Names: _____ **100 points total**

CS 2123 Programming Project 3 Fall 2019

Assignment is due at 11:59pm on October 17. Submit a digital copy of the assignment on Harvey. You may submit a lateness coupon request BEFORE the assignment is due by sending an email to cs2123f19@googlegroups.com with Subject "CS2123 Project Lateness Coupon". All other late work will receive a 10 percentage point deduction per day (including weekends), No late work is accepted beyond five days after the assignment is due.

In the *classroom scheduling problem*, a number of classes must be assigned to the smallest number of rooms so that no two classes are scheduled at the same time in the same room. In particular, you should implement the following function according to its docstring:

```
def scheduleRooms(rooms,cls):
    """
    Input: rooms - list of available rooms
           cls   - dictionary mapping class names to pair of (start,end) times
    Output: Return a dictionary mapping the room name to a list of
    non-conflicting scheduled classes.
    If there are not enough rooms to hold the classes, return 'Not enough rooms'.
    """
```

Your code should be modular and follow a greedy strategy. In particular, to receive full credit your code should use a priority queue to efficiently select available rooms. Here is example output for invoking `scheduleRooms` with the variables `cl1` and `rm1` as shown in the starter code.

```
{1: ['c', 'd', 'f', 'i'], 2: ['b', 'g', 'j'], 3: ['a', 'e', 'h']}
```

You may download starter code from `https:/secon.utulsa.edu/cs2123/code/classroom_starter.py`. **Include output for all the function calls from within the `if __name__=="__main__":` block of the starter code.**