CIS 40 - Assignment 9

You can work with a partner in this assignment.

If you choose to work with a partner, please make sure that both people have time to work together. If one person does all the work, the non-participating partner will not be prepared for the exam.

Write a Python script that helps someone organize their daily schedule

The script has test driver code that will:

- create a to do list with 3 tasks
- let the user add to the to do list
- let the user delete tasks from the to do list
- let the user search in the to do list

The script contains 4 functions:

1. printList:
   - print the header with the word: Tasks
   - print the task number, followed by the task name for all the tasks in the list

2. add:
   Loop as long as the user wants to add to the list:
   - prompt the user for a task
   - prompt the user for an existing task number that the new task will be added after
   - if the task number is valid, add the new task into the list at the correct location and then print the list
   - if the task number is not valid, print an error message

3. delete:
   Loop as long as the user wants to delete from the list:
   - prompt the user for a task number
   - if the task number is valid, delete the task from the list
   - if the task number is not valid, print an error message

4. search:
   Loop as long as the user wants to search the list:
   - prompt the user for a task name
   - if the name exists in the list, print the task number corresponding to the task name
   - if the name doesn't exist, print an error message

Extra Credit (2 pts)

For the delete function: the user can either enter one task number (such as: 5) or the user can enter a range of numbers. The range of numbers is in the format: start_num <space> dash <space> end_num. For example: 2 - 5

The task with numbers in the range of start_num and end_num will be deleted from the list.

You should not use a loop for the extra credit (and don't use any concept that we haven't covered in class).

Sample program output with 3 adds, 2 deletes, 3 searches

```
Tasks:
------
1 dentist
2 bank
3 lunch
Enter a task to add: job
Add after task number? 3

Tasks:
------
1 dentist
2 bank
3 lunch
4 job
Continue to add? y/n: y
Enter a task to add: school
Add after task number? 0

Tasks:
------
1 school
2 dentist
3 bank
4 lunch
5 job
Continue to add? y/n: y
Enter a task to add: tutor
Add after task number? 1

Tasks:
------
1 school
2 tutor
3 dentist
4 bank
5 lunch
6 job
Continue to add? y/n: n
Delete task number? 3
```

(continue in next column)

```
Tasks:
------
1 school
2 tutor
3 bank
4 lunch
5 job
Continue to delete? y/n: y
Delete task number? 5

Tasks:
------
1 school
2 tutor
3 bank
4 lunch
Continue to delete? y/n: n
Enter task to search: tutor
tutor is task number 2
Continue to search? y/n: y
Enter task to search: lunch
lunch is task number 4
Continue to search? y/n: y
Enter task to search: movie
No such task
Continue to search? y/n: n
```

Sample output with extra credit in delete and user input error handling

```
Tasks:
------
1 dentist
2 bank
3 lunch
Enter a task to add: school
Add after task number? 0

Tasks:
------
1 school
2 dentist
3 bank
4 lunch
Continue to add? y/n: y
Enter a task to add: gym
Add after task number? 5
Between 1 and 4 only
Continue to add? y/n: y
Enter a task to add: gym
Add after task number? 4

Tasks:
------
1 school
2 dentist
3 bank
4 lunch
5 gym
Continue to add? y/n: y
Enter a task to add: tutor
Add after task number? 1

Tasks:
------
1 school
2 tutor
3 dentist
4 bank
5 lunch
6 gym
Continue to add? y/n: y
Enter a task to add: job
Add after task number? 5
```

(continue in next column)

```
Tasks:
------
1 school
2 tutor
3 dentist
4 bank
5 lunch
6 job
7 gym
Continue to add? y/n: n
Delete task number? 2 - 4

Tasks:
------
1 school
2 lunch
3 job
4 gym
Continue to delete? y/n: y
Delete task number? 5
No task number 5
Continue to delete? y/n: y
Delete task number? 4

Tasks:
------
1 school
2 lunch
3 job
Continue to delete? y/n: n
Enter task to search: school
school is task number 1
Continue to search? y/n: y
Enter task to search: job
job is task number 3
Continue to search? y/n: y
Enter task to search: movie
No such task
Continue to search? y/n: n
```