Program : 1

Aim: Display future leap years from current year to a final year entered by user.

Algorithm

steps:

1. Start
2. Read limit of year
3. Print current leap year + 4 upto limit
4. Stop

Program code

```
n=int(input("Enter the year upto which
  leap years are to be displayed:"))
# printing the leap year using for loop.
for in range (2024, n, 4):
 Print (i)
```

Output

Enter the year upto which leapyears are to be displayed : 2030

2024

2028

Program : 2

Aim: Generate positive list of numbers from a given list of integers

Algorithm

Steps

1. Start
2. Declare a list
3. Read the no of elements
4. Read the integers
5. print integers greater than zero
6. Stop

Program code

```
list = []    # Declaring list
num = int(input("Enter the number of
    elements:"))
for i in range(0,n):
        list.append(int(input("Enter the
                integer:")))
print("positive integers")
for  i in list:  # checking positive integers
if(i>0):
        print(i,end=" ")
```

Output

```
Enter the number of elements: 6
Enter the integers : -3
Enter the integers : 2
Enter the integers: 5
Enter the integers: -1
Enter the integers: -6
Enter the integers: 4
Printing the positive integers
 2 5 4
```

Program : 3

Aim: Generate the square of N numbers for the given list

Algorithm

Steps

1. Start
2. Declae a list
3. Read the number of elements
4. Read the numbers
5. Print the square of numbers
6. Stop

Program code

```
list = []  # declaring the list
n = int(input("Enter the no of elements"))
# reading the numbers
for i in range(0,n):
    list.append(int(input("Enter the numbe
                          :")))
print("printing the squares of the
      numbers: ")
for i in list:  # printing the squae
print(i*i, end=" ")
```

Output

```
Enter the number of elements :5
Enter the number :1
Enter the number :2
Enter the number :3
Enter the number :4
Enter the number:5
Printing the squares of numbers.
1 4 9 16 25
```

Program : 4

Aim: Form a list of vowels selected from a given word.

Algorithm

Steps:

1. start
2. Declare a list
3. Initialize a list of vowels
4. Read a string
5. add letters which are in vowels and not in list to be list[]
6. print List
7. stop

Program code

```
List = []
Vowels = ['a','e','i','o','u']
Str = input("Enter any word:")
for i in Str :  # checking whether the
letter is vowel or not
if (i in vowels) and (i not in list)
        list.append(i)
Print("Vowels present in given word"
                                List)
```

Output

Enter any word: monday Calculate

Vowels present in given word : ['o','a']

Program : 5

Aim: List ordinal value of each element of a word

Algorithm

Steps

1. Start
2. Read a String
3. print the ordinal value of each letter using ord() function
4. Stop

Program

```
String = input ("Enter any word: ")
For i in String :
# printing ordinal value
print(" ordinal value of', i,'is', ord(i)
```

Output

```
Enter any word: happy
ordinal value of h is 104
ordinal value of a is 97
ordinal value of p is 112
ordinal value of p is 112
ordinal value of y is 121
```