Questions

DSA Lab Sheet 1

21 January, 2025

Problem 1

Problem Statement: Given a non-negative integer ***u*** as input, reverse the digits of ***u*** and print out the output. You may ignore leading zeros while reversing the digits.

Constraints: $0 \leq u \leq 10^9$

Input: The input is a single integer ***u*** - the number to be reversed.

Example 1	**Example 2**	**Example 3**	**Example 4**
Input: 9348 **Output:** 8439	**Input:** 12345678 **Output:** 87654321	**Input:** 100000 **Output:** 1	**Input:** 0 **Output:** 0

Problem 2

Problem Statement: You are given an array ***prices*** where ***prices[i]*** is the price of a given stock on the i-th day. You want to maximize your profit by choosing a single day to buy one stock and choosing a different day in the future to sell that stock.

Return the maximum profit you can achieve from this transaction. If you cannot achieve any profit, return **0**.

Input: The first line contains and integer ***n*** integers ***prices[1], prices[2], …, prices[n]***.

Example 1	**Example 2**
Input: 7 1 5 3 6 4 **Output:** 5	**Input:** 7 6 4 3 1 **Output:** 0