Homework #1
Due by Monday 9/21 11:55pm

Question 1:
Convert the following numbers to their decimal representation:

a) 10011011_2 =

b) 1101101_2 =

c) $3A8_{16}$ =

d) 2214_5 =

Question 2:
Convert the following numbers to their binary representation:

a) 69_{10} =

b) 485_{10}=

c) $6D1A_{16}$ =

Question 3:
Write a program that asks for the user's name and prints a personalized welcome message for him.

For example, an execution could look like:
Please enter you name:
Mike
Hi Mike, Welcome to CS-UY 1114

Question 4:
Textbook P.80, Q4:
The U.S. Cencus provides information on its web page (http://www.census.gov) about the current U.S. population as well as approximate rates of change.
Three rates of change are provided:

- There is a birth every 7 seconds.
- There is a death every 13 seconds.
- There is a new immigrant every 35 seconds.

These are obviously approximations of birth, death, and immigration rates, but they can assist in providing population estimates in the near term.

Write a program that takes years as input (as a integer) and prints out an estimated population (as an integer). Assume that the current population is 307,357,870, and assume that there are exactly 365 days in a year.

Hint: Note that the rate units are in seconds.

Submission instructions:
1. You should submit your homework in the NYU Classes system.
2. For this assignment you should turn in 3 files:
    - A '.pdf' file with the base conversions (For questions 1 and 2).
      Make sure to include the conversion calculations, not just the final answer.
    - Two '.py' files, one containing a script for question 3 and the other for question4. Name your files 'q3.py' and 'q4.py' respectively.