COMP1511 18s2

Sample Exam Questions for Week-11 Lab Practical Exam

The exam environment for your second practical lab exam in Week-11 will be similar to your first lab practical exam (in week-05). Your tutor will inform you how to login and start using your exam environment. There are three questions in this exam, and you need to answer all three questions. The required files will be available in the directories named "q1", "q2" and "q3' in your (exam) home directory. You need to submit the required files as specified in each exercise.

Important: In order to receive marks for an exercise, your program must compile successfully without any errors and pass "new" auto-tests. You will be awarded marks only if your solution is correct and properly solves the problem (no hard-coded solutions!). If your algorithm/solution is incorrect, even if you pass auto-tests, you will NOT be awarded marks.

Question 01

This questions will be related to the examples discussed in the Lectures on **Linked List**, and the related lab and tutorial quesrions. You can either use an iterative approach or a recursive approach,

- Linked List ,
- Recursion, Linked List with Recursion,
- code: Linked lists, recursion (wk07.zip).

For example, you may need to implement a function similar to one of the following functions (most of them discussed in the lectures/tutorials/labs):

- print a list in python style
- calculate sum of a list
- find an item (say 25) in a list
- find last item in a list
- find n^{th} item in a list
- add item at the end of the list
- remove first item from a list
- remove last item from a list
- remove a given item (say 25) from a list

Question 02

This question will be related to Lab07 exercises. In particular, Exercise-02 that requires you to implement the following function, read Lab07 for more explanation.

```
void species_count(char species[], int n_sightings, struct pod sightings[n_sightings], int *n_pods, int *n_whales) {
    // REPLACE THIS COMMENT WITH YOUR CODE
    // THIS FUNCTION SHOULD NOT CALL SCANF OR PRINTF
    // IT SHOULD JUST ASSIGN VALUES to N_PODS AND N_WHALES
    *n_pods = 24; // CHANGE ME
    *n_whales = 42; // CHANGE ME
}
```

By the way, the sample solutions for Lab07 are also available (see Labs).

Question 03

This question will be related to Lab08 exercises. In particular, Exercise-02 that requires you to implement the following function, read Lab08 for more explanation.

```
void species_count(char species[], struct pod *first_pod, int *n_pods, int *n_whales) {
```

```
void species_count(char species[], struct pod *first_pod, int *n_pods, int *n_whales) {
    // REPLACE THIS COMMENT WITH YOUR CODE
    // THIS FUNCTION SHOULD NOT CALL SCANF OR PRINTF
    // IT SHOULD JUST ASSIGN VALUES to N_PODS AND N_WHALES
    *n_pods = 24; // CHANGE ME
    *n_whales = 42; // CHANGE ME
}
```

By the way, the sample solutions for Lab08 are also available (see Labs).

-- end --