

LAB 7 – RED BLACK TREE

There's many instances of red-black trees available throughout the internet for a variety of languages. Pick one and include it with your source code if the language you use does not have a built in one.

Using a red-black tree, build a sorted dictionary. This dictionary should be able to insert key/value pairs, retrieve values associated with keys, delete keys, and inform you whether or not a key exists in the dictionary. You do not need to do any error checking to determine if a key already exists when someone attempts to retrieve/delete an existing key.

Demonstrate that your sorted dictionary works by writing your program to insert into the dictionary the following key/value pairs:

Key	Value
hello	world
goodbye	everyone
name	student
occupation	student
year	2016
gpa	4.0
lab	yes
assignment	no
department	cs

Then, retrieve the value of *gpa* and *department* and display it on the screen.