

De Anza College
CIS 22C – Spring 2016
Team 4

PROGRAM DEMONSTRATION

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1. Execute the program

Main menu should look like this:

```
-----Main Menu-----
1. Add new data
2. Delete data
3. Find data
4. List hash sequence
5. List sorted data
6. Print indented tree
7. Print efficieny
8. Team choice
9. Save to file
10. Exit
-----
Enter a choice:
```

2. Try invalid menu selections

Purpose: menu will only work by entering characters 1-10

- Enter "asdf"
- Enter "0"
- Enter "11"
- Enter "191"
- Enter "ASDF"
- Return to main menu

3. Try showing data of empty tree/hash table

Purpose: Show that no data has been entered, nothing to print

- Enter "4"
- Press any key to exit
- Enter "6"
- Enter "1" or "2" or "3"
- Press any key to exit
- Return to main menu

4. Add data

Purpose: Show how to add data – 2 options

Manually – add a player manually; requires entering name, team, and all stats

Use default file – uses the default input file we created i.e. "RB_stats_2015.txt"

- Enter "1"

Menu options now show:

```
Would you like to add a player manually or read from file?
1. Manually
2. Use default file
Enter a choice:
```

- Enter "2" – use the default data file "RB_stats_2015.txt"
- Return to the main menu

5. Find data

- Enter "3"
- Type in: "Devonta Freeman"
- Output should show as follows:

```
Please enter the name of the player: Devonta Freeman
Name      tm GP RuA RuY Rutd tar Rc RcY RcTD pts p/g
Devonta Freeman ATL 15 264 1061 11 97 73 578 3 247.9 16.5
Press any key to continue . . .
```

- Return to main menu

6. List hash sequence

- Enter "4"
- Output should show hashTable contents:

```
1.1: Duke Johnson      CLE      103.3    6.5
1.2: James Starks      GB       129.3    8.1

2.1: Chris Ivory       NYJ      176.7   11.8
2.2: Eddie Lacy        GB       124.6    8.3
2.3: Giovani Bernard   CIN      132.2    8.3
2.4: Jeremy Hill       CIN      159.3   10

3.1: Jonathan Stewart  CAR      150.8   11.6
3.2: LeSean McCoy      BUF      148.7   12.4
3.3: I.J. Yeldon       JAC      119.9   10

6.1: Antonio Andrews   TEN      87.4    6.2
6.2: DeMarco Murray    PHI      144.1    9.6
6.3: Devonta Freeman   ATL      247.9   16.5
6.4: Lataavius Murray  OAK      165.8   10.4
6.5: Rashad Jennings   NYG      139.9    8.7
```

*Only shows a portion of the screen here

*Note that each slot is maintained alphabetically in sorted order

- Return to main menu

7. List sorted data

- Enter "5"
- Enter "1", "2", or "3"
- Output is sorted alphabetically or numerically in descending order depending on choice

```
Name      tm GP RuA RuY Rutd tar Rc RcY RcTD pts p/g
Devonta Freeman ATL 15 264 1061 11 97 73 578 3 247.9 16.5
Adrian Peterson MIN 16 327 1485 11 36 30 222 0 236.7 14.8
Doug Martin TB 16 288 1402 6 44 33 271 1 209.3 13.1
DeAngelo Williams PIT 16 200 907 11 47 40 367 0 193.4 12.1
Todd Gurley STL 13 229 1100 10 26 21 188 0 189.6 14.6
Lamar Miller MIA 16 194 872 8 57 47 397 2 186.9 11.7
Chris Ivory NYJ 15 247 1070 7 37 30 217 1 176.7 11.8
David Johnson ARI 16 125 581 8 57 36 457 4 175.8 11
Matt Forte CHI 13 218 898 4 58 44 389 3 170.7 13.1
Lataavius Murray OAK 16 267 1066 6 53 41 232 0 165.8 10.4
Frank Gore IND 16 260 967 6 58 34 267 1 165.4 10.3
Danny Woodhead SD 16 97 335 3 107 81 756 6 163.1 10.2
Darren McFadden DAL 16 239 1009 3 53 40 328 0 159.7 10
Jeremy Hill CIN 16 223 794 11 19 15 79 1 159.3 10
Mark Ingram NO 12 165 767 6 60 50 405 0 153.2 12.8
Jonathan Stewart CAR 13 242 989 6 21 16 99 1 150.8 11.6
LeSean McCoy BUF 12 203 895 3 49 32 292 2 148.7 12.4
DeMarco Murray PHI 15 194 699 6 55 44 322 1 144.1 9.6
Rashad Jennings NYG 16 195 863 3 39 29 296 1 139.9 8.7
Rashad Jennings NYG 16 195 863 3 39 29 296 1 139.9 8.7
```

- **Return to main menu**
- 8. List indented tree
 - **Enter “6”**
 - **Enter “1”, “2”, or “3”**
 - **Output is sorted by whatever option and prints a horizontal indented AVL**

```

                                247.9   236.7
                              209.3   193.4
                            189.6   186.9
                          176.7   175.8   170.7
                        165.8   163.1   165.4
                      159.3   153.2   159.7
                    148.7   150.8
                  139.9   144.1
                133   139.4
              124.6   132.2
            123.6   120.6   120.3
          119.9   118.8
        116.6   115.3
      114.8   110.5   105.2
          104.9   103.4
        103.3   99.5   101
              96.1   94.5
                91.4   98.7
              87.8   88.1
                87.4   87.2
              86.2   84.1   83.7
Press any key to continue . . .

```

- **Return to Menu**
- 9. Delete Data
 - **Enter “2”**
 - **Enter “Devonta Freeman”**
 - **Return to main menu**
 - **Try finding him (step 5)**
 - **List sorted data by points (step 7)**
 - **Print indented tree by points (step 8)**
- 10. Add “Devonta Freeman” manually
 - **Enter “1”**

- Enter "1"
- Manually enter the following stats for Devonta Freeman

```
Please enter the name of the player: Devonta Freeman
Name      tm  GP  RuA  RuY  Rutd  tar  Rc  RcY  RcTD  pts  p/g
Devonta Freeman  ATL 15  264 1061  11  97  73  578  3  247.9 16.5
Press any key to continue . . .
```

- Try finding him (step 5)
- List sorted data by points (step 7)
- Print indented tree by points (step 8)

11. Add "Latavius Murray" manually to show collision resolution

- List hash table data
- Note: Latavius Murray and Devonta Freeman are on the same table index (6)
- Return to main menu
- Enter "1"
- Enter "1"
- Manually enter the following stats for "Latavius Murray"

```
Please enter the name of the player: Latavius Murray
Name      tm  GP  RuA  RuY  Rutd  tar  Rc  RcY  RcTD  pts  p/g
Latavius Murray  OAK 16  267 1066  6  53  41  232  0  165.8 10.4
Press any key to continue . . .
```

- List hash table data (6)

12. Delete "Latavius Murray"

- Utilize same steps in step 9 but with "Latavius Murray"

13. Compare two players

- At main menu, select "compare"
- Enter "Latavius Murray"
- Enter "Devonta Freeman"

```
Name      tm  GP  RuA  RuY  Rutd  tar  Rc  RcY  RcTD  pts  p/g
Latavius Murray  OAK 16  267 1066  6  53  41  232  0  165.8 10.4
Devonta Freeman  ATL 15  245 1503  78  45  15  31  25  247.5 16.5
Press any key to continue . . .
```

14. Print efficiency

- Select print efficiency option from menu

15. Exit

- Exit the program – program automatically saves to the same file