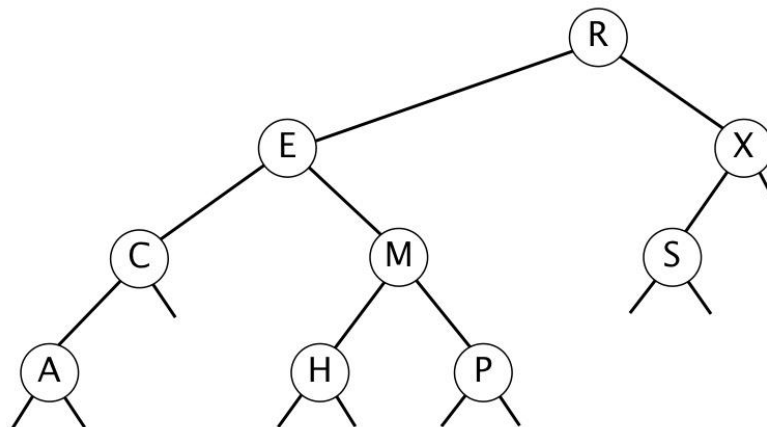Quiz 2 – Take Home

Date: 11.4.2020

Due Date: 13.4.2020 – 23.59

Questions:

1. A BST is uniquely defined by its level-order traversal, a breadth-first traversal where the root is visited first, then all nodes at depth 1 (going from left to right), then all nodes at depth 2 (going from left to right), and so forth.
   a) What is the level-order traversal of the BST drawn below?
   b) What mechanism should you employ to achieve the question above?

2. Create a red-black tree with the word "SECURITYTERMS" and show each step until you eventually finish. Pay attention to note the necessary operations (i.e. rotate left, rotate right, flip colors) at the right side of each figure. It is important to include all steps with an appropriate tree figure. You can use the free draw.io web application. Note that, you must highlight red links and color (with orange color) each newly added letter.

3. Give a non-recursive implementations of get() and put() for BST.
   public Value get(Key key){   public void put(Key key, Value val){

       }   }

NOTES

* No late submission is permitted.

* It is not an obligation but we suggest Eclipse platform since it is free and it gets updates constantly

* Use submit system that has been configured for you. No other medium except Submit System will be accepted.

* Use UNDERSTANDABLE names for your variables, functions, and classes (please be sure you are obeying name convention).

* Write READABLE SOURCE CODE blocks for coding questions

* Use EXPLANATORY COMMENTS in your source codes.

* Your work must be original. Duplicate or very similar works are both going to be considered as cheating.

* You will submit your work from https://submit.cs.hacettepe.edu.tr with the file hierarchy as below:

Required Document: **report.pdf**