### **Program 1:**

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| Input | Processing | Output |
| Contestant (by first letter) | Processing items: none  Algorithm:  1. User enters the contestant they want to vote for  2. convert the users input to lower case  3. switch(input)  4. case a: msg = voted for amanda  5. case b: msg = voted for ben  6. case c: msg = voted for chris  7. default: invalid input - display error and restart execution  8. display msg | The person that the user voted for, or an error message if the input is invalid |

### **Program 2:**

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| --- | --- | --- |
| Input | Processing | Output |
| Votes for amanda  Votes for ben  Votes for chris | Processing items: none  Algorithm:  1. User enters votes for the 3 contestants  2. if (v\_a == v\_b && v\_b == v\_c) Amanda, Ben, and Chris all tied for first  3. if (v\_a > v\_b)  4. if (v\_c > v\_a) Chris wins  5. if (v\_a == v\_c) Amanda and Chris tied  6. (if code reaches this point Amanda wins)  7. else  if (v\_b < v\_c) Chris wins  8. if (v\_a == v\_b) Amanda and Ben tied  9. if (v\_b == v\_c) Ben and Chris tied  10. (if code reaches this point Ben wins)  11. endif  Note: v\_a = votes for amanda, v\_b = votes for ben, v\_c = votes for chris | The winner of the vote |