CS222: Assignment 3 - Base b

1. Submission deadline: Monday, 23 January at 3 pm.
2. Follow good coding practices to gain more marks.
3. No copying among the students or from the Internet or any other source.
4. The assignment can be submitted in groups of size ≤ 2.
5. Submit two `.cpp` files and one `.pdf` file.
6. Write the names and roll numbers of the students at the top of each file.
7. The files should be called

   `baseb_firstRollNumber_secondRollNumber.cpp`,

   `baseb_firstRollNumber_secondRollNumber.pdf`,
8. Assume all inputs are positive integers.

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1. 1. Write a *function* that takes a base b and a positive integer n as an input. And returns n in the base b. You can return it as an array of numbers.

      E.g. Input: base b = 5, n = 125.

      Returns: 100.

      Input: base b = 5, n = 251.

      Returns: 201.
   2. Implement addition of two numbers in base b. Write a function that takes the base b, and integers x and y, that are presented in base b. It should *adds them in base* b and return the output still in base b.

      The implementation in base b is important.
   3. In the `main` function, take the base b and two numbers x and y (as `integers`) from the user. Convert them to base b by calling the first function. Add these base b numbers using the second function and print the output.
2. In a pdf file, do a short time complexity analysis of the function that adds two numbers in base b.