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Criterion B – Design

Input and Output

Input*	Java Data Type	Example
Team Name	String	003
Autonomous Period	Int	1
Driver Controlled Period	Int	2
End Game/Flags	Boolean	True
Penalties	Int	7

*Replicated 4 times

Output	Java Data Type	Example
Sum (per period)	Int	6
Overall Sum	Int	23
Team Name*	String	003
Autonomous Period	Int	10
Driver Controlled Period	Int	8
End Game	Int	9
Penalties	Int	7
Year (e.g.2012)	Int	30
Help→General help	String	“You should input the numbers…”

*Replicated 2 times

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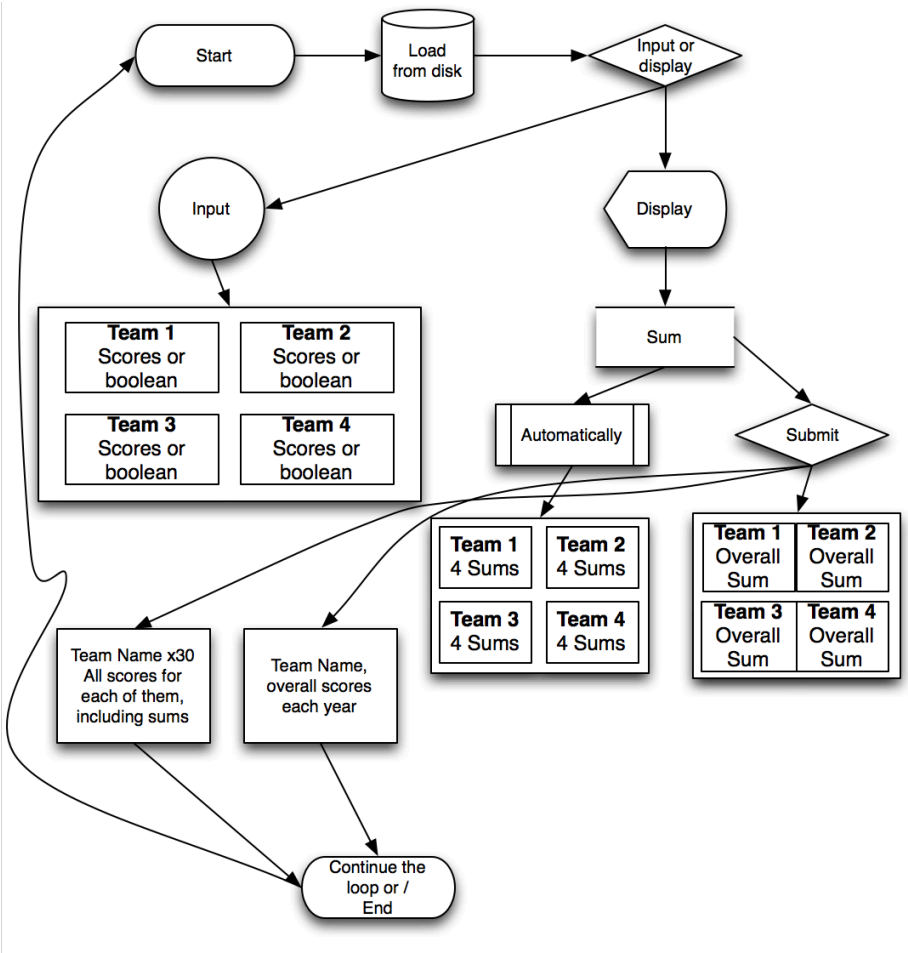
Class Diagrams

Flow Chart



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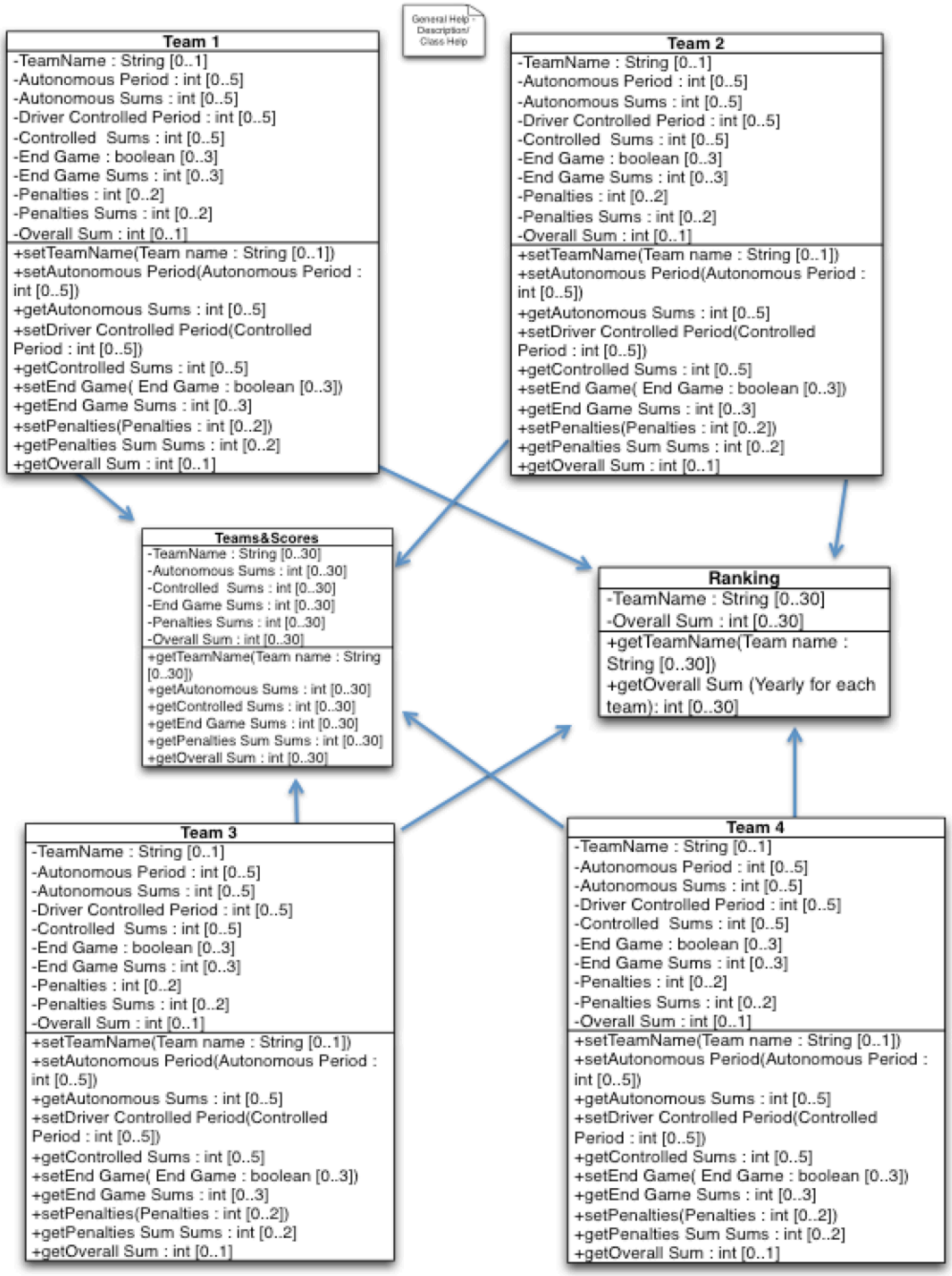
Attributes diagram



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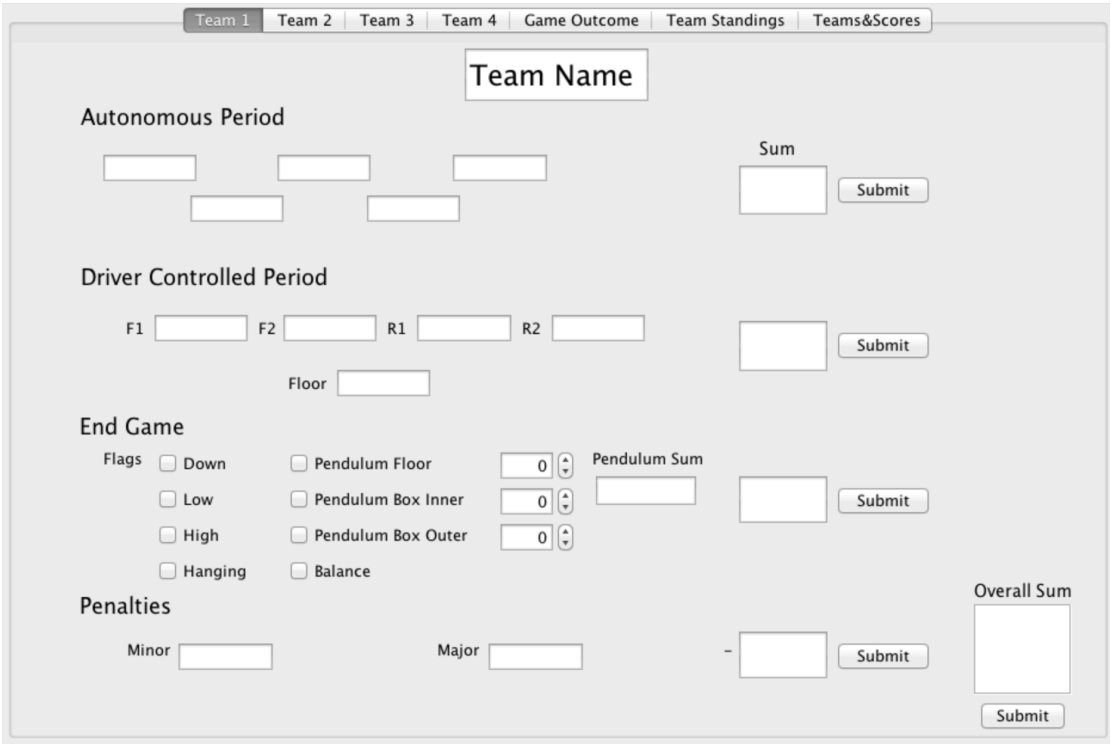
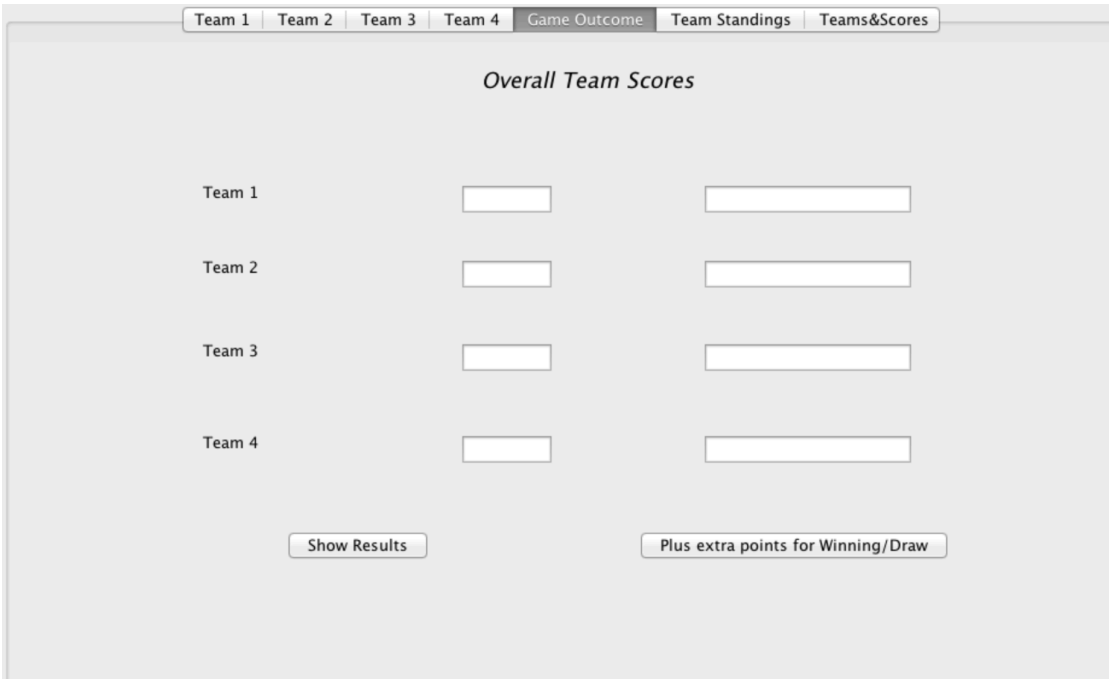
Prototype Diagram





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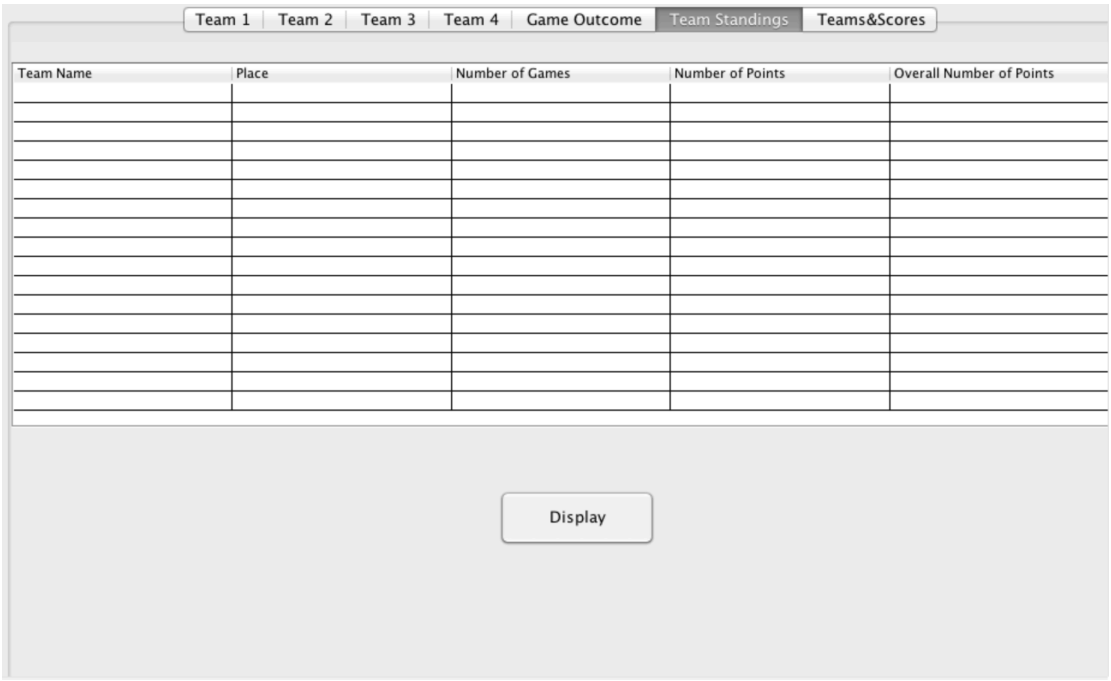

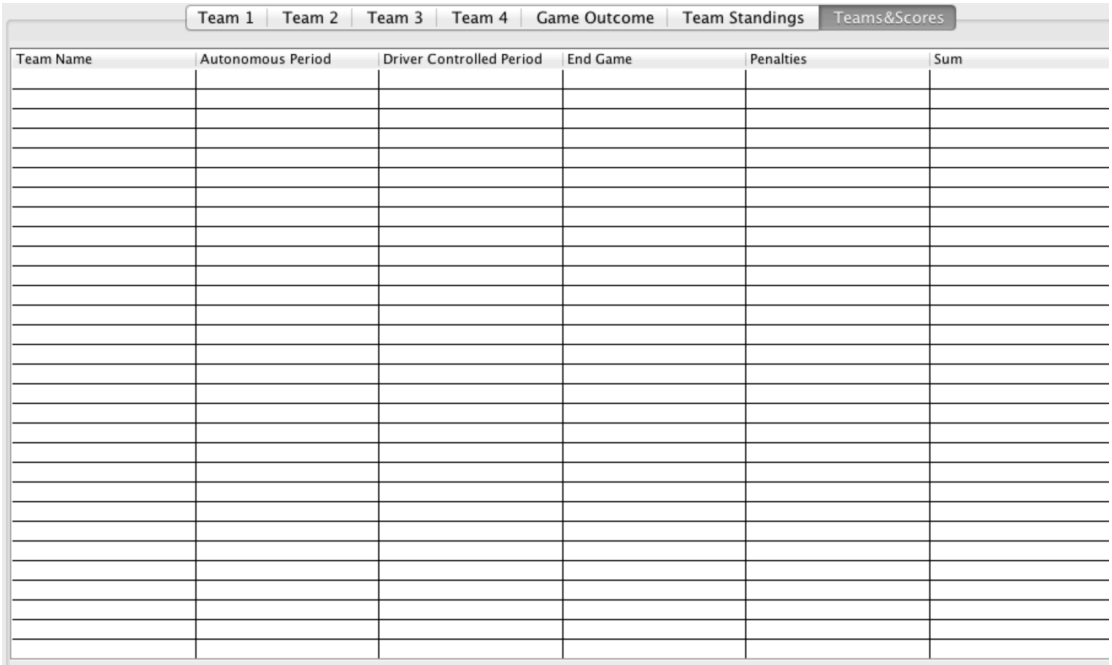

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Chronological development plan

- Give names to all variables
  - 4 team tabs
  - Table tabs

- *Create template classes with attributes, constructors, gets and sets for
  - Autonomous period
  - Driver controlled period
  - End game
  - Penalties

- *Work with attributes
  - Assign to certain values
  - Sum them up
  - Display in the text boxes

- Work with table
  - *"Submit" buttons
  - Make it display certain values

  By using **tableName*.setValueAt*

- Create
  - File saving window – by using *JFileChooser jfc*
  - Help window – by using *JFileChooser jfc*

- Test for inputs (to input different types of data and observe how the program would run)
    - Fix errors

* - must be programmed for all of the four Team tabs

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Testing Plan

Functions to do on this tab	Normal Functioning to test	Border Case to test	Abnormal situations to test	Extreme situations to test	Other potential Problems to test
Team Name	Team Name (ints): 0009.	Team Name: 9 → Message: Please input in the form of "####".	+If the Team Name is not input, before any submit → Message: Please input the Team Name in the form of digits - "####".	+A huge number: (e.g.) 9320490238 → Message: Please input numbers on a scale from 1-10.	
Input 5 scores for Autonomous Period	Scores: Positive integers 1;2;3.	+0: accepted.	+Two → Message: Please input in a digital form.	+A huge number: (e.g.) 9320490238 → Message: Please input numbers on a scale from 1-10.	+If a '+' sign is input → Please input all of the numbers as positive integers, the addition will be done automatically +Scores: 1.2; 2.5 → Message: Please input in the form of a full number.
Input 5 scores for Driver Controlled Period	Scores: Positive integers 1;2;3.	+0: accepted.	+Nine → Message: Please input in a digital form.	+A huge number: (e.g.) 9320490238 → Message: Please input numbers on a scale from 1-10.	+If a '+' sign is input → Please input all of the numbers as positive integers, the addition will be done automatically. +Scores: 1.2; 2.5 → Message: Please input in the form of a full number.
Input 3 booleans for End Game	Ticked/Not Ticked	None	None	None	None
Input 2 scores for Penalties	Scores: Positive integers 1;2;3.	+ 0: accepted.	+Five → Message: Please input in a digital form.	+A huge number: (e.g.) 9320490238 → Message: Please input numbers on a scale from 1-10.	+Scores are input as negative numbers → Message: Please input all of the numbers as positive integers,

					the subtraction will be done automatically.

Testing Strategy for Normal Functioning: Try all at the same time. One screenshot.
Testing Strategy for Border/Abnormal/Extreme Cases: Separate for all of the problems + Screenshots for each of the problems.

When clicked “Submit” the scores automatically go to the Display Tabs, which are “Teams&Scores” and “Ranking”. A team name, final sums for Autonomous Period, Driver Controlled Period, End Game, Penalties and Overall Sum (score) for each team is displayed automatically, after clicking the button “Submit” in either of four “Team” tabs. The user can choose how the teams will be displayed, i.e. from highest to lowest score, from lowest to highest or by the team name. A team name and Overall Sum (score) for each team is displayed automatically, after clicking the button “Submit” in either of four “Team” tabs, regarding the year of the competition. The user can choose how the teams will be displayed, i.e. from highest to lowest score, from lowest to highest or by the team name.