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Project 1 Pseudocode

GotG2 Ticket Reservation System

* import classes: java.io.\*, java.util.Scanner
* public class GotG2TicketReservationSystem
  + public static void main(String[] args)
    - Open auditorium files and store data in char[][] variables
      1. char[][] a1 = openAuditorium(“A1.txt”);
      2. char[][] a2 = openAuditorium(“A2.txt”);
      3. char[][] a3 = openAuditorium(“A3.txt”);
    - boolean exit = false;
    - while (!exit)
      1. Call displayMainMenu();
      2. Initialize Scanner
      3. Read user input and check for valid user input entry
      4. If user selected an auditorium (options 1, 2, or 3)
         * Call printAuditorium(auditorium);
         * Prompt user for number of tickets
         * Read user input and check for valid user input entry
         * Save user input in variable numberTickets = scan.nextInt();
         * Prompt user for row number
         * Read user input and check for valid user input entry
         * Save user input in variable rowNumber = scan.nextInt();
         * Prompt user for starting seat number
         * Read user input and check for valid user input entry
         * Save user input in variable startingSeatNumber = scan.nextInt();
         * If seats are available

Update char[][] for the correct auditorium

Print “successful” message to console

* + - * + Else (seats are not available)

Print “unsuccessful” message to console

Call findBestAvailable(auditorium, numberTickets,rowNumber);

Prompt user to enter Y or N to reserve the best available seats

Read user input and check for valid user input entry

If user selects Y

Update char[][] for the correct auditorium

Print “successful” message to console

Else (user selects N)

Print “unsuccessful” message to console

* + - 1. Else (option 4)
         * exit = true;
         * Save updated auditorium files

saveAuditorium(a1, “A1.txt”);

saveAuditorium(a2, “A2.txt”);

saveAuditorium(a3, “A3.txt”);

* + - * + Call printReport();
      1. Close Scanner
  + public static void displayMainMenu()
    - Print the main menu
      1. Auditorium 1
      2. Auditorium 2
      3. Auditorium 3
      4. Exit
  + public static char[][] openAuditorium(String inputFilePath)
    - Initialize Scanner to inputFilePath
    - Read corresponding auditorium text file
    - Return char[][] with auditorium data
    - Close Scanner
  + public static void printAuditorium(char[][] auditorium)
    - Print the char[][] auditorium variable that was passed into the method
  + public static void saveAuditorium(char[][] auditoriumData, String outputFilePath)
    - Initialize BufferedWriter to outputFilePath
    - Write auditoriumData to the respective outputFilePath
    - Close BufferedWriter
  + public static void printReport()
    - Print a formatted report to the console
      1. Column 1 – labels
         * Auditorium 1
         * Auditorium 2
         * Auditorium 3
         * Total
      2. Column 2 – number of seats reserved for each label
      3. Column 3 – number of open seats for each label
      4. Column 4 – total number/price of ticket sales
  + public static int[][] findBestAvailable(char[][] auditorium, int numberTickets, int row)
    - Find int numberTickets of best available seats (closest to the middle) on the row in the auditorium specified
    - Return an int[][] of the location of the best available seats