

# **COMP 360-01 Programming Languages Spring 2024**

## **Project 3**

**Due Date: April 28**

### **Java Exception and Security Project**

**Objective:** Java language provides some mechanisms to support security. Exception is one of these language structures. Using exceptions can increase the reliability of software products and handle unexpected errors. In this project students will apply object-oriented and exception techniques to the assigned problems.

#### **Project Assignment**

Using object-oriented programming techniques and exception handling to implement an Artist Theater System for the tickets of “Kung Fu Panda 4”. The Artist Theater has 30 seats, and each seat has a number associated with it. On April 20 the theater will have one show that will be 1:00 PM, and April 28 the theater will also have one show that will be 8:00 PM. The Artist Theater System must satisfy the following requirements:

A constructor sets the date, time, and number of seats.

A method ArtistTheaterFull to check if there are any seats available for the customer requested ticket.

A person purchases a ticket via BuyTicket method.

If a customer tries to buy a ticket but all tickets were sold a NoSeatAvailable exception will occur. The corresponding exception handler must display tickets sold out information that will include date and time that the customer requested ticket.

If a customer bought a ticket the date, time and seat number should be displayed.

If a customer returns a ticket the seat will become available.

#### **Requirements:**

- a) This is a two-person team project.
- b) The team should use department programming standards.
- c) The program must execute correctly.
- d) Email your program to Yang Liu [yliu2@aggies.ncat.edu](mailto:yliu2@aggies.ncat.edu).