1. **Python Program for n-th Fibonacci number**

```
def Fibonacci(n):
        if n<= 0:
                print("Incorrect input")
        # First Fibonacci number is 0
        elif n == 1:
                return 0
        # Second Fibonacci number is 1
        elif n == 2:
                return 1
        else:
                return Fibonacci(n-1)+Fibonacci(n-2)
print(Fibonacci(10))
```

2. **Python Program for How to check if a given number is the Fibonacci number?**

```
import math
def isPerfectSquare(x):
        s = int(math.sqrt(x))
        return s*s == x
def isFibonacci(n):

        # n is Fibonacci if one of 5*n*n + 4 or 5*n*n - 4 or both
        # is a perfect square
        return isPerfectSquare(5*n*n + 4) or isPerfectSquare(5*n*n - 4)

# A utility function to test above functions
for i in range(1,11):
        if (isFibonacci(i) == True):
                print (i,"is a Fibonacci Number")
        else:
                print (i,"is a not Fibonacci Number ")
```

3. **Python Program for n\'th multiple of a number in Fibonacci Series**

```
def findPosition(k, n):
        f1 = 0
        f2 = 1
        i =2;
        while i!=0:
                f3 = f1 + f2;
```

```
            f1 = f2;
            f2 = f3;

            if f2%k == 0:
                  return n*i

            i+=1

      return


# Multiple no.
n = 5;
# Number of whose multiple we are finding
k = 4;

print("Position of n\'th multiple of k in"
                              "Fibonacci Series is", findPosition(k,n))
```

4. **Program to print ASCII Value of a character**

```
c = 'g'
# print the ASCII value of the assigned character in c
print("The ASCII value of '" + c + "' is", ord(c))
```

5. **Python Program for Sum of squares of first n natural numbers**

```
N = int(input("Enter value of N: "))

# calculating sum of square
sumVal = 0
for i in range(1, N+1):
   sumVal += (i*i)

print("Sum of squares = ", sumVal)
```

6. **Python Program for cube sum of first n natural numbers**

```
def sumOfSeries(n):
      sum = 0
```

```
        for i in range(1, n+1):
            sum +=i*i*i

        return sum


# Driver Function
n = 5
print(sumOfSeries(n))
```

7. **Python Program to find the sum of array**

```
def _sum(arr):
        sum=0

        for i in arr:
            sum = sum + i

        return(sum)

# driver function
arr=[]
# input values to list
arr = [12, 3, 4, 15]

# calculating length of array
n = len(arr)

ans = _sum(arr)

# display sum
print ('Sum of the array is ', ans)
```

8. **Python Program to find the largest element in an array**

```
def largest(arr,n):

        # Initialize maximum element
        max = arr[0]

        # Traverse array elements from second
        # and compare every element with
```

```
        # current max
        for i in range(1, n):
                if arr[i] > max:
                        max = arr[i]
        return max

# Driver Code
arr = [10, 324, 45, 90, 9808]
n = len(arr)
Ans = largest(arr,n)
print ("Largest in given array is",Ans)
```

9. **Python Program for array rotation**

```
def rotateArray(arr, n, d):
        temp = []
        i = 0
        while (i < d):
                temp.append(arr[i])
                i = i + 1
        i = 0
        while (d < n):
                arr[i] = arr[d]
                i = i + 1
                d = d + 1
        arr[:] = arr[: i] + temp
        return arr
# Driver function to test above function
arr = [1, 2, 3, 4, 5, 6, 7]
print("Array after left rotation is: ", end=' ')
print(rotateArray(arr, len(arr), 2))
```

10. **Python Program for Reversal algorithm for array rotation**

```
def reverseArray(arr, start, end):
   while (start < end):
      temp=arr[start]
      arr[start]=arr[end]
      arr[end]=temp
      start=start+1
      end=end-1
```

```
def Rotate(a, d):
    if d == 0:
        return
    n = len(a)
    d = d % n
    reverseArray(a, 0, d-1)
    reverseArray(a, d, n-1)
    reverseArray(a, 0, n-1)

def printArray(arr):
    for i in range(0, len(arr)):
        print(arr[i],end=" ")

a= [10, 20, 13, 24, 53, 6, 17]
n = len(a)
d = 2
printArray(a)
Rotate(a, d)
print("\nShifted array: ")
printArray(a)
```

11. Python Program to Split the array and add the first part to the end

```
def splitArr(arr, n, k):
        for i in range(0, k):
                x = arr[0]
                for j in range(0, n-1):
                        arr[j] = arr[j + 1]


                arr[n-1] = x
arr = [12, 10, 5, 6, 52, 36]
n = len(arr)
position = 2
splitArr(arr, n, position)
for i in range(0, n):
```

```
print(arr[i], end = ' ')
```