Output

1. Enter the present year : 2020
Enter the last year : 2050
leap years between 2020 - 2050
2020
2024
2028
2032
2036
2040
2044
2048

Cycle 1.1

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

Algorithm.

① Start
② Read present year
③ Read future year
④ For year in range (present year, future year):
If (y%400 == 0 or year%4==0 and year%100!=0):
print year.
⑤ Stop.

Program.

```
p = int(input("Enter the present year :"))
n = int(input("Enter the last year :"))
print("leap years between", p, "-", n)
for y in range(p,n):
    if ((y%400==0) or (y%4==0 and y%100!=0)):
        print(y)
```

Output

2. Enter the list size : 6

Enter integers
-1
1
-2
2
-3
3.

Entered list is : [-1, 1, -2, 2, -3, 3]
list of POSITIVE integers : [1, 2, 3]

2. Generate positive list of numbers from a given list of integers.

Algorithm.

① Start
② enter size
③ enter element
④ If element >0
element added to positive list
⑤ If size reach
stop
⑥ else goto ③

Program.

```
integers =[]
posint   =[]
n = int(input ("Enter the list size : "))
print ("\n Enter integers")
for i in range (0,n):
    item = int(input())
    if item>0:
        posint.append (item)
    integers.append (item)
print ("Entered list is :", integers)
print (" list of POSITIVE integers :", posint)
```

Output

3. Enter the list size : 5

Enter integers

1

2

3

4

5

entered list is : [1, 2, 3, 4, 5]

square : [1, 4, 9, 16, 25]

3. Generate the square of N numbers for the given list.

Algorithm.

① Start

② enter size

③ enter elements

④ square = element * element

⑤ square added to list

⑥ if size reach

stop

⑦ else

goto ③

program.

```
integers = []
square = []
N = int(input("Enter the list size : "))
print("Enter integers")
for i in range(0, N):
    item = int(input())
    integers.append(item)
    sq = item * item
    square.append(sq)
print("Entered list is :", integers)
print("square :", square)
```

Output

4. Enter a coord : ASSIGNMENT

vowels are : ['A', 'I', 'E']

4. Form a list of vowels selected from a given word.

Algorithm.

① Start

② Enter a coord

③ for char in coord:

if (char = 'A' or char = 'E' or char = 'I', or char = 'O',
or char = 'U' or char = 'a' or char = 'e' or char = 'i'
or char = 'o' or char = 'u'):

add char to list

④ print

⑤ Stop.

program

```
vowels = []
inp = input("Enter a word : ")
for ch in inp:
    if (ch == 'A' or ch == 'E' or ch == 'I' or ch == 'O' or ch == 'U'
        or ch == 'a' or ch == 'e' or ch == 'i' or ch == 'o' or ch == 'u'):
        vowels.append(ch)
print("vowels are :", vowels)
```

Output

5 Enter a word : PROJECT

Elements are : ['P', 'R', 'O', 'J', 'E', 'C', 'T']

ordinal values are : [80, 82, 79, 74, 69, 67, 84]

5. List ordinal value of each element of a word

Algorithm.

① Start

② Read word

③ for char in word :

ord(char)

④ print

⑤ Stop.

Program.

```
original = []
ordinal = []
word = input("Enter a word:")
for ch in word :
    o = ord(ch)
    original.append(ch)
    ordinal.append(o)
print("Elements are :", original)
print("ordinal values are :", ordinal)
```