

CSCI-SHU 210 Data Structures

Recitation 1 Additional practice problem

You have a series of tasks in front of you. Complete them! Everyone should code on their own computer, but you are encouraged to talk to others, and seek help from each other and from the TA/LAs.

Problem 1: Reverse Digits

Given a 32-bit signed integer, return the reversed digits of this integer.

Example 1:

Input: 123
Output: 321

Example 2:

Input: -123
Output: -321

Example 3:

Input: 120
Output: 21

Note:

Try to solve this problem using math equations. Eg: don't cast this number to str/list/etc.

Problem 2: Majority Number

Given an array of integers, the majority number is the number that occurs **more than half** of the size of the array. Write a function to find the majority number.

****** You may assume that the array is non-empty and the majority number always exist in the array.

Example

Given **[1, 1, 1, 1, 2, 2, 2]**, return **1**

Problem 3:

Write a program to check whether a given number is a **Funny** number.

Funny numbers are positive numbers whose prime factors only include **2, 3, 5**. For example, **6, 8** are **Funny** while **14** is not **Funny** since it includes another prime factor **7**.

Example

Given num = **8** return **true**

Given num = **14** return **false**