

## **MCS173 Python Programming LAB 4 Lambda Functions**

**Date:22/10/2020**

Write a python script to solve the below problem. Use lambda function

1. You are an enthusiast learner of stock trading and you are coder. You are arbitrageur who buys shares at lower price and sells it at high cost. You are given task of writing a script which takes in a list containing price of a stock for any given period of days (n) , where  $n < 9$ . Write a lambda function which takes in the list as input and returns back the maximum profit obtained by buying and selling the stock once each, ie you can buy once and sell once.  
Example: the input is [1,2,3,4,5] then the out put is 4 ie you buy on first day and sell it on 5<sup>th</sup> day to maximize the profit.
2. You are professional robber and coder. You have obtained information that a certain locality has houses stacked with cash. The only problem is that if you rob two consecutive houses the security alarm will automatically alert the police. As you are also professional coder you are asked to write a python script which will take in list containing positive numbers representing the cash stacked in the houses . Let the maximum number of houses in the street and hence the number of elements in the list is 10. Determine the maximum amount you can rob without alerting the police.  
Example if input is [1,2,3,4,5] output is 6 ie rob 1<sup>st</sup> house and then 5<sup>th</sup> house.