

## Assignment 3 Summer Bootcamp in java

**Total Marks: 100**  
**Due Date: 30 July 2024**

Solution will be discussed in doubt sessions

### Util library Random in java

#### Cricket Scorecard Application

Develop a console-based cricket scorecard application that simulates a cricket match, calculates scores, and determines the winner.

#### Requirements:

- Accept input for team names.
- Conduct a virtual toss to determine the batting order.
- Allow for a maximum of 20 overs per innings.
- Store player names in a string array.
- Calculate and display individual and team scores.
- Calculate and display strike rates.
- Determine the winning team based on total scores.

#### Task Breakdown

1. **User Input:**
  - Prompt the user to enter the names of two cricket teams.
  - Simulate a toss and determine the batting order.
  - Set the number of overs per innings (20 in this case).
2. **Player Data:**
  - Create two string arrays to store the names of 11 players for each team.
  - You can either hardcode player names or allow the user to input them.
3. **Scorekeeping:**
  - Initialize variables to track the following for each batsman:
    - Name
    - Runs scored
    - Balls faced
    - Out or Not Out
  - Initialize variables to track the following for each team:
    - Total runs
    - Wickets fallen
    - Overs bowled
  - Implement logic to simulate the batting innings, including:
    - Bowling overs
    - Scoring runs
    - Wicket falls
    - Calculating strike rates (runs/balls faced \* 100)

#### 4. **Score Display:**

- Create a formatted scorecard displaying the following information for each batsman:
  - Name
  - Score
  - Out/Not Out
  - Balls faced
  - Strike rate
- Display the total score for the team in the format: "Total score X/Y in Z overs"

#### 5. **Winning Team:**

- Compare the total scores of both teams.
- Declare the team with the higher score as the winner.

Best of Luck

