

Programming Assignment #2

Stadium Seating Statistics

CS 1428.003, Fall 2019

Instructor: Jill Seaman

Due: before class **Wednesday, 9/18/2019** (upload electronic copy by 9:30am)

Problem:

There are three seating categories at a stadium. For a soccer game, Class A seats cost \$15.00, Class B seats cost \$12.50, and Class C seats cost \$9.75. Write a program that asks how many tickets for each class of seats were sold, then displays some statistics about the ticket sales.

Input: The user should be prompted to input the number of Class A, Class B, and Class C tickets that were sold for a given event.

Processing: The stadium owners want to know: the total number of tickets sold and the total amount of money in sales. They also want to know the percent of total sales generated by each of the three ticket classes. For example, if 10 of each class of tickets were sold, then the total sales was $\$150.00 + \$125.00 + \$97.50 = \372.50 . The percent of total sales generated by the Class A seats was $\$150 / \$372.50 \times 100 = 40.27\%$.

Output: The program should print the statistics described above. All output should be clearly labeled, dollar amounts should include a dollar sign (\$) and percentages should include a percent sign (%). Dollar amounts and percentages should be formatted to exactly 2 decimal places.

Sample output:

```
Enter the number of class A tickets sold: 10
Enter the number of class B tickets sold: 10
Enter the number of class C tickets sold: 10

Total Tickets sold: 30
Total Sales: $372.50

Percent of total sales generated by:
Class A Seats: 40.27%
Class B Seats: 33.56%
Class C Seats: 26.17%
```

Additional Requirements:

- Your program **must compile** and run, otherwise you will receive a score of 0.
- Don't worry if your total sales or percentages are off by .01. This is due to a rounding error.
- Your program must output the correct values given **any** valid input values.

Style:

See the Style Guidelines document on the class website. In particular:

- Include the **Header comments**, like last time, including a good description
- **Variables:** Use meaningful variable names and use camel case. Each variable declaration must be on a separate line with a descriptive comment.
- **Named constants:** use these for numeric literals, and use uppercase and underscores in their names.
- Source code lines should be less than 80 characters in length, and the program statements should be indented appropriately.

Logistics:

Name your file **assign2_xxxxx.cpp** where xxxxx is your TX State NetID (your txstate.edu email id). The file name should look something like this: assign2_js236.cpp

There are two steps to the turn-in process:

1. Submit an **electronic copy** using the Assignments tool on the TRACS website for this class (tracs.txstate.edu). Submit the .cpp file only.
2. Submit a **printout** of the .cpp file at the beginning of class on the day the assignment is due. Please print your name on the front page. Submit the .cpp file only. Do **not** submit a printout of the output.

See the assignment turn-in policy on the course website (cs.txstate.edu/~js236/cs1428) for more details, including penalties.