "Account created"

deposit(self)

1. While True do

Read the deposit amount

If deposit amount is not a multiple of 100 then

Print "enter multiples of 100" Else:

Print "Amount deposited"

withdraw(self)

1. While True do

Read withdrawal amount

If withdrawal amount > FD amount then

Print "entered amount exceeds balance" Else If withdrwal amount is not a multiple of

100 then

Print "can only withdraw amount which is multiple of 100" Else:

FD - withdrawal amount

Print "Amount withdraw

## SOURCE CODE:

ClassBank:

```
def create(self):
```

```
    self.no = int(input("Enter account number: "))
```

```
    self.name=input("Enter account holder name: ")
```

```
while True:
```

```
    self.fd=int(input("Enter FD amount: "))
```

```
    if self.fd<500:
```

```
        print("Please deposit more than 500")
```

```
    else:
```

```
        self.fd=self.fd
```

```
        print("Account created!")
```

```
        break
```

```
def deposit(self):
```

```
    while True:
```

```
        namount = int(input("Enter amount to be deposited: "))
```

```
        if namount% 100==0:
```

```
            self.fd = namount
```

```
            print("Amount deposited!")
```

```
            break
```

```
        else:
```

```
            print("Enter multiples of 100!")
```

```
def withdraw(self):
```

```
    while True:
```

```
        w_amount=int(input("Enter money to be withdrawn:"))
```

```
        if w_amount>self.fd:
```

```
            print("Entered amount exceeds balance")
```

```
elif w_amount% 100!=0:
```

```
    print("Can only withdraw amount which is multiple of 100!")
```

```
elif self.fd-w_amount<500:
```

```
    print("can only withdraw money with minimum balance 500")
```

```
else:
```

```
self.fd=self.fd
w_amountprint("Amount withdrawn!")
break
bank = []
while True:
    print("1. A/C creation", "2. Money deposit", "3. Withdraw money", "4.Checkbalance")
    choice =int(input("Enter choice: "))
    if choice == 1:
        account = Bank()
        account.create()
        bank.append(account)
    elif choice == 2:
        flag = 0
        sacno = int(input("Enter account number to search:"))
        for account in bank:
            if account.no == sacno:
                flag=1
                break
            if flag==1
print("Welcomeaccount
t.name)
account.deposit()
else:
    print("No such account!")    elif
choice == 3:
    flag = 0
    sacno = int(input("Enter account number to search: "))    for
account in bank:
    if account.no == sacno:
        flag = 1
        break
    if flag == 1:
        print("Welcome", account.name)
account.withdraw()
else:
    print("No such account!")
```



```
elif choice == 4:
    flag = 0
    sacno = int(input("Enter account number to search: "))
for account in bank:
    if account.no == sacno:
        print("Welcome", account.name)
        print("Balance: ", account.fd)
elif choice == 5:
    break
```

## RESULT:

Program is executed and output is obtained

## OUTPUT:

```
1. A/C creation 2. Money deposit 3. Withdraw money 4. Checkbalance
Enter choice: 1
Enter account number: 12345
Enter account holder name: abcd
Enter FD amount: 345000
Account created!
1. A/C creation 2. Money deposit 3. Withdraw money 4. Checkbalance
Enter choice: 4
Enter account number to search: 12345
Welcome abcd
Balance: 345000
1. A/C creation 2. Money deposit 3. Withdraw money 4. Checkbalance
Enter choice: 2
Enter account number to search: 12345
Welcome abcd
Enter amount to be deposited: 25000
Amount deposited!
```

## PROGRAM-28

**AIM:** Write a python program to read each row from a given CSV file and print list of string

### ALGORITHM:

1. import csv file
2. open csv file in write mode
3. write contents into csv file using writerow() function
4. close csv file
5. open csv file in read mode
6. print each row

### SOURCE CODE:

```
import csv
csvfile=open('example.csv','w',newline='')
writer=csv.writer(csvfile)
writer.writerow(['name','age','occupation'])
writer.writerow(['sanju','30','cricketer'])
writer.writerow(['ronaldo','37','footballer'])
csvfile.close()
csvfile=open('example.csv','r')
reader=csv.reader(csvfile)
for row in reader:
    print(row)
csvfile.close()
```

### RESULT:

Program is executed and output is obtained

### OUTPUT:

```
['name', 'age', 'occupation']
['sanju', '30', 'cricketer']
['ronaldo', '37', 'footballer']
```