

Assessment Instructions

Instructions: For this assessment, you are going to use traversal methods.

1. Create a folder called Assessment in your Unit 6 assessments folder.
2. Create a class called Candidate.
 - a. Candidate will need instance variables name and numVotes (of types String and int, respectively).
 - b. Candidate will need appropriate methods and constructors. Make sure to have a toString() method that prints the name of the Candidate along with the number of votes.
 - c. Save the class as Candidate.java.
3. Create a class called TestCandidate and save it as TestCandidate.java.
 - a. Make sure that you create an array called election. Add the following
2. Candidates with their votes:

Candidate	Vote
John Smith	5000
Mary Miller	4000
Michael Duffy	6000
Tim Robinson	2500
Joe Ashtony	1800

- b. Create a method called printVotes() that traverses through the array and prints out each element.
 - c. Create a method called getTotal() that traverses through the array and counts
3. the total of the votes for all Candidates. It should return that number.
 - d. Create a method called printResults() that traverses through the array and creates a table with columns for Candidate name, followed by votes received, and then percentage of total votes (you can round these values). Note that this method will need to call getTotal() to use in constructing the third column. After printing the table, print a line showing the total number of votes for all Candidates.
 - e. Test your methods. Your output should be similar to that shown below:

```
Blue: Terminal Window - demo
Options
Results per candidate:
_____
John Smith received 5000 votes.
Mary Miller received 4000 votes.
Michael Duffy received 6000 votes.
Tim Robinson received 2500 votes.
Joe Ashtony received 1800 votes.

Candidate          Votes Received    % of Total Votes
John Smith         5000              26
Mary Miller        4000              21
Michael Duffy      6000              31
Tim Robinson       2500              13
Joe Ashtony        1800              9

Total number of votes in election: 19300
```

4. Now create a class TestCandidate2 and save it as TestCandidate2.java.
 - a. Create the same items as for TestCandidate; however, use an ArrayList instead.
 - b. Output should still look the same as for TestCandidate.