

Lab 7 Report

Partners: Alexander Remm, Kartikey Pandey, Peter Kroeger, Ryan Kunkel

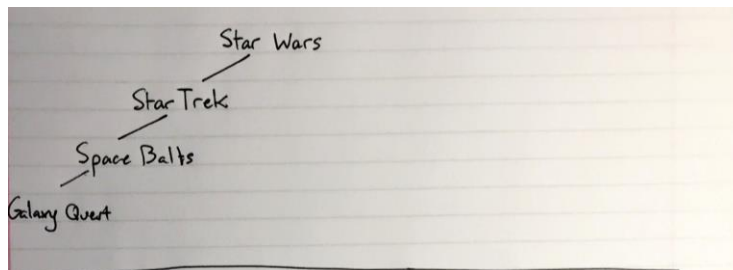
Rubric of Participation:

Team Member	Participation
Alexander	26
Kartikey	26
Peter	24
Ryan	24

Screenshot:

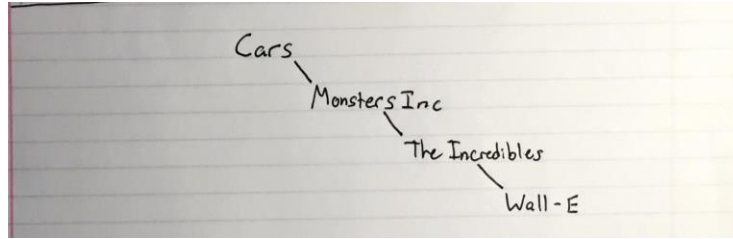
```
Microsoft Visual Studio Debug Console
Tree Size: 4
Tree 1 Ascending
-----
Galaxy Quest
Space Balls
Star Trek
Star Wars
Tree 1 Descending
-----
Star Wars
Star Trek
Space Balls
Galaxy Quest
Tree Size: 4
Tree 2 Ascending
-----
Cars
Monsters Inc
The Incredibles
Wall-E
Tree 2 Descending
-----
Wall-E
The Incredibles
Monsters Inc
Cars
Tree Size: 4
Tree 3 Ascending
-----
A Nightmare On Elm Street
Basketball
Halloween
House Pocus
Tree 3 Descending
-----
House Pocus
Halloween
Basketball
A Nightmare On Elm Street
E:\Users\alex\Documents\Projects\repos\lab7\src\Lab7\Debug\Lab7.exe (process 33128) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

Discussion:



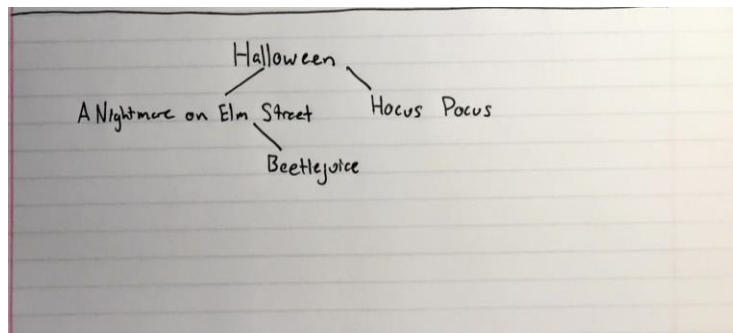
First Tree Test

For the first test, all the inputs were given in a way that they formed more of a linked list rather than a chain, as each input was less than the previous, placing it in the left side of the node prior to it. In order to get a better structure for this, we could swap “Star Wars” and “Star Trek” in order, which would place “Star Wars” on the right of the new root node, while “Space Balls” and “Galaxy Quest” would remain unchanged, still attached to the left side of “Star Trek”.



Second Tree Test

For the second test, a similar situation arises where the tree forms a linear tree rather than a balanced one. In order to give it a better structure, “Monsters Inc” can become the root node, and “Cars” would become the left branch from it. “The Incredibles” and “Wall-E” would remain on the right side of the new root node.



Third Tree Test

For the third test, the structure of the tree is as balanced as it can be given the 4 inputs, as the root node has a right and left branch, and the only remaining input is a leaf on “A Nightmare on Elm Street”.