

## 16.04 Assignment Instructions

**Instructions:** For this assignment, you are going to create insertion methods.

1. Create a folder called **16.04 Assignment** in your module 16 assignments folder.
2. Copy your **TestCandidate5.java** to a new class **TestCandidate7.java**.
3. Create the following methods for inserting election results.
  - a. Create a method that will delete a particular candidate, by position in the election array. Call it **deleteByLoc ( )**. Its arguments should include the array, and a position to delete.
  - b. Create a method that will find a particular candidate by name and delete that candidate. Call it **deleteByName ( )**. Its arguments should include the array the name of the candidate to delete.
  - c. Remember that, since you are working with an array, you need to modify your other methods so that they still work even if the array has some null entries.
  - d. Test your methods by first deleting location 6 and then deleting Kathleen Turner. You should call **printResults ( )** first and then after each delete. Your output should be similar to output shown below. Remember to turn on unlimited buffering in BlueJ, so that you can see the results.

BlueJ: Terminal Window - demo

Options

Original results:

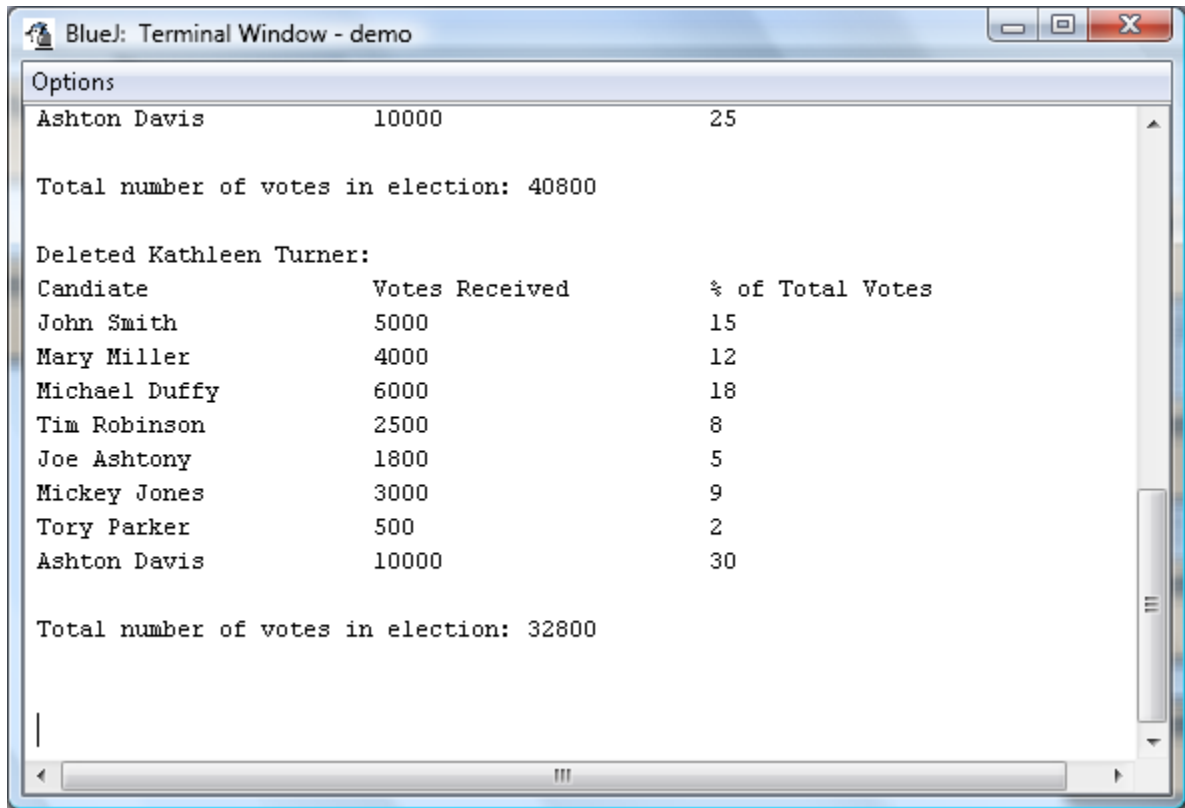
Candidate	Votes Received	% of Total Votes
John Smith	5000	12
Mary Miller	4000	9
Michael Duffy	6000	14
Tim Robinson	2500	6
Joe Ashtony	1800	4
Mickey Jones	3000	7
Rebecca Morgan	2000	5
Kathleen Turner	8000	19
Tory Parker	500	1
Ashton Davis	10000	23

Total number of votes in election: 42800

Deleted location 6:

Candidate	Votes Received	% of Total Votes
John Smith	5000	12
Mary Miller	4000	10
Michael Duffy	6000	15
Tim Robinson	2500	6
Joe Ashtony	1800	4
Mickey Jones	3000	7
Kathleen Turner	8000	20
Tory Parker	500	1
Ashton Davis	10000	25

Total number of votes in election: 40800



A screenshot of a BlueJ Terminal Window titled "BlueJ: Terminal Window - demo". The window displays the output of a Java program. It starts with an "Options" section showing Ashton Davis with 10000 votes and 25% of the total. Below this, it states the total number of votes is 40800. Then, it says "Deleted Kathleen Turner:". This is followed by a table of candidates, their votes, and their percentage of total votes. The table lists John Smith (5000, 15%), Mary Miller (4000, 12%), Michael Duffy (6000, 18%), Tim Robinson (2500, 8%), Joe Ashtony (1800, 5%), Mickey Jones (3000, 9%), Tory Parker (500, 2%), and Ashton Davis (10000, 30%). Finally, it states the total number of votes is 32800.

```
Options
Ashton Davis      10000      25

Total number of votes in election: 40800

Deleted Kathleen Turner:
Candidate          Votes Received      % of Total Votes
John Smith         5000                15
Mary Miller        4000                12
Michael Duffy      6000                18
Tim Robinson       2500                8
Joe Ashtony        1800                5
Mickey Jones       3000                9
Tory Parker        500                 2
Ashton Davis       10000               30

Total number of votes in election: 32800
```

4. Now create a class **TestCandidate8** and save it as **TestCandidate8.java**.
  - a. Create the same items as for **TestCandidate7**; however, use an **ArrayList** instead.
  - b. Output should look like that for **TestCandidate7**.