

# Design

## Preliminary Design

Need:

- Data Flows
- Large modules/packages
- Architectural Design
  - The modules, and
  - Their interactions

## Detailed Design

Need:

- Data Formats/Table Layouts
- Code interfaces (i.e. public class interfaces)
  - Method names
  - Post-, pre-, and error conditions
- Optional pseudocode for complex operations

## Code Interfaces

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Robot Object

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*int* teamNumber  
*int* robotNumber  
*int* pointsLeft  
*int* maxMoves  
*int* movesLeft  
*int* power  
*int* health  
*int* range  
*bool* hasFired  
*void*: move(coords)  
*void*: fire(coords)  
*Robot*: scan(coords)  
*Stats*: getStats()

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Match Controller Object
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<i>Robot</i> [ ] robots
<i>Cell</i> [ ] cells
<i>int</i> turnNumber
<i>int</i> maxTurns
<i>int</i> currentTeam
<i>int</i> executionSpeed
<i>void</i> : stepForward()
<i>void</i> : stepBack()
<i>Robot</i> : getContentOfCell(coords)
<i>void</i> : damageRobot(robot)

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## Views

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Main Menu View
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<i>void</i> loadWatchMatch()
<i>void</i> loadInstantResults()
<i>void</i> loadTestBench()

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Team Select View
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<i>Team</i> [ ] teams
<i>void</i> loadTeam(int slot)
<i>void</i> confirm()

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Watch Match View
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<i>MatchController</i> controller
<i>void</i> step()
<i>void</i> play()
<i>void</i> stop()
<i>void</i> setRate(int rate)
<i>void</i> updateLog(string log)
<i>void</i> (string log)

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Test Bench View (inherits from Watch Match View)
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<i>void</i> runCommand()
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Match Results View

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*score* [ / ] scores  
*void* returnToMenu

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