

## Lab - 9

### Concert Promotion

#### Task:

Write a class that keeps track of concert promotion information.

- First download **ConcertPromoter.java** (contains the main method) and put it in your project
  - o Notice that this file has all of the dialog outputs and user inputs already written.
  - o Do NOT modify ConcertPromoter.java
- Create a class called **Concert** that DOES NOT HAVE a main method
- Some of the attributes of Concert are
  - o Name
  - o Capacity
  - o Number of Tickets Sold By Phone
  - o Number of Tickets Sold At the Venue
  - o The price of a ticket by phone
  - o The price of a ticket at the venue
- Create the following Constructors
  - o Default – sets everything to default values
  - o One that has the parameters (in this order)
    - Band name
    - Capacity
    - Price by phone
    - Price at the venue
  - o One that has parameters (in this order)
    - BandName
    - 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
  - o Make sure the mutators check for valid values.
- Create the following Methods
  - o totalNumberOfTicketsSold
    - No parameters
    - Returns the value of the phone tickets plus the venue tickets
  - o ticketsRemaining
    - No parameters
    - Returns the value of the capacity minus the total number of tickets sold
  - o buyTicketsAtVenue
    - 1 parameter that corresponds to the number of tickets being bought
    - returns nothing
  - o buyTicketsByPhone
    - 1 parameter that corresponds to the number of tickets being bought
    - returns nothing
  - o 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

### Sample Output:

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

**1**

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

**8**

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

**2**

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

**3**

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

**300**

Currently the concert featuring the band Bob's Band

Has sold 300 tickets by phone

Has sold 0 tickets at the venue

And has grossed \$1500.0

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 300 tickets by phone

Has sold 200 tickets at the venue

And has grossed \$3500.0

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

**50**

The concert is sold out!

Currently the concert featuring the band Bob's Band

Has sold 300 tickets by phone

Has sold 200 tickets at the venue

And has grossed \$3500.0

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

**0**

### **Lab Submission:**

- At the beginning of your program, insert your full name as a comment.
- Include comments in your program wherever necessary.
- Upload all .java files on Dropbox.

### **Lab Report Submission:**

- First, download the Lab report Template document on Dropbox.
- Use this template to complete your lab report.
- Additional Questions:
  1. (5 pts) Why should the instance variables in a class definition be set to private?
  2. (5 pts) Can you verify the equality of 2 objects of a class using the == operator?  
Why/Why not?
  3. (5 pts) How can you distinguish 2 overloaded methods?