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| JHU Fantasy Football |
| 605.782.71: Term Project, Preliminary Proposal |
| Project Repository: <https://github.com/cxd213/jhu-ff> |
| **Chris Dibble, Eric George, & David Hybner** |
| **10/9/2012** |

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| This document serves as a work in progress and will be modified through the duration of the 605.782.71 Fall 2012 course. |

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# Modification History

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| Version Number | **Description** | **Modified Date** | **Modified By** |
| 0.1 Draft | Created initial document | 10/4/2012 | Chris Dibble |

# Introduction

## Need for Application

This application is being developed to fulfill the requirements of the course-long team project for 605.782.71: Web Application Development with Java. This application is for educational purposes only.

## Project Name

The preliminary name for our project is “JHU Fantasy Football”, hereby referred to as ‘the application’.

## Project Definition

The National Football League (NFL) is America’s most popular sport. In recent years web based games based upon real NFL game stats have become increasingly popular. These games are generally known as “Fantasy Football”. Fantasy football games typically involve many different users with unique accounts. Users can create leagues, which other users are able to join. Traditional fantasy football involves each user picking upwards of 16 NFL players to form their team. Users generally face one another each week in head-to-head games. The performance and statistics of the NFL players on team users team are converted into points, which are then used to determine the winner of the head-to-head games each week.

To be practical to complete over the duration of the course, and to be unique, “JHU Fantasy Football” will allow users to pick only one offense and one defense from the 32 professional NFL teams. The stats produced by the team as a whole (yards gained/allowed, points scored/allowed, turnover ratio, etc) will be used to determine the total score each user earns each week. Rather than having head-to-head matches, the application will simply sum up the total points earned by each user over the course of an NFL season, with the person scoring the most declared as the winner.

## Project Team Members

* Christopher Dibble
* Eric George
* David Hybner

# Requirements

## Functional Requirements

The application shall implement the following functionality:

### Registration

The application shall provide the ability for users to create a new user account with an email address and password.

### Login Authorization and Authentication

The application shall provide the ability to authorize and authenticate users via their designated user credentials.

### League Creation

The application shall provide the ability for users to create their own league.

### League Invitations

The application shall provide the ability for users to assign other users to a spot within their league.

### Offense/Defense Team Selection

The application shall provide the ability for users to select a single offense and defense from the 32 professional NFL teams.

### Scoring

The application shall automatically populate the scores for each user’s teams every Tuesday following the completion of all NFL games for a given week.

### Post-Game Scoring Analysis

The application shall provide users the ability to forensically analyze their team’s performance in past games. Data available shall include points scored and NFL statistics generated by both offense and defense.

### Offense/Defense Substitution

The application shall provide users the ability to substitute an offense or defense of their choice each given week from the pool of available offenses defenses which have yet to be claimed by other players.

### League Finalization

After the final week of regular season NFL games, the system shall tally the point totals for each user’s team and show the winner, along with the statistics for each team in the league (total points scored).

## Use Cases

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| Use case | User Registration |
| Primary actor | Fantasy Football site user |
| Goal | A new user creates an account on the Fantasy Football site. |
| Scenario | 1. User navigates to the home page of the Fantasy Football site. 2. User clicks the link, ‘Sign Up’ 3. A page is brought up that asks for the user’s name, desired account name, and an email address. 4. The user enters and submits the required data. 5. The application creates a new account for the user and logs the person in. |
| Priority | Expected requirement |

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| Use case | User Login |
| Primary actor | Fantasy Football site user |
| Goal | A user signs into the Fantasy Football website. |
| Scenario | 1. User navigates to the home page of the Fantasy Football site. 2. User clicks the link, ‘Sign In’ 3. A page is brought up that asks for the user’s id and password. 4. The user enters and submits the required data. 5. The application validates the user’s data. 6. The application redirects user to welcome page. 7. Application displays user’s fantasy leagues and teams. |
| Priority | Expected requirement |

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| Use case | User Logs Out |
| Primary actor | Fantasy Football site user |
| Goal | A user logs outs of the Fantasy Football website. |
| Scenario | 1. User clicks ‘Log Out’ in to right corner. 2. Application redirects user to the welcome homepage 3. Application removes all previous record of the user from the display. |
| Priority | Expected requirement |

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| Use case | Create League |
| Primary actor | League Owner |
| Goal | User creates a league for him and his friends to use. |
| Scenario | 1. User navigates to the home page of the Fantasy Football site. 2. User logs into his account. 3. User clicks ‘Create League’ 4. User fills in the required league information and submits data. 5. League is created and the user is redirected to the homepage of the new league. |
| Priority | Expected requirement |

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| Use case | Invite League Members |
| Primary actor | League Owner |
| Goal | League owner invites her friends to join the league. |
| Scenario | 1. League Owner navigates to the home page of the Fantasy Football site. 2. League Owner logs into his account. 3. League Owner clicks the link for her desired league. 4. League Owner clicks ‘Teams and Owners🡪Invite Owners’ 5. League Owner enters emails of friends he is inviting. 6. Application sends an email with league information to each of the people invited. |
| Priority | Expected requirement |

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| Use case | Join League |
| Primary actor | Invitee |
| Goal | User accepts an invitation and joins a league |
| Scenario | 1. Invitee opens email invitation from the Application. 2. Invitee clicks the URI of the specific league. 3. Application prompts the user to sign in or create an account. 4. Invitee enters account information. 5. Application prompts users for team name. 6. Invitee enters team information. 7. Application creates a team entry in the league for the user. |
| Priority | Expected requirement |

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| Use case | Set Lineup |
| Primary actor | Team Member |
| Goal | Team Member picks her offense and defence for the week. |
| Scenario | 1. Team Member signs in to league site. 2. Team Member selects ‘My Team’ 3. Team Member clicks ‘Select Offense’ 4. Application displays available teams. 5. Team Member selects her offense for the week. 6. Team Member repeats process for ‘Defense’ |
| Priority | Expected requirement |

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| Use case | View Score |
| Primary actor | Team Member |
| Goal | Team Member view his scoring for the week |
| Scenario | 1. Team Member logs into league site. 2. Team Member clicks ‘Scoreboard’ 3. Application displays each team in the league with the current points this week. 4. Team Member selects his team. 5. Application redirect user to page that shows the specific statistics of his team. 6. Application updates the statistics and team points periodically without requiring the user to refresh the page. |
| Priority | Expected requirement |

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| Use case | Update Standings |
| Primary actor | Application |
| Goal | Update the current standings and total points for the fantasy teams. |
| Scenario | 1. Application finalizes team statistics Tuesday morning. 2. Application adds each team’s points for this week to their season point total. 3. Application re-orders the teams in terms of total points. |
| Priority | Expected requirement |

# Distribution of Work

Below is a rough distribution of work broken down by individual team members. This division of work, and task list, can and will change at this point of the project. The idea here is to allow each member to work towards their areas of interest or expertise. Not all tasks may be 100% throughout and captured before the final revision:

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| Name | Tasks |
| Chris Dibble | * Project proposal editor * Technology research and planning (exploring publicly available APIs related to the NFL, database storage options, etc.) * System architecture design * UI design wireframes * Coding of JSP/CSS/JavaScript/etc. – mainly front end work |
| Eric George | * Project proposal contributor – Functional Requirements/Use Cases * Servlet and JSP development – focus on back end work * Application testing * Registration & Security design and implementation |
| David Hybner | * Project proposal contributor (UML diagrams) * Application testing * Servlet and JSP development * Session management design and implementation |