INT20101 Exam #1 (35 points/25%)

Instructions:

Part 2 (20 points/1 hour 30 minutes)

1. **[5 points]** Write a function that returns true if the first array is not a subset of the second array. Otherwise return false.

   Example:

   notSubsetArray([-1,-2], [1, 2, 3, 4]) → true

   notSubsetArray([2,4], [1, 2, 3, 4]) → false

2. **[5 points]** Write a function called "Roll" that accepts two numbers as the faces of two dice that are rolled.

   a. Each dice has faces numbered from 1 to 6.

   b. If both dice show the same number on top, it is considered a "Jackpot".

   c. If the sum of the top faces is greater than or equal to sever, it is considered "High."

   d. If the sum is less than seven, it is considered "Low".

   Example:

   Roll(1,1) → 'Jackpot'

   Roll(3,2) → 'Low'

   Roll(6,5) → 'High'

3. **[5 points]** Write a function that takes a string as a parameter. It converts all vowel characters to uppercase and converts all other letters to lowercase.

Example:

stringVowelToUpperCase('Hello World') → 'hEllO wOrld'

4. **[5 points]** Write a function that finds the number in the array that appears the most. If there is more than one number with the same highest frequency, return 'None'. Also, return 'None' if all numbers in the array have the same frequency. The numbers in the array range from 1 to 5.

Example:

mostNumberInArray([1, 2, 2, 3, 4, 2]) → 2

mostNumberInArray([1, 2, 3, 4, 5]) → None

mostNumberInArray([1, 1, 2, 2, 3, 4, 5]) → None