Lovely Professional University

(PUNJAB)

PROJECT REPORT :

INT-213 (PYTHON PROGRAMMING)

PROJECT NAME :

GUI Online Cricket Score Board

[GITHUB Repository Link of the Code -   https://github.com/ng20-Projects/CricketScoreBoard.git]

SUBMITTED TO:

SUBMITTED BY:

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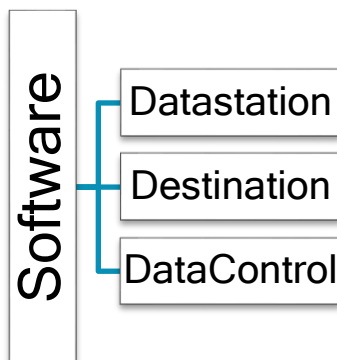
INTRODUCTION

This is an **"Online Cricket Score Board"** which can be used to keep track of all over the data like "Runs, Balls Played, Wickets, Total number of Overs, Total number of balls left, Which player is playing now, who gets out and many more. With this software you can easily track all these kind of data without any problem. It also provides easy-understandability to the audience so that they can easily understand what is going on.

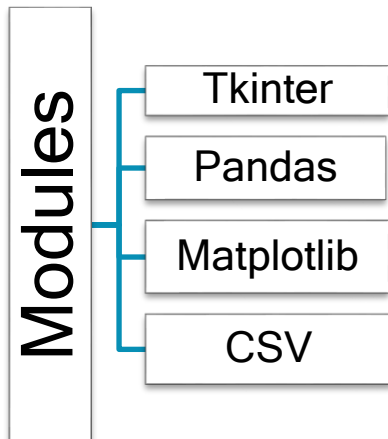With the availability of two modes – "Manual" and "Automatic".

A person can easily operate it from the one end and can manipulate the data on the rear end. Also the GUI is very easy to understand and can be operate by anyone without any kind of Different or High-Knowledge.

Preview of the Project

- This software have **"3-Different Classes"**

■ Modules used in this software are
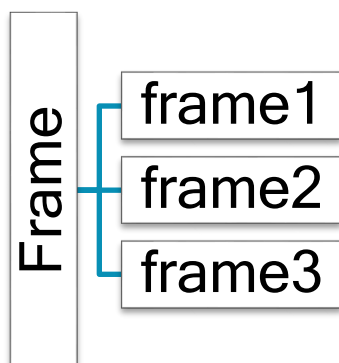
Modules
- Tkinter
- Pandas
- Matplotlib
- CSV

■ Widgets used in the software are

Widgets
- Label
- Button
- Entry
- Check Box
- File Menu
- Option Menu
- Frame

■ Frames used in the Software are
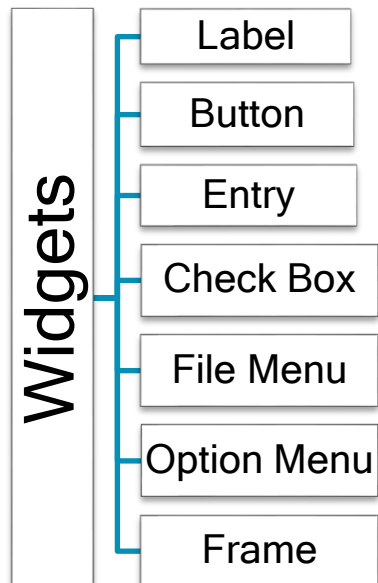
Frame
- frame1
- frame2
- frame3

[GLOBAL VARIABLES]

- **score1 :-** This variable is used to increase the total number of runs of a team in score board.

- **score2 :-** This variable is used to increase the number of runs of a Batsman-1 in score board.

- **score3 :-** This variable is used to increase the number of runs of a Batsman-2 in score board.

- **ballsplayed :-** This variable is used to increase the number of Balls played by Batsman-1 in score board.

- **ballsplayed2 :-** This variable is used to increase the number of Balls played by Batsman-2 in score board.

- **wickets :-** This variable is used to increase the number of wickets fallen of a team in score board.

- **balls1 :-** This variable is used to increase the number of Balls played by whole team in score board, till 0.5 balls after that it will becomes zero again and increases variable overs.

USE OF GLOBAL VARIABLE IN A PROGRAM

Global Variable can be accessed every where in the program i.e, it's scope is through out the Program. We can use a global variable anywhere by using the keyword **" global "** before the variable name.

- **overs :-** This variable is used to increase the number of over played by whole team in score board, after 0.5 balls increases variable overs.

- **auto_checker :-** This variable is used to verify that the MODE of the scoreboard is 'Automatic' or 'Manual' by storing the value '1' and '0' respectively.

- **Strike_Pointer :-** This variable is used to check which 'Player' is playing currently.

- **Strike_List :-** This variable is used to store the current two batsman who are playing.

- **out_reason :-** This variable is used to store the how the player is out.

- **out_reason_checker :-** This variable is used to restrict in increase of the 'Wickets' without giving the reason of out. When the user provide/choose the reason why the player is out then only the end-user can increase the wicket.

- **CSV_checker :-** This variable is used to check when the program is run for the first time then a new csv file is formed with specific columns and if the csv file exists then it overwrites before filling up the new data.

- **evod :-** This variable is used to assign the value '1' to the variable 'auto_checker' when the Check Box named "**Automatic**" is clicked and '0' when it is not clicked.

- **a :-** This variable is used to get the string written inside the 'Entry Box' for both the Batsman name.

- **Clear_Out_Reason :-** This variable is used to clear the response giving by the end user and reset the value of Out Reason to its initial state.

Class

Destination	Datastation	DataControl
Object - app	**Object -** app1	**Object -** DC

[DESTINATION CLASS]

[VARIABLES]

- **t_name :-** This variable is declared as StringVar and used to store Team name as text and set to "Team".

- **scr :-** This variable is declared as StringVar and used to store Score of team as text and set to "0".

- **wkt :-** This variable is declared as StringVar and used to store wicket fall of team as text and set to "-0".

- **ovr :-** This variable is declared as StringVar and used to store overs after 6 balls as text and set to "0".

- **balls :-** This variable is declared as StringVar and used to store balls till 5 balls and then again store as ".0" as text and set to ".0".

- **over :-** This variable is declared as StringVar and used to store total number of overs of team will play in match as text and set to "/ 0".

DESTINATION CLASS INTRODUCTION

Destination class is basically used to show all our main score board where everything will change according to run or team, and in this Class we have made all our Labels and made functions or logic inside it to change the text of Label.

- **B1 :-** This variable is declared as StringVar and used to store Batsman-1 Name as text and set to "Batsman-1 Name".

- **B1scr :-** This variable is declared as StringVar and used to store Batsman-1 score as text and set to "0".

- **B1ball :-** This variable is declared as StringVar and used to store Batsman-1 Name ball played as text and set to "(0)".

- **B2 :-** This variable is declared as StringVar and used to store Batsman-2 Name as text and set to "Batsman-2 Name".

- **B2scr :-** This variable is declared as StringVar and used to store Batsman-2 score as text and set to "0".

- **B2ball :-** This variable is declared as StringVar and used to store Batsman-2 Name ball played as text and set to "(0)".

[DESTINATION CLASS]

[FUNCTIONS]

- Whole Code is written inside the Constructor of this class except Functions they are inside class but not inside constructor.

- **Strike() & strik() :-** These 2 functions are used for change strike of Batsman while playing.

- **scr1() to till scr6() :-** These all functions are used to increase runs of team and also set strike according to run scored by players.

- **scrminus() :-** This Function is used to decrease run of team in score board.

- **wicket() :-** This Function is used to increase wicket fall of team according to the conditions of strike and also write the data of player into "Data.csv" file.

- **wicketminus() :-** This Functions is used to decrease wicket of team in score board.

- **over_update() :-** This function is used to update the text or value of overs of team by taking from entry box.

DESTINATION CLASS INTRODUCTION

Destination class is basically used to show all our main score board where everything will change according to run or team, and in this Class we have made all our Labels and made functions or logic inside it to change the text of Label.

- **B1score1() to till B1score6() :-** These all functions are used to increase runs of individual players according to button clicked by user.

- **B1scoreminus() :-** This function is used to decrease runs of individual player-1 in score board.

- **B1ballplay() :-** This function is used to increase balls played by individual player-1 in score board.

- **B1ballplayminus() :-** This function is used to decrease balls played by individual player-1 in score board.

- **B1name_update() :-** This functions is used to take input from entry box of Batsman-1 Name and set text to it's name.

- **B2score1() to till B2score6() :-** These all functions are used to increase runs of individual players according to button clicked by user.

- **B2scoreminus() :-** This function is used to decrease runs of individual player-2 in score board.

- **B2ballplay() :-** This function is used to increase balls played by individual player-2 in score board.

- **B2ballplayminus() :-** This function is used to decrease balls played by individual player-2 in score board.

- **B2name_update() :-** This functions is used to take input from entry box of Batsman-2 Name and set text to it's name.

- **teamname_update() :-** This functions is used to take input from entry box of Team Name and set text as Team name.

- **t_balls() :-** This function is used to increase number of balls and increase over after each 5 balls in match and it also checks that automatic button is clicked or not and works according to it.

- **t_ballsminus() :-** This function is used to decrease number of balls and decrease over after each 5 balls in reverse order in match and it also checks that automatic button is clicked or not and works according to it.

- **Clear() :-** This function is used to clear everything in score board and set it to it's default text in main score board.

[DESTINATION CLASS]

[WIDGETS]

- **Frame :-** This Widget is used to create a frame in main score GUI window to show all Labels and variables.

- **Label :-** This Widget is used to create label inside frame to show text or data of score board.

DESTINATION CLASS INTRODUCTION

Destination class is basically used to show all our main score board where everything will change according to run or team, and in this Class we have made all our Labels and made functions or logic inside it to change the text of Label.

[DATASTATION CLASS]

[VARIABLES]

- **totalscrlb1 :-** This variable is used to show Label of "ADD SCORE"

- **scr1btn :-** This Variable is used to show Button in Datastation class for increase score of team as text="+1".
  [Series of these variables like scr2btn, scr3btn till scr6btn declared with increasing text as +2,+3, till +6**]**

- **scrminbtn :-** This variable is used to show Button for decrease score as text="-1".

- **totalwktlb1 :-** This variable is used to show Label of "ADD WICKET".

- **wktbtn :-** This variable is used to show Button in Datastation class to increase wicket of team as text="+1".

- **_wktbtn :-** This variable is used to show Button in Datastation class to decrease wicket of team as text="-1".

- **var :-** This variable is used to store text or value from OptionMenu widget.

Datastation class is basically used to show our data of Score Board, like from where we will change all Text or values of main score board, In this class we have made all Buttons to change the text or values.

- **B1scrlb1 :-** This variable is used to show Label of "ADD B1 SCORE".

- **B1scr1btn :-** This Variable is used to show Button in Datastation class for increase Batsman-1 score as text="+1".
  [Series of these variable like B1scr2btn, B1scr3btn till B1scr6btn declared with increasing text as +2,+3, till +6]

- **B1scrminusbtn :-** This variable is used to show Button for decrease score of Batsman-1 as text="-1".

- **B1ballplylb1 :-** This variable is used to show Label of "B1 BALLS PLAYED ".

- **B1ball1btn :-** This Variable is used to show Button in Datastation in class for increase balls of Batsman-1 as text="+1".

- **B1ballminusbtn :-** This Variable is used to show Button in Datastation in class for decrease balls of Batsman-1 as text="-1".

- **B2scrlb1 :-** This variable is used to show Label of "ADD B2 SCORE".

- **B2scr1btn :-** This Variable is used to show Button in Datastation class for increase Batsman-2 score as text="+1".
  [Series of thess variable like B2scr2btn, B2scr3btn till B2scr6btn declared with increasing text as +2,+3, till +6]

- **B2scrminusbtn :-** This variable is used to show Button for decrease score of Batsman-2 as text="-1".

- **B2ballplylb1 :-** This variable is used to show Label of "B2 BALLS PLAYED ".

- **B2ball1btn :-** This Variable is used to show Button in Datastation in class for increase balls of Batsman-2 as text="+1".

- **B2ballminusbtn :-** This Variable is used to show Button in Datastation in class for decrease balls of Batsman-2 as text="-1".

- **t_ballslb1 :-** This variable is used to show Label of "ADD TOTAL BALLS".

- **t_ballsbtn :-** This Variable is used to show Button in Datastation in class for increase balls of Team as text="+1".

- **t_ballsminusbtn :-** This Variable is used to show Button in Datastation in class for decrease balls of Team as text="-1".

- **clear :-** This variable is used to show Button in Datastation class for clear everything in score board as default text or value.

- **auto :-** This Variable is used to show check box Button in Datastation in class for automatic button.

- **t_over1b1 :-** This variable is used to show Label of "Enter Total Overs".

- **t_overentry :-** This variable is used to show Entry box for taking input from user for total team over.

- **t_overbtn :-** This variable is used to show Button for update value of t_overentry box into score board as text.

- **B1name1b1 :-** This variable is used to show Label of "Enter BATSMAN-1".

- **B1name_entry :-** This variable is used to show Entry box for taking input from user for Batsman-1 Name.

- **B1namebtn :-** This variable is used to show Button for update value of B1name_entry into score board as text.

- **B2name1b1 :-** This variable is used to show Label of "Enter BATSMAN-2".

- **B2name_entry :-** This variable is used to show Entry box for taking input from user for Batsman-2 Name.

- **B2namebtn :-** This variable is used to show Button for update value of B2name_entry into score board as text.

- **teamname1b1 :-** This variable is used to show Label of "Enter TEAM NAME".

- **teamname_entry :-** This variable is used to show Entry box for taking input from user for Team Name.

- **teamnamebtn :-** This variable is used to show Button for update value of teamname_entry into score board as text.

[Datastation class]

[FUNCTIONS]

- Whole Code and function to is written inside Constructor of this class.

- **Out() :-** This Function used to get reason of out of any Batsman while playing cricket, so we can increase wicket of team otherwise we will not able to increase it.

- **Auto() :-** This Function is used to get if user click on automatic button or not so, the program will automatic scores of players.

DATASTATION CLASS INTRODUCTION

Datastation class is basicall used to show our data of Score Board, like from wher we will change all Text or values of main score board, In this class we have made all Buttons to change the tex or values.

[DATASTATION CLASS]

[WIDGETS]

- **Frame :-** This Widget is used to create a frame in Datastation GUI window to show all Labels and text.

- **Label :-** This Widget is used to create label inside frame to show text or buttons in Datastation window.

- **Menu :-** This Widget is used to show menu bar in Datastation window inside it there are two options to show statics of players or exit from program.

- **Buttons :-** This Widget is used to create Buttons, Many types of Buttons to show changes in main score board from that particular button.

- **OptionMenu :-** This Widget is used to show the options how the Batsman out while playing from bowler (Types of Out)

- CheckButton :- This Widget is used to create check box button with named 'Automatic', to show scores of players atomatic while changing score of whlole team.

- **Entry :-** This Widget is used to take input from user for Total over, Batsman-1 Name, Batsman-2 Name, Team Name.

[DATACONTROL CLASS]

[VARIABLES]

- **writer :-** The variable which is used to have the property of "csv.writer(File_Name)".

- **Strike_Rate :-** The variable which is used to calculate the strike rate of a player.

- **Strike_Rate1 :-** The variable which is used to specially to calculate the strike rate of the first Batsman.

- **Strike_Rate2 :-** The variable which is used to specially to calculate the strike rate of the second Batsman.

- **d :-** The variable which is used to have the property of "read_csv(Path)".

- **Name :-** The variable that stores the data of Player's name from the CSV file in the form of a list.

- **sc :-** The variable that stores the data of Score from the CSV file in the form of a list.

DATACONTROL CLASS INTRODUCTION

DataControl class is basically used to store the player data like their 'Name', 'Runs' , 'Balls Played' in a CSV file. It also read that CSV file to plot the graph too.

- **BP :-** The variable that stores the data of Balls Played from the CSV file in the form of a list.

- **SR :-** The variable that stores the data of Strike rate from the CSV file in the form of a list.
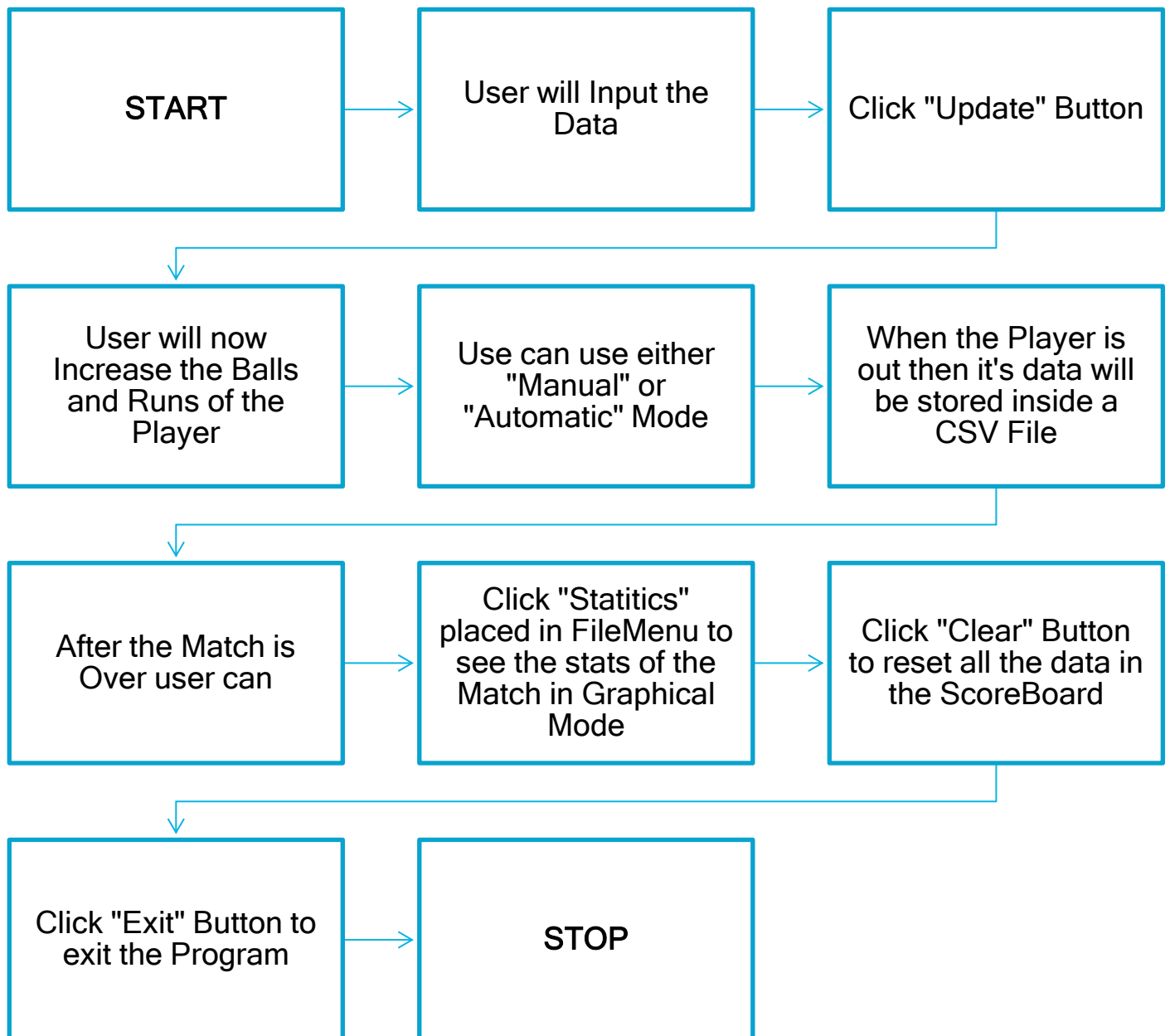
[DATACONTROL CLASS]

[FUNCTIONS]

- **Excel() :-** This Function is used to create a "Data.csv" named file and write all the data of players who recently out.

- **End_Excel() :-** This Function is used to create a "Data.csv" named file if not created before and write all the data of players who is still playing when match is over and store the data after completing over.

- **Show_Graphical_Performance() :-** This Function is used to show graphical performance of players by taking data from "Data.csv" file.

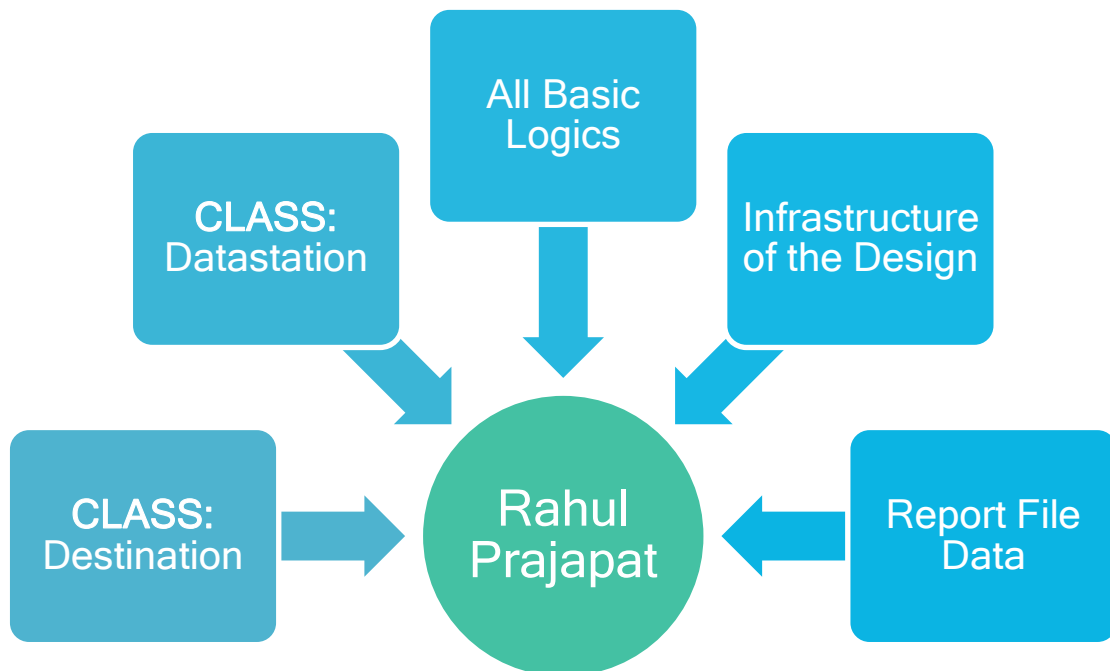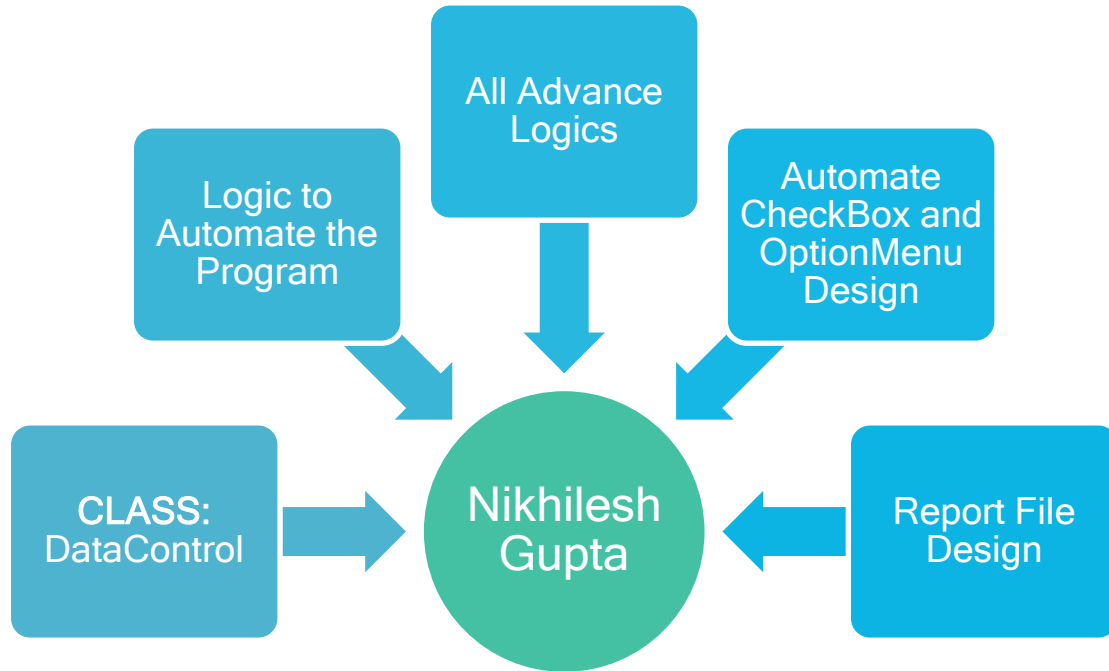- **Exit() :-** This Function is used to exit from the whole program.

DATACONTROL CLASS INTRODUCTION

DataControl class is basically used to store the player data like their 'Name', 'Runs' , 'Balls Played' in a CSV file. It also read that CSV file to plot the graph too.

Flow of The Program

START	User will Input the Data	Click "Update" Button
User will now Increase the Balls and Runs of the Player	Use can use either "Manual" or "Automatic" Mode	When the Player is out then it's data will be stored inside a CSV File
After the Match is Over user can	Click "Statitics" placed in FileMenu to see the stats of the Match in Graphical Mode	Click "Clear" Button to reset all the data in the ScoreBoard
Click "Exit" Button to exit the Program	STOP	

Work Distribution

Nikhilesh Gupta

- Logic to Automate the Program
- All Advance Logics
- Automate CheckBox and OptionMenu Design
- CLASS: DataControl
- Report File Design

Rahul Prajapat

- CLASS: Datastation
- All Basic Logics
- Infrastructure of the Design
- CLASS: Destination
- Report File Data

-Thank You-