# 6G5Z0024

**Assessed Exercise 2**

**This assessed exercise has 3 assessed tasks: Task A, Task B and Task C**

**Task A**

Implement a Console Application in C# with a menu driven interface which allows the user to: (i) insert a word into a BSTree of strings; (ii) choose a tree traversal (in-order, post-order, pre-order) and display the content of the tree in the chosen tree traversal; (iii) display the height of the tree.

*Hints: Complete the implementation of the BStree classes and methods (see lab and lectures). Use the generic BSTree to implement a BSTree of strings. Assume that the user input all different words (i.e., no repetitions)*

**Task B**

Extend the application of Task A by adding the possibility for the user to: check if a word is present into the tree, if so, remove the word from the tree.

**Task C**

Search is a very efficient operation in AVL Trees. Implement a Console Application which uses an AVL tree and allows to keep track, in an efficient way, products and quantities present in a store.

The application must have a menu driven interface which allows the user to:

1. Add and store the name of a product into an AVLTree (assume that the name of the product is a string, eg “laptop”).
2. Check if a product is present in the tree (the user must input the name of the product to search) and, if present, remove the product from the tree.

*Hints: Before attempting the methods, make sure you have fully implemented the class AVL tree with working left and right rotations (see lecture and lab of week 6).*