PROGRAM2

BCS358D

FIBONACCI SEQUENCE

DEFINED AS A FUNCTION F AS FN = FN-1 + FN-2. WRITE A PYTHON PROGRAM WHICH ACCEPTS A VALUE FOR N (WHERE N >0) AS INPUT AND PASS THIS VALUE TO THE FUNCTION. DISPLAY SUITABLE ERROR MESSAGE IF THE CONDITION FOR INPUT VALUE IS NOT FOLLOWED.

```
def fn(n):
    if n <= 2:
        return n – 1
    else:
        return fn(n-1) + fn(n-2)
try:
    num = int(input("Enter a number : "))
    if num > 0:
        print(f' fn({num}) = {fn(num)}')
    else:
        print("Input should be greater than 0")
except ValueError:
    print("Try with numeric value")
```

BINARY TO DECIMAL & OCTAL TO HEXADECIMAL CONVERSION

DEVELOP A PYTHON PROGRAM TO CONVERT BINARY TO DECIMAL, OCTAL TO HEXADECIMAL USING FUNCTIONS.

```
def bin2Dec(val):
    return int(val, 2)
def oct2Hex(val):
    dval=int(val, 8)
    return hex(dval)
try:
    num1 = input("Enter a binary number : ")
    print(bin2Dec(num1))
except ValueError:
    print("Invalid literal in input with base 2")
try:
    num2 = input("Enter a octal number : ")
    print(oct2Hex(num2))
except ValueError:
    print("Invalid literal in input with base 8")
```