Seneca College

Applied Arts & Technology
SCHOOL OF COMPUTER STUDIES

JAC444 Submission date: Feb 15, 2023

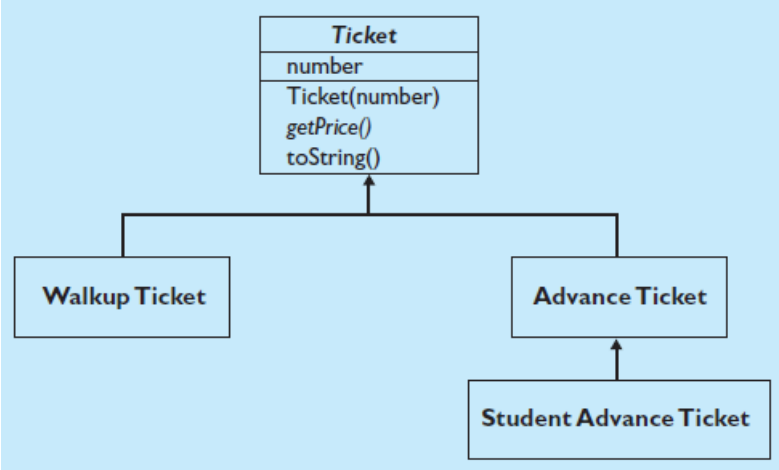
Workshop 3

Description:
The following workshop lets you practice basic java coding techniques classes and objects in more depth.

Task 1:

Consider the task of representing types of tickets to campus events. Each ticket has a unique number and a price. There are three types of tickets:

- walk-up tickets
- advance tickets
- student advance



• Walk-up tickets are purchased the day of the event and cost $50.
• Advance tickets purchased 10 or more days before the event cost $30, and advance tickets purchased fewer than 10 days before the event cost $40.
• Student advance tickets are sold at half the price of normal advance tickets: When they are purchased 10 or more days early they cost $15, and when they are purchased fewer than 10 days early they cost $20.

➢ Implement a class called Ticket that will serve as the superclass for all three types of tickets.

- Define all common operations in this class, and specify all differing operations in such a way that every subclass must implement them. No actual objects of type Ticket will be created: Each actual ticket will be an object of a subclass type. Define the following operations:
  - The ability to construct a ticket by number.
  - The ability to ask for a ticket's price.
  - The ability to println a ticket object as a String. An example String would be "Number: 17, Price: 50.0".
- Implement a class called WalkupTicket to represent a walk-up event ticket. Walk-up tickets are also constructed by number, and they have a price of $50.
- Implement a class called AdvanceTicket to represent tickets purchased in advance. An advance ticket is constructed with a ticket number and with the number of days in advance that the ticket was purchased. Advance tickets purchased 10 or more days before the event cost $30, and advance tickets purchased fewer than 10 days before the event cost $40.
- Implement a class called StudentAdvanceTicket to represent tickets purchased in advance by students. A student advance ticket is constructed with a ticket number and with the number of days in advance that the ticket was purchased. Student advance tickets purchased 10 or more days before the event cost $15, and student advance tickets purchased fewer than 10 days before the event cost $20 (half of a normal advance ticket). When a student advance ticket is printed, the String should mention that the student must show his or her student ID (for example, "Number: 17, Price: 15.0 (ID required)").

Note: Your tester class should be designed like a menu which can provide different options to check the functionalities.

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Workshop Header

/**
Workshop #
Course:*<subject type> - Semester*
Last Name:*<student last name>*
First Name:*<student first name>*
ID:*<student ID>*
Section:*<section name>*
This assignment represents my own work in accordance with Seneca Academic Policy.
Signature
Date:*<submission date>*
**/

Code Submission Criteria:

Please note that you should have:

- Appropriate indentation.
- Proper file structure
- Follow java naming convention
- Document all the classes properly using JavaDoc
- JavaDoc should be generated properly in the project
- Do Not have any debug/ useless code and/ or files in the assignment

Deliverables and Important Notes:

All these deliverables are supposed to be uploaded on the blackboard once done.

- You are supposed to create **video with voice** of your running solution. **(50%)**
  - Screen Video captured file should state your last name and id, like Ali_123456.mp4 (or whatever the extension of the file is)

    OR
  - Show your work during the lab
- A text file which will reflect on learning of your concepts in this workshop. **(20%)**
  - Should state your Full name and Id on the top of the file and save the file with your last name and id, like Ali_123456.txt
- JavaDocs must be used for proper documentation of each task. **(15%)**
- Submission of working code. **(15%)**
  - Make sure your follow the "**Code Submission Criteria"** mentioned above.
  - You should zip your whole working project to a file named after your Last Name followed by the first 3 digits of your student ID. For example, **Ali123.**zip.

- Your marks will be deducted according to what is missing from the above-mentioned submission details.
- Late submissions would result in additional 10% penalties for each day or part of it.
- Remember that you are encouraged to talk to each other, to the instructor, or to anyone else about any of the assignments, but the final solution may not be copied from any source.