SE 1105 PROGRAMMING AND PROBLEM SOLVING I

Week 9

Task 1: Dice Game

Develop a C program that simulates a game involving rolling a six-sided dice. The game has the following rules:

Instructions:

1. Roll the dice until you get a 6.
2. If you roll a 3, you must roll again, and the next number that comes up will be doubled.
3. Your score is the sum of all dice rolls, including all doubled rolls.
4. The game ends when you roll a 6.

Note: Use the **rand()** function to generate random numbers representing dice rolls.

```
Rolling the dice...
You rolled: 3(Current score: 3)
Rolling a double roll...
You rolled: 5, doubled to 10(Current score: 13)
Rolling the dice...
You rolled: 5(Current score: 18)
Rolling the dice...
You rolled: 2(Current score: 20)
Rolling the dice...
You rolled: 5(Current score: 25)
Rolling the dice...
You rolled: 6(Current score: 31)
Game over. Your final score: 31
```

Task 2: Merge Arrays

Define a function **mergeArrays** that takes three arrays of integers (**arr1**, **arr2**, and **resultArr**), and their sizes (**size1**, **size2**). The function should copy the elements of **arr1** and **arr2** into **resultArr** such that the elements of **arr1** come first, followed by the elements of **arr2**.