Subject #1E 15.06.2022

Implement a C application for managing the airplanes' landings in an airport with only one single runway. For this, you can use a Binary Search Tree structure (BST). Structure *Flight*, which is the useful information of a tree node, is created with the following attributes: airplane code(char*), *landing time (unsigned short) – expressed in minutes*, coming from (char*), no. of passengers (unsigned short).

- 1. Print the reversed order of landings. **0.5p**
- 2. Find the landing that has the maximum number of passengers and return it for display in the main section. **1p**
- 3. Print the planes that land in a given time interval [x; y]; x and y represent the number of minutes given as parameters to the function. **1p**
- 4. Find the next plane to land and remove it; print the remaining elements after. 1p
- 5. How many planes are scheduled to land at times <= t (t given value as a parameter). **1p**
- 6. Save all the entries starting from the root of the tree all the way to a given leaf (given as a parameter by its landing time) in an array of pointers to be displayed (the array doesn't share memory space with the BST implementation). **1.5p**

The following items should be considered for the implementation:

□ Projects with compilation issues are NOT going to be evaluated;

□ Functions that are not tested in the main() function are not taken into account at evaluation;

□ Source code that is commented is NOT going to be evaluated;