

```
1
2 public class calculate {
3     //create variables
4     char letterGrade;
5     private static float avg;
6     private static float ppl;
7     private static float topScore;
8     private static float total;
9     private float percent;
10    private float pointsEarned, pointsTotal;
11
12    //increment counter for each person calculated
13    calculate(float points, float total){
14        ppl++;
15        pointsEarned = points;
16        pointsTotal = total;
17        percentage();
18        getGrade();
19    }
20
21    //calculate the decimal percentage of the score inputted
22    private void percentage(){
23        //get decimal percentage of the score
24        percent = pointsEarned/pointsTotal;
25        total += percent;
26        if (percent > topScore){
27            topScore = percent;
28        }
29        avg = total / ppl;
30    }
31
32    //based off of the first character in the
33    private void getGrade(){
34        String percentString = Float.toString(percent);
35        char firstDigit = percentString.charAt(2);
36        System.out.println(firstDigit);
37        //determine grades based off the 2nd character in the percent string
38        switch(firstDigit){
39            case '9':
40                letterGrade = 'A';
41                break;
42            case '8':
43                letterGrade = 'B';
44                break;
45            case '7':
46                letterGrade = 'C';
47                break;
48            case '6':
49                letterGrade = 'D';
50                break;
51            case '5':
52                letterGrade = 'F';
53                break;
54            case '4':
55                letterGrade = 'F';
56                break;
57            case '3':
```

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58         letterGrade = 'F';
59         break;
60     case '2':
61         letterGrade = 'F';
62         break;
63     case '1':
64         letterGrade = 'F';
65         break;
66     case '0':
67         if (percentString.charAt(0) == 0){ //if statement required because a 100 will
look like "1.0" and a 0 will look like "0.0". to the switch it will see both AtChar(2) as 0
and make it an "F"
68             letterGrade = 'F';
69         }
70         else{
71             letterGrade = 'A';
72         }
73         break;
74     }
75 }
76
77 public float getAvg(){
78     return avg;
79 }
80
81 public float getTotal(){
82     return total;
83 }
84
85 public float getTopScore(){
86     //topscore starts at 0, and as scores are calculated that are higher than 0, those
become the new top score
87     return topScore;
88 }
89
90 public float getPercent(){
91     return percent;
92 }
93
94 public char getLetterGrade(){
95     return letterGrade;
96 }
97
98 }
99
```