##

1. Implement a program which will take 2 parameters as input 'a' and 'b' and return a^b as output. Eg. If a is 5 and b is 3, then the output will be 5^3 = 125. Bonus - Implement this program using recursion. Constraints: 1<= a,b <= 10
2. Implement a program which will take an array as an input and remove the duplicates from it. Eg. If [1,2,3,4,4,2,1,5,1,4,5] is the input, then the output should be [1,2,3,4,5]. Bonus - Implement this function in O(nlogn) time complexity and O(1) space complexity. Constraints: 1 <= array length <= 1000000
3. Implement a program which will take 1 parameter as input and print Fibonacci numbers up to that input. Constraints: 1 <= n <= 1000000

##

#ANSWERS:

1)

```
def power(a, b):

        if (b == 0): return 1
        elif (int(b % 2) == 0):
                return (power(a, int(b / 2)) *
                        power(a, int(b / 2)))
        else:
                return (a * power(a, int(b / 2)) *
                                power(a, int(b / 2)))
```

3)

```
def Fibonacci(n):
        if n<0:
                print("Enter number greater pr equal to zero”)
        elif n==0:
                return 0
        elif n==1:
                return 1
        else:
                return Fibonacci(n-1)+Fibonacci(n-2)
```