Ticket Seller Lab Report

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**Task 1: Questions about the Show class:**

SC-1  How many constants are defined in this class?

SC-2  What basic type or class of information do these constants represent?

SC-3  How many member data items are defined in this class?

SC-4  Give the name of the only member data in this class that is not of basic type int.

SC-5  How many constructors does this class have?

SC-6  What is the total number of get functions?

SC-7  Why do the price() and sell() functions return an int?

SC-8  Why do the two available() functions return a boolean value?

SC-9  Can the user change the value of the adultsSold? If yes, how? If not, why not?

SC-10 What do you not understand about this class definition?

**Task 2: Questions about the TicketSeller class**

TS-1  How many Annotation fields are defined in this class?

TS-2  List the names given to the three TextFieldViews.

TS-3  List the label on the seven action buttons.
TS-4 List the four member functions of the class \texttt{TicketSeller} that specify what the desired actions should be when selecting the show or deciding or reset the show statistics.

TS-5 List the three member functions of the class \texttt{TicketSeller} that specify what the desired actions should be when making a ticket sale.

TS-6 Find the statement that defines the \texttt{mainPanel} and copy it into you report.
Hint: it is right before the \texttt{main} function of the class.

\section*{Task 3: Questions about the actions functions}

AF-1 Choose your favorite movie and decide on the name to be shown on the button and the display:
\begin{itemize}
\item Button label: ..................
\item Title shown: ..................
\end{itemize}
Now, highlight in the TicketSeller.java all places where the word tarzan appears in any form (lower or upper case). Modify the code, so your theater will show your favorite movie in a theater with 400 seats, with prices $20, $10, and $5 respectively for adults, students, and children. Include a snapshot of your program selling the tickets for your show.

AF-2 Add a \texttt{setViewState} member function call that will set the \texttt{ViewState} of the \texttt{studentsOrderTFV}. (Copy the code there)

AF-3 Why do we set the \texttt{totalOrderField} and \texttt{totalPriceField} to two different values? What are these values?

AF-4 See what happens if you do not type anything into the field and leave it blank. Also, try to type in any sequence of characters that are not a number. What happens?

AF-5 Try to type in a simple arithmetic expression, such as 20 - 5 + 6 and see what will happen. Experiment with several expressions and see if you know what is happening.

AF-6 What is the difference between the \texttt{price()} member function and \texttt{sell()} member function in the class \texttt{Show}?

AF-7 Write a function
\begin{verbatim}
private void setCurrentShow(Show show)
\end{verbatim}
that will perform all the tasks that are repeated in the three show selection actions \texttt{tarzan}, \texttt{kingKong}, and \texttt{casablanca}. These functions will then consist of only one function call to this helper function, for example:
\begin{verbatim}
public void tarzan(){
    setCurrentShow(tarzanShow);
}
\end{verbatim}
Copy the code for this function into your report.

Task 4: Questions about the helper/utility functions

HF-1 Update the student price field annotation, following the model for the adult and child price fields. (Copy the code here)

HF-2 Copy into the report the code for the two helper functions string(int count) and dollar(int count) and explain what do they do.

HF-3 Update all of student information following the pattern for adult and child. (Copy the code here)

HF-4 Add the code to set the correct value in the totalIncomeField. (Copy the code here)

Task 5: Questions about the integrity of data

ID-1 Write down the three remaining if statements that will adjust the prices into acceptable range.

ID-2 Print the modified setShow function once you determined that it works correctly.

ID-3 Write down several constructor calls for the currentShow that will test your code and indicate which values are to be corrected by the setShow function.
Note: You can do this by modifying the arguments for the constructor calls when new tarzan, kingKong, and casablanca Show objects are created at the beginning of the program.

ID-4 Explain what does the function adjust do. Show an example of several functions call to the function adjust and the effect that the function has. Add a comment before the adjust function that explains its purpose.

ID-5 Why can we delete the four if statements. How is the input data corrected now?

ID-6 Print your refactored setShow function and compare it with the one you printed earlier. Can you see the difference?

ID-7 Propose a way to make sure that a request for a negative number of tickets in any category is going to be rejected.