

Big Blue Sports Betting

Software Design Document

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Introduction

An app that makes it easy for sports fans to place bets on their favorite teams. We created this document to details and functionality of our betting platform.

Purpose

Our project is a sports betting app. We are wanting to make an app that allows our users to create a fantasy team composed of real college athletes and professional athletes and compete within fantasy leagues. Our app will be easy to operate for all users.

Our app is a real app with real rewards, some apps are seen as scams because they do not allow users to collect their earnings.

Our app will not continuously notify the user to place a bet on anything. The user will review the app and place their bets as they please. Our app will notify the user on whether they won/lost the bet, game times, etc. Hopefully, this notification change can help reduce the likelihood of becoming addicted to gambling.

Our attended audience are those who love watching sports and enjoy participating in gambling.

Scope

For this project we wanted it to be realistic and manageable in terms of its functionality and features since it had no code involved in it. This project is was targeted for users who wanted to bet on their favorite college teams and their favorite college players which is an audience that has not been targeted by other betting platforms.

The biggest limitation we had would be user personalization on their homepage. Due to the different sports selection, we have for betting, we wanted to have a homepage that is user friendly that features the popular sports and give the spotlight to less popular sports to. However, in the future after more updates we hope to resolve this limitation as we update our platform

Reference Material

Binley, Meredith K., and The Conversation. "A Psychologist Who's Been Treating Gambling Addicts for over a Decade Reveals How Sports Betting Apps Really Hook You." *Fortune*, 6 Feb. 2023, fortune.com/2023/02/06/how-sports-gambling-betting-apps-work-addictive-psychologist/.

Gordon, Samantha. "New Sportsbook Banking Option Allows PayPal, Venmo, Cash App Deposits." *Sportsbetting.Legal*, 19 Oct. 2020, sportsbetting.legal/news/sportsbook-funding-option-allows-paypal-venmo-cash-app-deposits/.

Juniper Research: Digital Wallets Transaction Value to Grow by 60% by 2026 Globally, as PayPal & Alipay Top Competitor Leaderboard. (2022, April 26). Retrieved December 17, 2023, from Businesswire.com website:
<https://www.businesswire.com/news/home/20220425005811/en/Juniper-Research-Digital-Wallets-Transaction-Value-to-Grow-by-60-by-2026-Globally-as-PayPal-Alipay-Top-Competitor-Leaderboard>

Definition and Acronyms

May not be needed but any acronym used or definition (of common jargon phrase). Sort by alphabetical order of terms – **Delete this line and replace example text below as needed.**

Full Term	Acronym/Abbrev.	Definition
Agile	N/A	A project management methodology which uses cycles of planning, building,

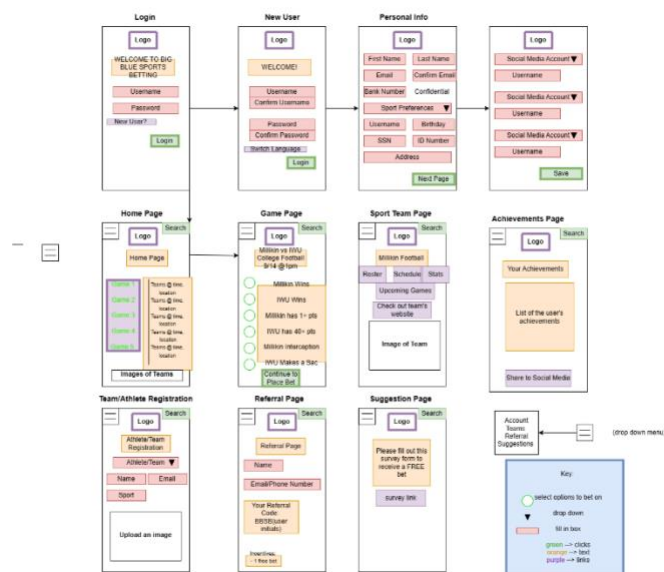
		deploying, and evaluating to build software or systems in an iterative and incremental fashion. Most used for software development but also used for other types of projects.
Software Design Document	SDD, SWDD, SDS	A design document used to describe the high-level (and some low-level) architecture and design goals & planning of a software project.
Software Development Lifecycle	SDLC	Umbrella Term for methodologies used to make a structured process for producing software systems and applications.
Database	DB	an organized collection of data or a type of data store based on the use of a database management system, the software that interacts with end users, applications, and the database itself to capture and analyze the data

Human Interface Design

Users will be able to use the app to place bets on their favorite sport teams. We want our app to be easy to use and be fun for everyone. The users will also be able to set a cap amount on the number of bets they place per week to help control a gambling addiction.

Once the user has logged into the app, the app will redirect the user to the main page which displays all the available sport games for that week. From there, users can view information regarding each sports team and are able to place a bet on a game. There are already pre-bet options for the user to select from, but the user is in control of how much money they are going to wager.

UI Design Images



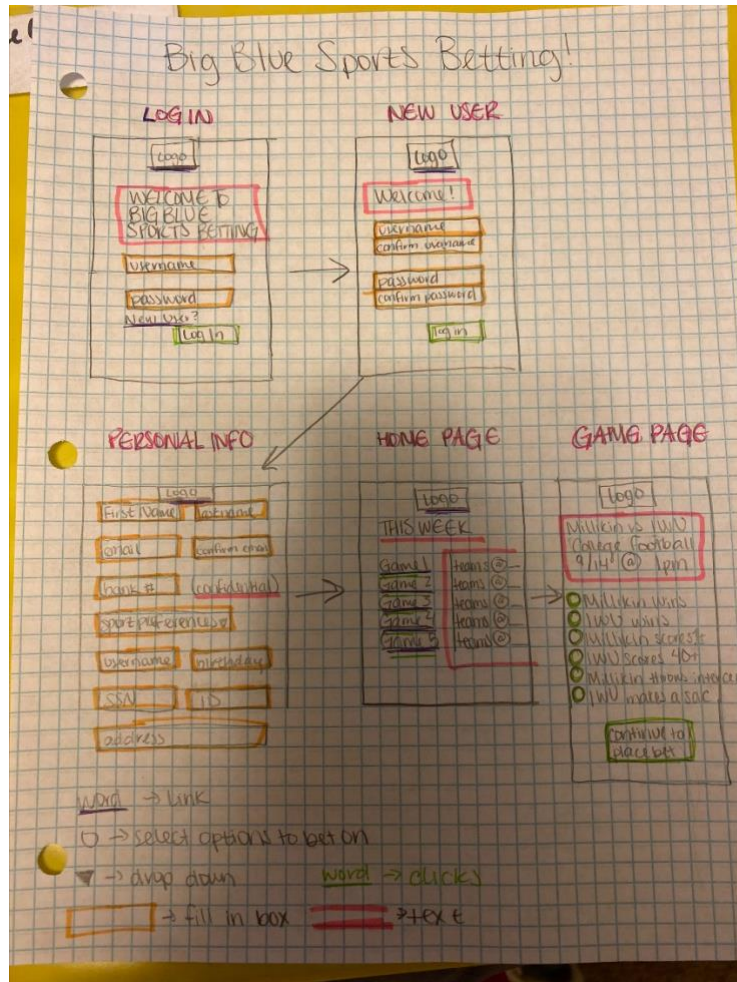
System Architecture

The major functions we chose to do were the log in page, the new user page, the personal information page, the home page, payment page, survey page, sport team page, achievements page, referral page, and the game/event page.

1. On the log in page, we made sure to include our logo and a short text welcoming our users. There are also text boxes for our users to insert their username and password. There are also two links on this page: the new user link and the log in button/link, "log in," that will move you to the next page.
2. On the new user page, we made sure to include our logo and a short text welcoming our users. There are also text boxes for our users to insert their username and password and to confirm their username and password. There is also a button/link, "log in," that will take you to the next page. We also included a link, where users can switch the language to their preferred language.
3. On the personal information page, we included all text boxes for our users to insert their information. These boxes include: first name, last name, email address, confirmation email address, sport preferences, username, birthday, and a mailing address. Also, we included our logo at the top of the page. On the second page, we wanted to include a section where users can link to their social media accounts so they can share their achievements and promote our product.
4. On the home page, we have an image of our logo at the top of the page. There is also a short text stating which page the user is on, "This Week." There is another text box that displays all the available games to place bets on. It also has more information regarding each game; for example, the teams playing and the time of the event. Each game title is a link that takes you to the next page where you can place bets.
5. On the game page, the logo is displayed at the top. There is a short text box stating the title of the game (the teams, the date, and the game time). Then there is another text box that states all the options to place bets on. To select the bet, you need to select the circle buttons. Users can select more than one option. Then at the bottom of the screen, there is a "Continue to place bet" link that will take you to another screen where you can choose the amount you want to place.
6. On the sport team page, this will display all the information needed regarding a specific sport team. There are clickable links that will take you to the team's external website: roster, schedule, stats, and upcoming games.
7. On the achievements page, it will display all of the achievements that the user has won and collected. At the bottom of the page, there is an option for the user to post their achievements on their social media accounts which will also promote our app.
8. On the referral page, we offer a way for our users to receive free benefits for sharing our app with their friends and family. We already have their code available that is specific to them "BBSB" (Big Blue Sports Betting) and their initials at the end. The users will provide their referral's name and either phone number or email address then click "send" to send a link for their referral to use. There is a small text at the bottom of the page that lists off what the users could get from sending a referral link.
9. On the form of payment page, the user will select which form of payment they want to use; either credit/debit card or bank account. Whichever they choose, it will bring them to a new page where they can enter all their information regarding which payment method

they choose. They will click “submit” when they finish entering all information and it will automatically save so they can easily place bets.

10. On our survey page, users can fill out a survey that will benefit us creators. This will tell us things we need to fix on our app. If users fill out the survey, then they will receive a free bet.



Epics and Use-cases

We have listed some of our use cases from our project and an explanation of each.

Create an Encrypted Database:

- Create an encrypted database that follows the security protocols.
- We want to keep our user's information safe and our information free from bugs and other issues.

Ensure and Secure Placing a Bet:

- Create the encrypted code for placing a bet that will connect the user's bank account and make sure that that information is secure.
- Making sure that our user's information is not stolen since we are using private personal information.

Setup and Ensure that Home Page is Working:

- Setup the home page based on the design created and ensure basic menu controls expand and contract correctly.
- We want the home page, all pages, to work to use the app.

Create Event/Game Schedule:

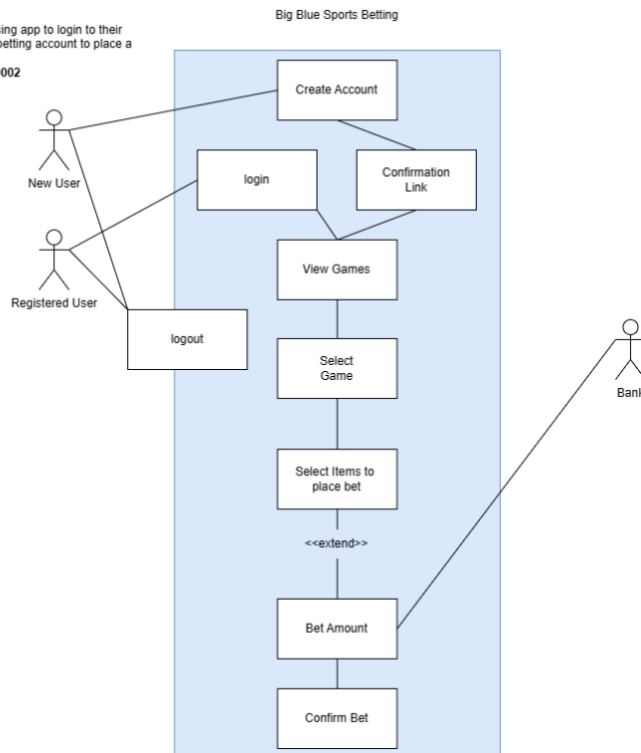
- Gathering information regarding the games/events that take place during the sport seasons. Gathering information about each team's (professional and collegiate) schedule.
- If we do not have the event/game schedule page created, then our users will not have any games to bet on.

Integration and Testing:

- Integrate external APIs for schedule data and conduct testing and debugging to ensure the app functions smoothly and provides accurate information.
- This process will make sure that our app is working smoothly.

Goal:

User using app to login to their sports betting account to place a bet
#001-0002

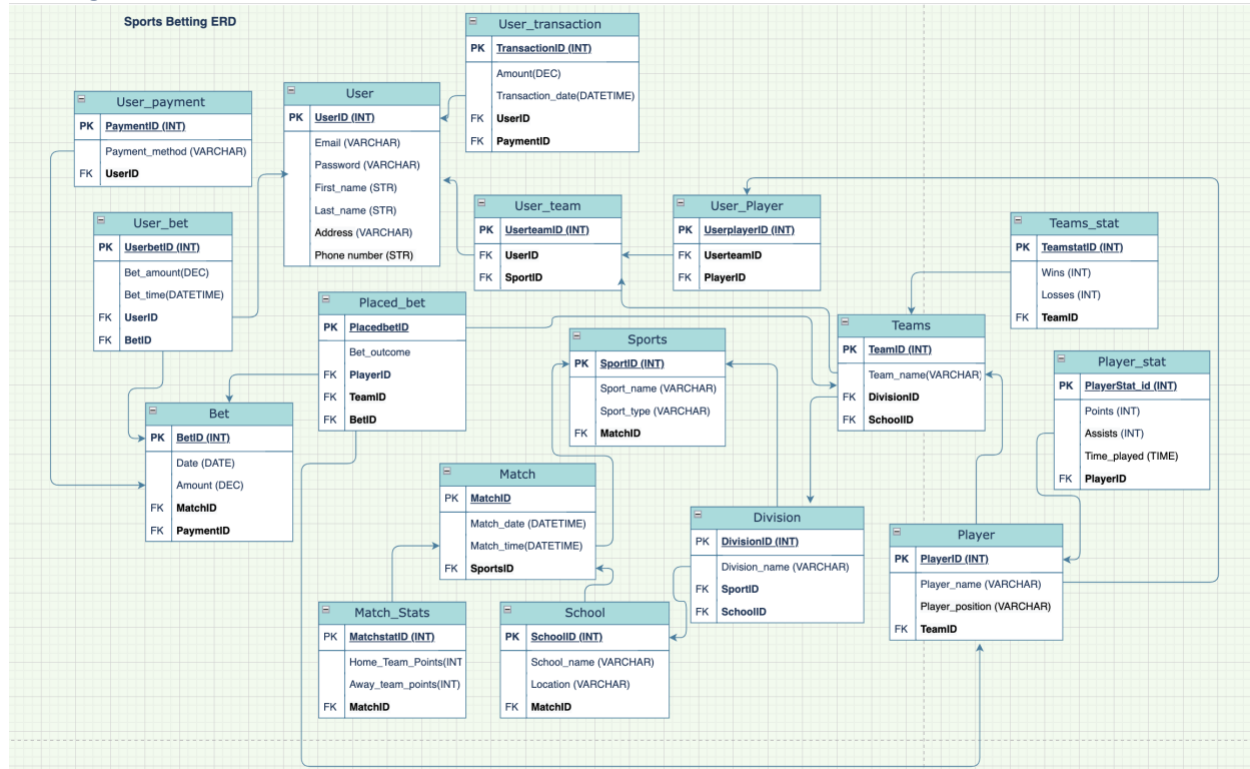


Use-case Feedback Analysis

person #	Like/Dislike	Word 2	Word 3	
1	1	buttons	crammed	some likes that we received were the buttons, it was organized and structured.
2	1	add pictures	buttons	Some dislikes was that we need to add pictures, take out the SSN, and add a payment page instead of offering the bank number option.
3	1	organized	no SSN	
4	1	structured	payment page	

We used a method of asking our classmates their opinions on our project. The image above is their responses to our project. From there we have considered each opinion and changed our project as needed.

Betting Database



The database we created is normalized to the 3rd normalization because we wanted to ensure data integrity and we wanted to reduce any anomalies that would happen when it is being updated. For all the tables we created we wanted to have the table focused on a single entity with its own attributes whether they are new attributes or foreign keys that create relationships between the tables. The current normalization we have is our base structure and we plan to normalize for it to be more refined and advanced with less risks associated with it.

For this database the main data types we chose were.

Integer (INT): this data type was mainly for primary keys to be able identify their data uniquely in the database.

Variable character (VARCHAR): this one was mainly for attributes that would have characters and numbers or signs when they are entered in the database.

DateTime: this one was used for attributes the required specific date and time information like the betdate and match date or how many times a player has played in all the games they have been in.

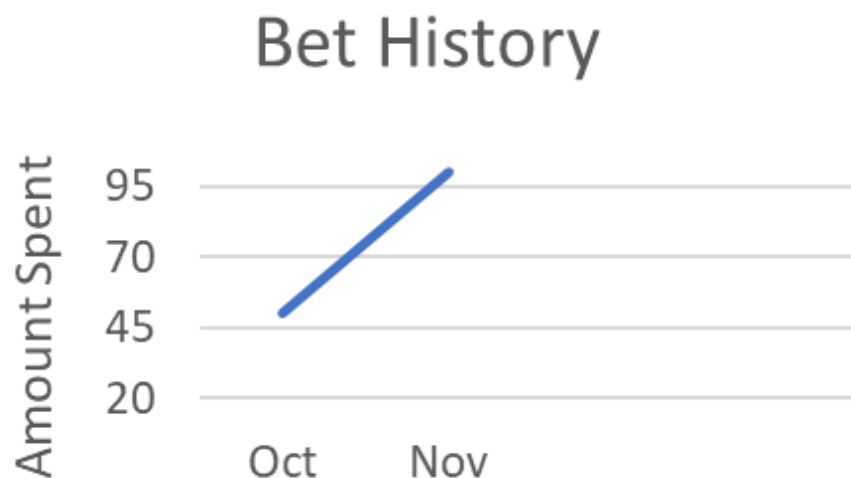
Float: lastly this data type was use for attributes that would have decimals in it for example the bet amount where a user betted an amount of money that had cents in it.

Charts from our demo:

The chart below shows an example of a user's earnings while using our sports betting app. It shows the amount the user earned each month. The users will be able to keep track of how much they are spending and see if they are making the right choices.



This chart displays an example of the user's bet history while using our app. This chart also is measured by the amount spent each month. The users will be able to keep track of how much they are spending and if they are performing well.



Subsystem: payment methods

For our payment methods we choose to use PayPal and Venmo for our users to cash out their earnings. Another third-party money transfer service that we would use that other sports betting websites have been using would be Match Pay. This party allows members to transfer money online. Match Pay pairs with PayPal and Venmo to transfer money. This process takes about 10-15 minutes to complete the transaction (Gordon, Samantha).

Venmo and PayPal are the transaction apps that are most commonly used, so we did not consider any other options.

Additionally, we focused on PayPal and Venmo because they are commonly used apps for transaction in the betting industry. These platforms were trusted by users from other platforms

like Fanduel, DraftKings, underdog, etc. So, we chose these ones because users would be already familiar with it.

Furthermore, while we also considered to add apple pay, Samsung pay and google pay, we decided to not integrate them for now , but wait for user feedback on the payment methods we have for now, and we wanted to see how these other payment methods would be receive in the industry.