

HW3

For Homework 3, you can choose either task 1 or task 2. Due Feb 12th. Compress your solution folder and submit it on dropbox.

Task 1:

Go to the course website, follow the video tutorial on the Hotel Calculator project. Create your own Hotel calculator.

Task 2:

Programming Challenge: Theater Revenue

A movie theater only keeps a percentage of the revenue earned from ticket sales. The reminder goes to the movie company. Create an application that calculates and displays the following figures for one night's box office business at a theater:

- Gross revenue for adult tickets sold. This is the amount of money taken in for all adult tickets sold.
- Net revenue for adult tickets sold. This is the amount of money from adult ticket sales left over after the payment to the movie company has been deducted.
- Gross revenue for child tickets sold. This is the amount of money taken in for all child tickets sold.
- Net revenue for child tickets sold. This is the amount of money from child ticket sales left over after the payment to the movie company has been deducted.
- Total gross revenue. This is the sum of gross revenue for adult and child tickets sold.
- Total net revenue. This is the sum of net revenue for adult and child tickets sold.

The screenshot shows a Windows application window titled "Theater Revenue". The window is divided into four main sections for data entry and calculation:

- Adult Ticket Sales:** Contains two input fields: "Price per Ticket" and "Tickets Sold".
- Child Ticket Sales:** Contains two input fields: "Price per Ticket" and "Tickets Sold".
- Gross Ticket Revenue:** Contains three output fields: "Adult Ticket Sales:", "Child Ticket Sales:", and "Total Gross Revenue for Ticket Sales:".
- Net Ticket Revenue:** Contains three output fields: "Adult Ticket Sales:", "Child Ticket Sales:", and "Total Net Revenue for Ticket Sales:".

At the bottom of the window, there are three buttons: "Calculate Ticket Revenue", "Clear", and "Exit".

The screenshot of the Revenue Calculator.

Assume the theater keeps 20% of its box office receipts. Use a named constant in your code to represent this percentage. If the user fails to enter numeric values, display an appropriate error message and do not attempt to perform calculations. Use the following test data to determine if the application is calculating properly:

Tickets Sales:

Price per Adult Tickets: \$6.00

Adult Tickets Sold: 120

Price per Child Ticket: \$4.00

Child Tickets Sold: 72

Revenue

Gross Adult Ticket Sales: \$720.00

Gross Child Ticket Sales: \$288.00

Total Gross Revenue:\$1008.00

Net Adult Ticket Sales: \$144.00

Net Child Ticket Sales: \$57.60

Total Net Revenue: \$201.60