**Assignment 6**

**Question 1**

A Barua number is a number that consists of only zeroes and ones and has only one 1. Barua’s

number will start with 1. Given numbers, find out the multiplication of the numbers. Note: The

input may contain one decimal number and all other Barua numbers. (Assume that each number

is the very large and the total number of values give is also very large)

Input 1: 100 10 12 1000

Output 1: 12000000

Input 2: 100 121 1000000000000000

Output 2: 12100000000000000000

Input 3: 10 100 1000

Output 3: 1000000

**Answer 1**

def multiplyList(myList) :

result = 1

for x in myList:

result = result \* x

return result

list1 = [100, 12, 10, 1000]

print(multiplyList(list1))

**Question 2**

Implement push, pop and find the minimum element in a stack in O(1) time complexity.

**Answer 2**

class MinStack(object):

min=float('inf')

def \_\_init\_\_(self):

self.min=float('inf')

self.stack = []

def push(self, x):

if x<=self.min:

self.stack.append(self.min)

self.min = x

self.stack.append(x)

def pop(self):

t = self.stack[-1]

self.stack.pop()

if self.min == t:

self.min = self.stack[-1]

self.stack.pop()

def getMin(self):

return self.min

m = MinStack()

m.push(-2)

m.push(0)

m.push(-3)

print(m.getMin())

m.pop()

print(m.top())

print(m.getMin())