Purwadhika
Digital Technology School

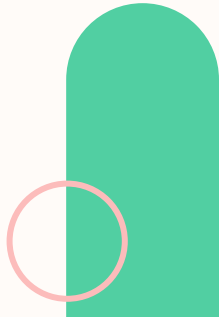
Full Stack Web Development

Exercise

Job Connector Program

Exercise

- Given an array nums of size n, return *the majority element*. The majority element is the element that appears more than ⌊n / 2⌋ times. You may assume that the majority element always exists in the array.
- **Example 1:**
  - **Input:** nums = [3,2,3]
  - **Output:** 3
- **Example 2:**
  - **Input:** nums = [2,2,1,1,1,2,2]
  - **Output:** 2

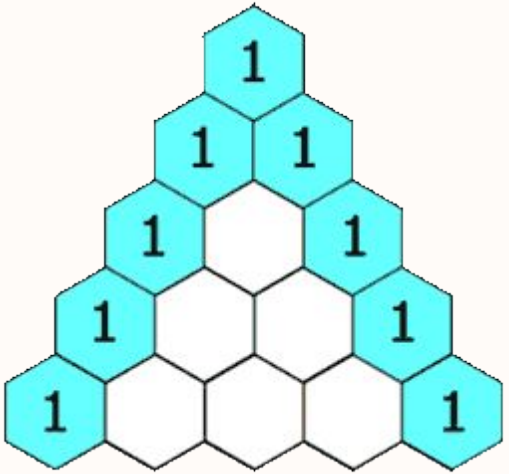


Exercise

- Create a function to convert roman numeral to integer.
- **Example 1:**
  - Input: s = "III”
  - Output: 3
  - Explanation: III = 3.
- **Example 2:**
  - Input: s = "LVIII"
  - Output: 58
  - Explanation: L = 50, V= 5, III = 3.
- **Example 3:**
  - Input: s = "MCMXCIV"
  - Output: 1994
  - Explanation: M = 1000, CM = 900, XC = 90 and IV = 4.

Exercise

- Given an integer numRows, return the first numRows of **Pascal's triangle**.
- In **Pascal's triangle**, each number is the sum of the two numbers directly above it as shown ➜
- **Example 1:**
  - **Input:** numRows = 5
  - **Output:** [[1],[1,1],[1,2,1],[1,3,3,1],[1,4,6,4,1]]
- **Example 2:**
  - **Input:** numRows = 1
  - **Output:** [[1]]



Exercise

- 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.
- **Example 1:**
  - Input: prices = [7,1,5,3,6,4]
  - Output: 5
  - Explanation: Buy on day 2 (price = 1) and sell on day 5 (price = 6), profit = 6-1 = 5.
  - Note that buying on day 2 and selling on day 1 is not allowed because you must buy before you sell.
- **Example 2:**
  - Input: prices = [7,6,4,3,1]
  - Output: 0
  - Explanation: In this case, no transactions are done and the max profit = 0.

Thank You!