CS 302 Introduction to Data Structures
University of Nevada, Las Vegas
Spring 18

Assignment 8
Due: Saturday, March 24, 2018

The Binary Search Tree Class

In this assignment, you are to use the binary search tree (BST) from class, the code is the file `BinarySearchTree.h` (available on the announcement page) and should be copied into your main program.

BST Sort

Now implement the BST sort described below:

1. Initialization

The user inputs `n`.
Then n random numbers between 1 and 10000 are are inserted into a BST.

2. Loop

Write the numbers in sorted order to the screen. In order to do this you repeatedly find the minimum, write it to the screen and delete it until the list is empty.

Run Time Experiments

Tabulate the user run time on machine `bobby` for `n = 50000, 150000, 500000`.
The command is

```
time ./a.out > /dev/null
```

Explanation: In order to measure run time the output must be redirected the to `/dev/null` (or else your screen will fill up with thousands of numbers.) To measure user run time you use the command time command, which is described in greater detail on the announcement page.

How to submit.

Create one file with your sort `asgn8_bstsort.cpp`. Email this as an attachments to `deshmk1@unlv.nevada.edu`. Subject of your email must be `"Assignment 8", <your name>, <your student ID number>`. The body of your email should contain the run-time table.