

Lab 14

Concert Promotion

Objective:

Write a class that keeps track of concert promotion information

- First download the [driver](#) and put it in your project
 - Notice that this has all of the dialog outputs and user inputs already written
 - You are writing the backend not the front end
- Write a class file called **Concert** that DOES NOT HAVE a main method
- Some of the attributes of Concert are
 - Name
 - Capacity
 - Number of Tickets Sold By Phone
 - Number of Tickets Sold At the Venue
 - The price of a ticket by phone
 - The price of a ticket at the venue
- Create the following Constructors
 - Default – sets everything to default values
 - One that has the parameters (in this order)
 - Band name
 - Capacity
 - Price by phone
 - Price at the venue
 - One that has parameters (in this order)
 - Name
 - Capacity
 - Number of Tickets Sold By Phone
 - Number of Tickets Sold At the Venue
 - The price of a ticket by phone
 - The price of a ticket at the venue
- Accessors and Mutators for each variable
 - MAKE SURE THE MUTATORS CHECK FOR VALID VALUES!
- Create the following Methods
 - TotalNumberOfTicketsSold
 - No parameters
 - Returns the value of the phone tickets plus the venue tickets
 - TicketsRemaining
 - No parameters
 - Returns the value of the capacity minus the total number of tickets sold
 - BuyTicketsAtVenue
 - 1 parameter that corresponds to the number of tickets being bought
 - returns nothing
 - BuyTicketsByPhone
 - 1 parameter that corresponds to the number of tickets being bought
 - returns nothing
 - TotalSales
 - No parameters
 - Returns the value of the ticket at the venue times the number of tickets sold at the venue, plus the tickets by phone times the price of a phone ticket

Example Dialog:

```
Welcome to the Concert Promotion tool!
Currently the concert featuring the band No name yet
Has sold 0 tickets by phone
Has sold 0 tickets at the venue
And has grossed $0.0
What would you like to do?
Enter 1: To change name
Enter 2: To change ticket by phone price
Enter 3: To change ticket at venue price
```

Enter 4: To add tickets by phone
Enter 5: To add tickets at the venue
Enter 6: To find out how many tickets are remaining
Enter 7: To find out how many total tickets have been sold
Enter 8: To change the venue's capacity
Enter 9: To start a new concert
Enter 0: To Quit

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Enter the name of the band
Bob's Band
Currently the concert featuring the band Bob's Band
Has sold 0 tickets by phone
Has sold 0 tickets at the venue
And has grossed \$0.0
What would you like to do?
Enter 1: To change name
Enter 2: To change ticket by phone price
Enter 3: To change ticket at venue price
Enter 4: To add tickets by phone
Enter 5: To add tickets at the venue
Enter 6: To find out how many tickets are remaining
Enter 7: To find out how many total tickets have been sold
Enter 8: To change the venue's capacity
Enter 9: To start a new concert
Enter 0: To Quit

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Enter the new capacity
500
Currently the concert featuring the band Bob's Band
Has sold 0 tickets by phone
Has sold 0 tickets at the venue
And has grossed \$0.0
What would you like to do?
Enter 1: To change name
Enter 2: To change ticket by phone price
Enter 3: To change ticket at venue price
Enter 4: To add tickets by phone
Enter 5: To add tickets at the venue
Enter 6: To find out how many tickets are remaining
Enter 7: To find out how many total tickets have been sold
Enter 8: To change the venue's capacity
Enter 9: To start a new concert
Enter 0: To Quit

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Enter the new price by phone
5
Currently the concert featuring the band Bob's Band
Has sold 0 tickets by phone
Has sold 0 tickets at the venue
And has grossed \$0.0
What would you like to do?
Enter 1: To change name
Enter 2: To change ticket by phone price

Enter 3: To change ticket at venue price
Enter 4: To add tickets by phone
Enter 5: To add tickets at the venue
Enter 6: To find out how many tickets are remaining
Enter 7: To find out how many total tickets have been sold
Enter 8: To change the venue's capacity
Enter 9: To start a new concert
Enter 0: To Quit

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Enter the new price at the venue
10

Currently the concert featuring the band Bob's Band
Has sold 0 tickets by phone
Has sold 0 tickets at the venue
And has grossed \$0.0
What would you like to do?

Enter 1: To change name
Enter 2: To change ticket by phone price
Enter 3: To change ticket at venue price
Enter 4: To add tickets by phone
Enter 5: To add tickets at the venue
Enter 6: To find out how many tickets are remaining
Enter 7: To find out how many total tickets have been sold
Enter 8: To change the venue's capacity
Enter 9: To start a new concert
Enter 0: To Quit

4
Enter a number of tickets to add by phone
200

Currently the concert featuring the band Bob's Band
Has sold 200 tickets by phone
Has sold 0 tickets at the venue
And has grossed \$1000.0
What would you like to do?

Enter 1: To change name
Enter 2: To change ticket by phone price
Enter 3: To change ticket at venue price
Enter 4: To add tickets by phone
Enter 5: To add tickets at the venue
Enter 6: To find out how many tickets are remaining
Enter 7: To find out how many total tickets have been sold
Enter 8: To change the venue's capacity
Enter 9: To start a new concert
Enter 0: To Quit

5
Enter a number of tickets to add at the venue
200

Currently the concert featuring the band Bob's Band
Has sold 200 tickets by phone
Has sold 200 tickets at the venue
And has grossed \$3000.0
What would you like to do?
Enter 1: To change name

Enter 2: To change ticket by phone price
Enter 3: To change ticket at venue price
Enter 4: To add tickets by phone
Enter 5: To add tickets at the venue
Enter 6: To find out how many tickets are remaining
Enter 7: To find out how many total tickets have been sold
Enter 8: To change the venue's capacity
Enter 9: To start a new concert
Enter 0: To Quit

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Enter a number of tickets to add by phone
1000

The concert is sold out!

Currently the concert featuring the band Bob's Band

Has sold 200 tickets by phone

Has sold 200 tickets at the venue

And has grossed \$3000.0

What would you like to do?

Enter 1: To change name

Enter 2: To change ticket by phone price

Enter 3: To change ticket at venue price

Enter 4: To add tickets by phone

Enter 5: To add tickets at the venue

Enter 6: To find out how many tickets are remaining

Enter 7: To find out how many total tickets have been sold

Enter 8: To change the venue's capacity

Enter 9: To start a new concert

Enter 0: To Quit

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Lab Report Questions:

1. Describe encapsulation.
2. What is the purpose of an accessor?
3. What is the purpose of a mutator?

Finally:

Upload Concert.java and ConcertPromoter.java file to the dropbox