

Recitation 6

October 21, 2021

Topics to Recap

- ArrayList
- 2d arrays
- Setting up github on eclipse
- Git commands

Examples for Recap

- Implement the function `removeEvens()` below that takes as input an integer array `nums` and outputs an integer array which is, as the function name suggests, a copied version of `nums` without any even valued entries. For example, if we have the input `[1,2,3,4,5,6]`, the output would be `[1,3,5]`.
- Write a method `max` that returns the maximum int value in the 2d int array.
- Write a method `sum` that returns the average of the 2d int array.

Recitation Problem Set

Question 1

This program `PlayerRoster` will store roster and rating information for a soccer team. Coaches rate players during tryouts to ensure a balanced team.

1. Given two arrays: one with the player's jersey number and the other with the player's rating, store the jersey numbers and the ratings into the field `rosterArray`, a 2d int array and initialize the Scanner `scnr` in the constructor.
2. Implement a menu of options for a user to modify the roster in a method `start()`. Each option is represented by a single character. The program initially outputs the menu, and outputs the menu after a user chooses an option. The program ends when the user chooses the option to Quit. For this step, the other options do nothing. The other options will be implemented in different methods.

```
MENU
u - Update player rating
a - Output players above a rating
r - Replace player
o - Output roster
q - Quit
```

Choose an option:

3. Implement the "Output roster" menu option in a method called `outputRoster()` that prints the player roster in the format below.

```
Player 1 -- Jersey number: 84, Rating: 7
Player 2 -- Jersey number: 23, Rating: 4
...
```

4. Implement the "Update player rating" menu option in a method called `updatePlayerRating()`. Prompt the user for a player's jersey number in the method, prompt again for a new rating for the player, and then change that player's rating. - Ex:

```
Enter a jersey number:
23
Enter a new rating for player:
6
...
```

5. Implement the "Output players above a rating" menu option in a method called `outputFilteredPlayers()`. Prompt the user for a rating. Print the jersey number and rating for all players with ratings above the entered value in the same format as `outputRoster()`.

```
Enter a rating:
5

ABOVE 5
Player 1 -- Jersey number: 84, Rating: 7
```

6. Implement the "Replace player" menu option in a method called `replacePlayer()`. Prompt the user for the jersey number of the player to replace. If the player is in the roster, then prompt again for a new jersey number and rating. Update the replaced player's jersey number and rating.

```
Enter a jersey number:
4
Enter a new jersey number:
12
Enter a rating for the new player:
8
```

- Some code to get you started:

```
import java.util.Scanner;

public class PlayerRoster {
    private int[][] rosterArray;
    private Scanner scnr;
```

```
public PlayerRoster(int[] jerseyNumber, int[] playerRatings) {
    /* Type your code here. */
}

public void start() {
    /* Type your code here. */
}

private void outputRoster() {
    /* Type your code here. */
}

private void updatePlayerRating() {
    /* Type your code here. */
}

private void updatePlayerRating() {
    /* Type your code here. */
}

private void outputFilteredPlayers() {
    /* Type your code here. */
}

private void replacePlayer() {
    /* Type your code here. */
}
}
```

Question 2

Type the command line commands (remove spaces before and after command/no trailing whitespace!)

- Command to let user know where they are
- Command to see the files in the current directory
- Command to go to the 591recitation directory if currently in
`~/documents/591recitation/recitation6`
- Command to go to the recitation6 folder if currently in `~/documents/591recitation`
- Command to clone git repo: <https://github.com/cit591/recitation6.git>
- Command to add `PlayerRoster` file to commit
- Command to make a new commit with the exact message `Implemented methods in PlayerRoster`

Submission

Copy the code for question 1 onto gradescope and type the commands into gradescope.

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