



Department of Computer Engineering  
Bilkent University

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# CS 353 Term Project

*Group 5 - Social Betting Platform*

## Project Proposal

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# 1. Introduction

As a result of the rapid development of technology throughout the world, the betting system, which has existed for centuries, has started to take place in online betting platforms by adapting itself to technology. Thanks to the fast, easy, effective and profitable platforms specially developed for betting lovers, the interest in online betting sites continues to increase day by day. Sports branches such as football, volleyball, basketball and horse racing, which are followed with great interest, have also become the focus of these online betting sites. High profits can be obtained by making various analyzes and predictions on sports betting platforms, which are a very common online service. In addition to earning income and following popular sports branches, an interactive interaction with other bettors can be achieved on a platform where coupons, comments and match analyzes are shared. This interactive interaction opportunity is also very important for betting lovers. It should not be forgotten that an inside prediction or strategy can always lead players to win.

Bettors can place bets from the moment the match starts to be played, can continue to place new bets during the match, and terminate their right to bet at the end of the match, while the competitions in the selected sports branch are played. In the betting platform, which has a user, editor and admin, users should be able to share betting slips, comment on matches, and comment and like what other users have shared. At the same time, bettors can add other users as friends and see their activities on their timeline. Editors can prepare betting slips and users who follow the editor can

see these betting slips. The administrator, on the other hand, can change the odds or remove a bet altogether.

## 2. Project Description

This project will be a web-based application that proposes to work as a betting site which also has social features. It will work on a database. Its design supports certain famous sports in the world as well as e-sports, such as League of Legends (LOL).

In the application, there will be bets, matches and users. All matches have different types of bets which have their own ratio and minimum betting number (MBN). Users are separated into three types: normal users, editors and the admin. All users can see the match schedule of all kinds of sports in their timeline. Before the match time, the admin can edit the ratio of the bets belonging to the match while normal users and editors can see the background information about the teams such as previous matches and statistical scores and they can create bet slips according to this information.

Normal users and editors cannot be able to change the bet but only admin can.

Normal users can make bets in bet slips and share these slips with other users. Also, they can comment on matches, comment and like the contents of other users. Besides, users can add other users as friends, see their activities on timeline and follow editors.

Editors can make bet slips, comment on matches and followers of the editors can see these activities on their timeline.

Admin can edit the ratio of the bets and remove the bet. Also, the admin can ban the users.

## 3. Requirements

### 3.1. Functional Requirements

- In our social betting platform, there are 3 different types of users which are normal user, editor, and admin. The functional requirements change according to the user type.

#### 3.1.1. Functional Requirements for Normal Users

- Normal users can add cash to their account and withdraw the money.
- Normal users can see the matches on this application.
- Normal users can see the background information about the teams, which are previous matches, specifically important statistics for the sport, players.
- Normal users can place bets for the future matches of different sports including e-sports.
- Normal users can place bets with different types and ratios (odds).
- Normal users can follow editors, see bet slips of the editors on their timeline and comment on these slips.
- Normal users can select their team in each sport and the matches of these teams will appear first regardless of match time.
- Normal users can add friends, see their activities on the timeline, such as bet slips and comments posted by them.

- Normal users can comment on matches and bet slips.

### 3.1.2. Functional Requirements for Editors

- Editors can create bet slips.
- Editors can share their slips with their followers.
- Editors can comment on other bet slips and matches.

### 3.1.3. Functional Requirements for Admin

- Admin can add bets.
- Admin can edit the odds of bets.
- Admin can remove the bet.
- Admin can ban other types of users (normal users and editors).

## 3.2. Non-functional Requirements

### 3.2.1. Usability

Since the application should provide a betting system, usability is one of the key non-functional requirements for us. The application should provide users and editors to use social features besides the betting system. Because our main goal is making money, our application should be easy to use with a non-complex user interface. To be able to reach our main goal, our application should charm a variety of user types. A variety of user types will be going to use our betting system so that the user experience is the number one priority for us. They should easily be able to deposit money or make bets. The web application should be easily used by both computer literate and illiterate people.

### 3.2.2. Security

Since our web application builds upon betting with social features, users will be going to deposit their real money to our application and we will have to securely complete their transactions and store how much they deposited. There will be various payment methods and if the user wanted we can be able to store their credit card information securely. Also, the user's information such as credentials should be stored securely and cannot be decrypted even if an incident happens. To achieve that goal, we will use the SHA256 algorithm to store sensitive user data in our database. All the database requests will be sent securely with the middle layer which we will use in our backend. So that, there cannot be any kind of injection that could happen. Moreover, our application will be designed to sanitize all user inputs before writing anything to the database. That's how any kind of cross-site scripting can be prevented.

### 3.2.3. Maintainability

We are aware that technology is always changing. With the help of our team, we will continuously improve our web application in terms of security, usability, and compatibility. To maintain such an application we will build our application with the consideration of modification, update, bug-fix requirements in our mind. The different features or improvements can be

added while the product is in production. With the consideration of these requirements, our software development lifecycle will be built accordingly.

### 3.2.4. Compatibility

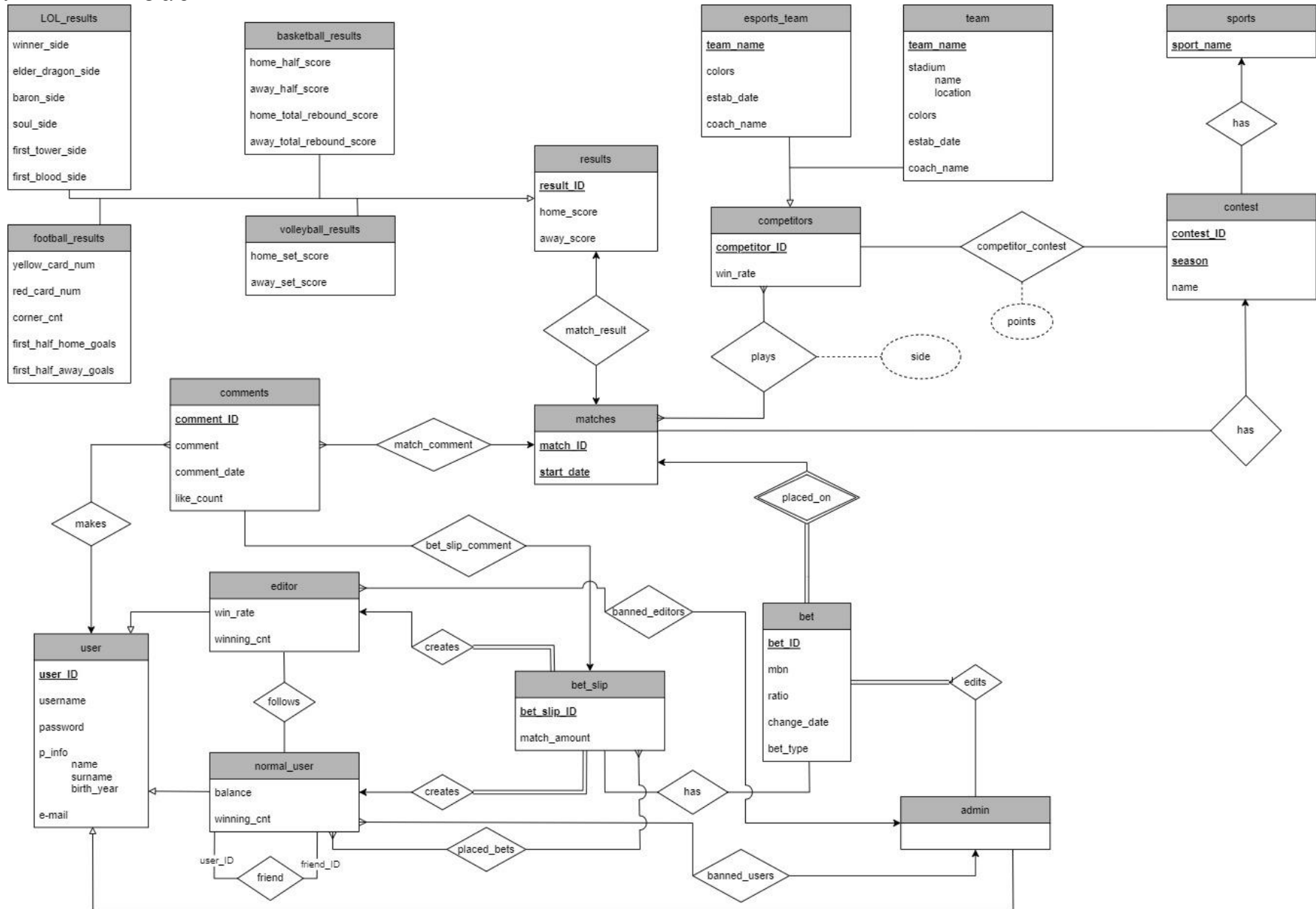
Since our project is a web application, there is another concern about compatibility. For this concern, we will be going to build our web applications to run seamlessly with a variety of web browsers such as Chrome, Edge, Safari, and Firefox. Our team will try not to use any newer browser engine-specific features or libraries without sacrificing anything from security and usability. To be able to reach more users, we will be going to build our web application to support older versions of these browsers too.

## 4. Limitations

- All users except admin must sign up with a unique username.
- Number of bets in a slip must be equal to or greater than the maximum of the MBN (minimum betting number) of bets in that bet slip.
- Bets cannot be placed after the match starts.
- Ratio (odd) of the bet paid by users must remain the same even after the admin changes its odd or removes the bet.
- Users can see editors' bets only if they follow the editor.
- Bets are open with 2 TL. Below that amount is not acceptable.
- There can be at most 15 different matches in a bet slip. Users can place a bet for different match statistics. For instance, users can place a bet for home winning as well as the first goal from home in football matches.



## 5. ER Model



## 6. Project Web Page

<https://turgut-edis.github.io/SocialBettingProject/>

## 7. References

[1] “EGW: E Gamers World” <https://tr.egamersworld.com/bets>

[2] “Nesine.com” <https://www.nesine.com/>

[3] “diagrams.net” <https://app.diagrams.net/>