SLOT ONE

1. Write a python program which accept the radius of a circle from the user and compute the area.

   PROGRAM

   ```
   Radius = float(input ("Enter the radius:"))
   Area =3.14*radius*radius
   print ("Area of circle :",Area)
   ```

   OUTPUT:

   ```
   Enter the radius:4
   Area of circle: 50.24
   ```

2. Program to find the biggest of three numbers.

   PROGRAM

   ```
   num1=input("Enter the first number:")
   num2=input("Enter the second number:")
   num3=input("Enter the third number:")
   Biggest=max(num1,num2,num3)
   print("The biggest number is:",biggest)
   ```

   OUTPUT:

   ```
   Enter the first number :10
   Enter the second number :25
   Enter the third number:20
   The largest number is: 25
   ```

3. Write a program which accepts a sequence of comma-separated numbers from user and generate a list and a tuple with those numbers.

   PROGRAM

   ```
   values=input("Enter the sequence of numbers:")
   list=values.split(",")
   print(list)
   print("Tuple:",tuple(list))
   ```

   OUTPUT

   ```
   Enter the sequence of numbers:5,2,4,99
   ['5', '2', '4', '99']
   Tuple: ('5', '2', '4', '99')
   ```

4. Write a python program to accept a filename from the user print the extension of that.

   PROGRAM

   ```
   fname=input("Enter the filename:")
   ext=fname.split(".")
   print("The extension of the file is",ext[-1])
   ```

   OUTPUT

   ```
   Enter the filename :Akhila.py
   ```

The extension of the file is py

5. Write a python program to display the first and last color s from the list.

PROGRAM

```
color=input("enter colors:")
col=color.split(" ")
print("the colors are",col)
print("first color is",col[0])
print("last color is",col[-1])
```

OUTPUT:

```
enter colors:RED BLUE BLACK
the colors are ['RED', 'BLUE', 'BLACK']
first color is RED
last color is BLACK
```

6. Write a python program to get a string and print the given string where all occurrences of its first char have been changed '$', except the first char itself.

PROGRAM

```
s=input("Enter the string:")
c=s[0]
print(s.replace(c,'$'))
```

OUTPUT

```
Enter the string :computer
$omputer
```

7. Write a python program to swap the first two characters of two string

PROGRAM

```
str1=input("Enter the first string:")
str2=input("Enter the second string:")
print("First string:",str1)
print("Second string:",str2)
str1_new=str2[0]+str2[1]+str1[2:]
str2_new=str1[0]+str1[1]+str2[2:]
print("First string after replacing first two character:",str1_new);
print("Second string after replacing first two character:",str2_new);
```

OUTPUT

```
Enter the first string: malayalam
Enter the second string: english
First string: malayalam
Second string: english
First string after replacing first two character :enlayalam
Second string after replacing first two character: maglish
```

8. Write a python program to get a single string from two given strings ,separated by a space and swap the first two characters of each string

PROGRAM

```
str1=input("Enter the string:")
str2=input("Enter the string:")
print(str1)
print(str2)
new=str2[0]+str2[1]+str1[2:]
new1=str1[0]+str1[1]+str2[2:]
print("new string is:",new,' ',new1)
```

OUTPUT

```
Enter the string:python
Enter the string:database
python
database
new string is: dathon   pytabase
```

9. Write a python program to change a given string to a new string where the first and last chars have been changed.

PROGRAM

```
str1=input("Enter the string:")
new=str1[-1]+str1[1:-1]+str1[0]
print(new)
```

OUTPUT

```
Enter the string:python
nythop
```

10. Write a python script that takes input from user and display that input backs in upper and lower cases

PROGRAM

```
s=input(“Enter a string:”)
print("string in upper case:",s.upper())
s=input("Enter another string:")
print("string in upper case:",s.lower())
```

OUTPUT

```
Enter a string:python
string in upper case: PYTHON
Enter another string:DATA BASE
string in upper case: data base
```

11. Write a python program to get the largest number from a list

PROGRAM

```
values=input("Enter a sequence of nos:");
```

```
list=values.split(" ")
print(list)
print("The largest number is:",max(list))
```

OUTPUT

```
Enter a sequence of nos:20 25 29
['20', '25 ‘, '29']
The largest number is: 29
```

12. Wite a program to clone or copy a list

    PROGRAM

```
v=input("Enter the list:")
list=v.split(" ")
print(list)
print("COPY OF LIST IS:",list.copy())
```

    OUTPUT

```
Enter the list: 4 2 8 7 5
['4', '2', '8', '7', '5']
COPY OF LIST IS: ['4', '2', '8', '7', '5']
```

SLOT TWO

1. A company decided to give bonus of 5% to employee in his/her year of service is more than 5 years?
   Ask user for their salary and year of service and print the net bonus amount

   PROGRAM:

```
Sal =int(input("Enter the salary:"))
yos =int(input("Enter year of service:"))
if (yos > 5):
   bonus=sal*0.5
   print("bonus",bonus)
else:
   print ("no")
```

   OUTPUT:

```
Enter the salary:1500
Enter year of service:6
bonus 750.0
```

2. Take values of length and breadth of a rectangle from user and check if it is square or not

PROGRAM:

```
length=input("Enter the length:")

breadth=input("Enter the breadth:")

if( length == breadth):

   print("square")

else:

   print("not a square")
```

OUTPUT:

```
Enter the length:10
Enter the breadth:10
Square
```

3. Take two int values from user and print greatest among them?

PROGRAM:

```
m=input("Enter the first number:")
n=input("Enter the second number:")
if(m == n):
   print("both are equal")
elif(m < n):
   print("the greater number is:",n)
elif(m > n):
   print("the greater number is:",m)
```

OUTPUT:

```
Enter the first number:10
Enter the second number:7
The greater number is: 10
```

4. A shop will discount of 10% if the cost of purchased quantity is more than 1000'
   Ask user for quantity
   Suppose,one unit will cost 100
   Judge and print total cost for grading system.

PROGRAM:

```
quantity=int(input("Enter the quantity:"))
total cost=quantity*100
if(quantity > 1000):
   total cost=total cost-(total cost*.10)
   print ("total cost:",total cost)
else:
   print (total cost)
```

OUTPUT:

```
Enter the quantity:1500
total cost: 135000.0
```

5.A school has following rules for grading system:

a. Below 25 - F
b. 25 to 45 - E
c. 45 to 50 - D
d. 50 to 60 - C
e. 60 to 80 - B
f. Above 80 - A

Ask user to enter marks and print the corresponding grade

PROGRAM:

```
s=int(input("Enter the mark:"))

if( s > 80):

   print("grade is A")

elif( s> 60 and s <= 80):

   print("Grade is B")

elif(s > 50 and s <= 60):

   print("grade is c")

elif(s > 45 and s <= 50):

   print("grade is d")

elif(s > 50 and n <= 24):

   print("grade is e")

elif(s < 25):
```

```
   print("F")
```

OUTPUT:

```
Enter the mark:95
grade is A
```

6.Take input of age of 3 people by user and determine oldest and youngest among them.

PROGRAM:

```
Age1=input ("Enter the first age:")
Age2=input ("Enter the second age:")
Age3=input ("Enter the third age:")
if(Age1 < Age2 and Age1 < Age3):
   print("The youngest age is:",Age1)
elif(Age2 < Age1 and Age2 < Age3):
   print("The youngest age is:",Age2)
elif(Age3 < Age1 and Age3 < Age2):
   print("The youngest age is:",Age3)
else:
   print("Same age")
if(Age1 > Age2 and Age1 > Age3):
   print("The oldest age is:",Age1)
elif(Age2 > Age1 and Age2 > Age3):
   print("The oldest age is:",Age2)
elif(Age3 > Age1 and Age3 > Age2):
   print("The oldest age is:",Age3)
else:
   print("Same age")
```

OUTPUT:

```
Enter the first age:60
Enter the second age:11
Enter the third age:20
The youngest age is: 11
The oldest age is: 60
```

7.A student will not be allowed to sit in exam if his/her attendence is less than 75%.
Take following input from user
Number of classes held
Number of classes attended.
And print
percentage of class attended
Is student is allowed to sit in exam or not.

PROGRAM

```
a=int(input("Enter the total no.of class:"))
b=int(input("Enter the total no.of you have attended:"))
print(b)
percentage=a*b/100
if(percentage<75):
    print("not allowed")
else:
   print("allowed to exam and and student percentage:",percentage)
```

OUTPUT

```
Enter the total no.of class:100
Enter the total no.of you have attended:89
89
allowed to exam and and student percentage: 89.0
```

8.Write a program to check if a year is leap year or not
If a year is divisible by 4 then it is leap year but if the year is century year like 2000,1900,2100 then it must be divisible by 400?

PROGRAM

```
year=int(input("Enter the year:"))
if year%400==0:
   print(str(year)+"is a leap year:")
elif year%100==0:
   print(str(year)+"is not leap year")
elif year%4==0:
   print(str(year)+"is leap year")
else:
   print(str(year)+"is not leap year")
```

OUTPUT:

```
Enter the year:2021
2021is not leap year
```

9.Ask user to enter age,gender (M or F) ,martial status (Y or N) and then using following rules print their place of service.
If employee is female,then we will work only in urbon area if employee is a male and age is in between 20 to 40 then he may work in anywhere.
If employee is male and age is in between 40 to 50 then he will work in urbon areas only.And any other input of age should print “ERROR”

PROGRAM

```
age=int(input("Enter the age:"))
gender=input("Enter the gender either M or F:")
status=input("Enter the martial status single(s)/married(m):")
status.upper()
if( gender.upper() == "F"):
   print("work only urban area")
```

```
elif( gender.upper()== "M") and (age>=20 and age<40):
    print("you can work anywhere")
elif(gender.upper() =="M" ) and (age>40 and age<60):
    print("You can only urban area")
else:
   print("ERROR")
```

OUTPUT

```
Enter the age:45
Enter the gender either M or FM:M
Enter the martial status single(s)/married(m) :s
You can work in urban area
```

10.Take inputs from user to make a list. Again take one input from user and search it in the list and delete that element, if found , Iterate over list using for loop.

PROGRAM:

```
list=[1,2,3,4]
print(list)
search=int(input("Enter the number:"))
for i in range(len(list)):
   if(list[i]==search):
      print("Element found")
      del list[i]
      print("after deletion",list)
      break;
else:
   print("not found")
```

OUTPUT:

```
[1, 2, 3, 4]
Enter the number:2
Element found
after deletion [1, 3, 4]
```

11.You are given with a list of integer elements.Make a new list which will store square of element of previous list.

PROGRAM

```
list=[5,8,5,4]
list1=[]
for i in list:
   list1.append(i**2)
print(list)
print(list1)
```

OUTPUT

```
[5, 8, 5, 4]
[25, 64, 25, 16]
```

12..Using range(1,101),make two list, one containing all even numbers and other containing odd number

PROGRAM:

```
even=[]
odd=[]
for i in range(1,101):
   if (i%2)==0:
      even.append(i)
   else:
      odd.append(i)
print(“EVEN NUMBERS ARE:”,even)
print(“ODD NUMBERS ARE:”,odd)
```

OUTPUT:

EVEN NUMBERS ARE:[2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100]
ODD NUMBERS ARE:[1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99]

13.From the two lists obtained in previous question, make new lists, containing only numbers which are divisible by 4 and 6 in separate list.

PROGRAM:

```
even=[]
odd=[]
list1=[]
list2=[]
list3=[]
list4=[]
for i in range(2,101,2):
   even.append(i)
   if(i%4)==0:
      list1.append(i)
   Elif(i%6) ==0:
      list2. append(i)
for i in range(1,101,2):
   odd.append(i)
   if(i%3)==0:
      list3.append(i)
    Elif(i%5) ==0:
      list4. append(i)
print("EVEN NUMBERS ARE:",even)
print("ODD NUMBERS ARE:",odd)
print("DIVISIBLE BY 4:",list1)
print("DIVISIBLE BY 6:",list2)
print("DIVISIBLE BY 3:",list2)
```

```
print("DIVISIBLE BY 5:",list2)
```

OUTPUT

```
EVEN NUMBERS ARE: [2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100]
ODD NUMBERS ARE: [1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99]
DIVISIBLE BY 4:[4,8,12,16,20,24,28,32,36,40,44,48,52,56,60,64,68,72,76,80,84,88,92,96,100]
DIVISIBLE BY 6: [6, 18, 30, 42, 54, 66, 78, 90]
DIVISIBLE BY 3:  [3,9,15,21,27,33,39,45,51,57,63,69,75,81,87,93,99]
DIVISIBLE BY 5: [5, 25, 35, 55, 65, 85, 95]
```