

## Slip 12

### 10 Marks:

```
java
Copy code
import java.util.Scanner;

class Continent {
    String continent;

    void input() {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Continent Name:");
        continent = sc.nextLine();
    }
}

class Country extends Continent {
    String country;

    void input() {
        super.input();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Country Name:");
        country = sc.nextLine();
    }
}

class State extends Country {
    String state;

    void input() {
        super.input();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter State Name:");
        state = sc.nextLine();
    }

    void display() {
        System.out.println("Continent: " + continent);
        System.out.println("Country: " + country);
        System.out.println("State: " + state);
    }
}

public class Main {
    public static void main(String[] args) {
        State s = new State();
        s.input();
        s.display();
    }
}
```

### 20 Marks:

```

java
Copy code
import java.io.*;
import java.util.*;

class CricketPlayer {
    String name;
    int noOfInnings, noOfTimesNotOut, totalRuns;
    float batAvg;

    public CricketPlayer(String name, int noOfInnings, int noOfTimesNotOut,
int totalRuns) {
        this.name = name;
        this.noOfInnings = noOfInnings;
        this.noOfTimesNotOut = noOfTimesNotOut;
        this.totalRuns = totalRuns;
        this.batAvg = (float) totalRuns / noOfInnings;
    }

    public static void sortPlayers(CricketPlayer[] players) {
        Arrays.sort(players, Comparator.comparingDouble(p -> -p.batAvg)); //
Sort by batAvg in descending order
        System.out.println("Players sorted by batting average:");
        for (CricketPlayer player : players) {
            player.display();
        }
    }

    public void display() {
        System.out.printf("Name: %s, Innings: %d, Not Out: %d, Total Runs:
%d, Batting Average: %.2f\n",
            name, noOfInnings, noOfTimesNotOut, totalRuns,
batAvg);
    }

    public static void main(String[] args) throws IOException {
        BufferedReader br = new BufferedReader(new
InputStreamReader(System.in));
        System.out.print("Enter the number of players: ");
        int n = Integer.parseInt(br.readLine());
        CricketPlayer[] players = new CricketPlayer[n];

        for (int i = 0; i < n; i++) {
            System.out.println("Enter details for player " + (i + 1));
            System.out.print("Enter name: ");
            String name = br.readLine();
            System.out.print("Enter number of innings: ");
            int innings = Integer.parseInt(br.readLine());
            System.out.print("Enter number of times not out: ");
            int notOut = Integer.parseInt(br.readLine());
            System.out.print("Enter total runs: ");
            int totalRuns = Integer.parseInt(br.readLine());

            players[i] = new CricketPlayer(name, innings, notOut, totalRuns);
        }

        sortPlayers(players);
    }
}

```

