

SEMESTER PROJECT

Anyone found in copying the project from any source, the groups will get F grade in Course as well as in the Lab.

Note: Carefully read the following instructions.

- 2 students are allowed per group. No cross-section is allowed.
- Use of SFML/ Windows Form is Optional(Bonus Marks will be awarded if GUI is in proper way).
- Submit your roll number in each submission.
- Using all concepts of OOP(CP) is mandatory. And concepts should be used correctly.
- Read the documentation and discuss it with your groupmate on zoom auto record and submit link of the video in the first submission. (20/11/2022)
- Your code should be clear and add exceptions where required [to avoid system to crash or accept incorrect data/options]
- Naming Conventions should clarify the purpose of variables and functions being used.
 - o Names of Classes should start with a Capital Letter.
 - o Names of Variables should start from a Small Letter.
 - o Use 3 file structure for implementation
- Project is to be submitted as a zip file.
- Deadline of the project will be announced later.(/ /)
- You must submit the whole project by one member of the group.
- Submit your file in this format
FirstGroupMemberRollNumber_SecondGroupMemberNumber.zip.
- Submit your complete project file with your code copy pasted on word file with all possible output screenshots. Both project file and word file must be included in .zip file. Make your submission on Google Classroom (Make sure your submission is completed).
- Submission will be through google classroom. Lab teachers will make portals for submission.

CRICBUZZ

Your task is to implement the management system of CricBuzz Application, which performs tasks such as Notifications of live matches and breaking news, Cricket Tournaments happening around you, updated scores and team positions after every match and so on.

Students are supposed to use as many concepts of OOP as possible. Most effectively used concepts will get maximum marks. (Unnecessary fixation of OOP concepts will not be appreciated).

Each student is bound to use all of the following classes for project. Failure to do so may result in deduction of marks.

Note: You can add more classes/functions if needed in your project, but the basic criteria must be met.

Classes:

- **Player** (Can be an Abstract Class)

Attributes:

1. Name
2. Shirt No.
3. Average
4. ICC ranking in each format (T20 etc.)
5. Total runs
6. Matches played
7. Total wickets

Student is supposed to add more attributes related to identification of a player (according to your own visualization), in addition to these basic attributes.

Functions:

1. addPlayer()
2. removePlayer()

3. searchPlayer()
4. updatePlayer()

(These are the necessary functions. Student can add functions according to functionality needs)

- **Team** (Can inherit Player Class)

Attributes:

1. Name
2. ICC ranking in each format (T20 etc.)
3. No. of Players
4. Total matches won
5. Total matches lost
6. Team Captain
7. Team Coach
8. Admin Username
9. Admin Password

Student is supposed to add more attributes related to identification of a player (according to your own visualization), in addition to these basic attributes.

Team class must be able to browse details of each player, even specified for a certain match or tournament. (e.g. wickets, strike rate, total score, etc.)

(When selected Team class, a username and password will be asked for admin login. Once logged in, admin can perform all the functions given below)

Functions:

1. addPlayer()
2. removePlayer()
3. searchPlayer()
4. updatePlayer()
5. displayMatches()
(this function will further display all previous and upcoming matches along with all details)
6. updateCaptain()
7. updateCoach()
8. displayTeam()

(These are the necessary functions. Student can add functions according to functionality needs)

- **Match**

Attributes:

1. Team1
2. Team2
3. Date
4. Venue
5. Match type (ODI etc.)
6. Tournament Name (T20 World Cup, IPL, PSL, etc.)
7. Commentators
8. Umpires
9. Match status (upcoming, recent, etc.)

Student is supposed to add more attributes related to identification of a player (according to your own visualization), in addition to these basic attributes.

Functions:

1. `conductMatch()`
2. `scheduleMatch()`
3. `updateWorldRecords()`
4. `updateTeamRanking()`
5. `updatePlayerRanking()`
6. `displayUpcomingMatches()`
7. `displayRecentMatches()`

Functionality:

Match class will be able to navigate around all matches throughout the world. If we want to conduct a match, **ConductMatch()** function will first ask if user wants to conduct an already scheduled match, for which it will display list of all already scheduled matches and the user will be prompted to select one match.

Or if user wants to schedule a new match, it will proceed to **scheduleMatch()** function.

scheduleMatch() function will show list of all available teams, of which user must select at least 2 teams. After that, user will be prompted to set all attributes like time, venue, etc. In case of a whole tournament, user will be shown list of all teams, from which they

must select several teams and set the venues, dates, tournament name, etc.

After each match/tournament, the **updateWorldRecords()** function must be called which will then update the following records:

- **Most runs**
- **Highest score**
- **Most sixes**
- **Most fours**
- **Most centuries**
- **Highest batting average**
- **Best batting strike rate**
- **Most wickets**
- **Best bowling avg**
- **Best bowling, etc.**

After each match/tournament, **updateTeamranking()** and **updatePlayerRanking()** functions will update necessary attributes for the playing teams.

User must be able to display all upcoming matches with details by function

displayUpcomingMatches()

and for all recent matches along with their details, select function

displayRecentMatches()

After each match/tournament is conducted, details of all included players must be updated in respective files and displayed. Such details may include:

Score, wickets, strike rate, etc.

- **News**

User must be able to browse certain or specified news, photos or videos from previous matches/tournaments.

User can ask for details of any recently played match, or schedule of upcoming matches along with date, venue, etc.

User can prompt the search for ICC World Rankings, which can be of an entire team, a certain user, or a certain category (e.g T20, or Bowling, etc.)

Best of luck 😊

You are done with your Project, submit on Google Classroom at given time.