

BetNation

SPECIFICATIONS

VERSION 1.0

As part of the ESP module at Epitech School

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1. Project scope

1.1. Project summary

The project is part of our MSc Pro training at Epitech. We have been asked to produce a complete project as part of the End of Study Project module.

We, Godefroy Chabanas and Bastien Angles, propose the development of a community platform around sports betting. We will specify our idea and the content of this solution in this document.

1.2. Challenges and objectives

Our solution meets a need expressed in the world of sports betting. In this environment, some players offer their sports forecast to less experienced players. These tipsters generally offer their analysis in exchange for a monthly subscription. Currently, the relationship and communication between the player and the tipster is still unstable. Most of the time it is done through groups on social networks. These platforms are not adapted to fully manage this type of activity.

We propose a solution that will allow forecasters of multiple sports to offer their analysis on a dedicated platform. The idea is to be able to provide forecasters and bettors with a complete communication, statistics and management system dedicated to the field.

A player looking for analysis will be able to compare different tipsters according to the sports played, the performance or the betting method used. A player will then be able to take out a free or paid monthly subscription for each tipster. The subscription system is based on well-known sites such as Twitch or OnlyFans.

Our platform guarantees transparency to players where each bet is archived and cannot be deleted or embellished for the benefit of statistics. This practice is particularly common among social network gamblers.

Our solution is not a sports betting site: no bets can be placed directly from our platform.

1.3. Introduction of the team

Our team is composed of two members, Godefroy Chabanas and Bastien Angles, the project leaders. This team will be expanded by four additional developers.

Main Front Developer
Godefroy Chabanas

Main Back Developer
Bastien Angles

Web Scraper

Front Developer

Back Developer

DevOps

2. Functional specifications

2.1. Features page

2.1.1. Front office

HOME PAGE

Features	Content	Requirements
Tipster list	<ul style="list-style-type: none">- name- tags favorite sports- ROI over 30 days- number of bets- current series last 5 bets- number of subscribers- subscribe button + price	<ul style="list-style-type: none">- filter by sports- filter by ROI- filter number of subscribers- filter number of bets- filter by price- filter by bookmaker- infinite scroll
Login / register	<ul style="list-style-type: none">- register button- login button- profile button	If the user is logged in, the login and register buttons disappear in favor of the profile button
Contact	<ul style="list-style-type: none">- twitter- instagram- facebook- mail	

Register button opens the registration form to create an account as a bettor, the tipster function is set up on the profile page.

Login button allows you to log in to your user account.

Profile button allows you to access your profile page.

PROFILE MANAGEMENT

Profile form	<ul style="list-style-type: none">- first name- last name- phone number (optional)- username- photo- email- password- password confirmation	
Payment informations	<ul style="list-style-type: none">- credit card saved- add payment method button- remove payment method button- invoice address<ul style="list-style-type: none">- first name- last name- address- zipcode- city- paypal	The address must be entered when adding a credit card.
Current subscriptions	<ul style="list-style-type: none">- photo- name- unsubscribe button	
Completed subscriptions	<ul style="list-style-type: none">- photo- name- subscribe again button	
Tipster informations	<ul style="list-style-type: none">- subscription price- tag favorite sports- add favorite sports button- bankroll amount- favorite bookmaker- description- number of subscribers this month- total amount of subscriptions	If the user is not a tipster, a button to become a tipster is available
Actions	<ul style="list-style-type: none">- update account button- delete account button	

Add payment method button opens a poppin that allows you to enter a payment method.

Unsubscribe button allows you to unsubscribe from a tipster. The current subscription will be lost.

Subscribe again button allows you to subscribe again to a tipster.

Add favorite sports button allows you to add a favorite sport.

Update account button allows you to update your account information.

Delete account button allows you to delete your account.

TIPSTER PUBLIC PAGE

Global informations	<ul style="list-style-type: none">- photo- name- date of registration as a tipster- description- favorite sports- number of subscribers- subscription price- favorite bookmaker / affiliate link- subscribe button	
Forecasting report	<ul style="list-style-type: none">- bankroll- profit- ROI over 30 days- Overall ROI- ongoing series (5)	
Detailed statistics	<ul style="list-style-type: none">- bets made L / W- graphical bankroll evolution	
Bet in progress	<ul style="list-style-type: none">- date- sport- teams- odd- stake- potential profit- delete bet button- add bet button	<ul style="list-style-type: none">- can change the bets only if he is the tipster- must be a subscriber to see the bets- bet can be removed only if the match has not started
Bets made	<ul style="list-style-type: none">- date- sport- teams- result- odd- stake- profit / loss	
Suggested tipsters	<ul style="list-style-type: none">- photo	

	<ul style="list-style-type: none"> - name - Overall ROI - subscribe button 	
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Delete bet button allows you to delete a bet before the first game has started.

Add bet button returns to the list of available bets page to create a new one.

AVAILABLE BETS

Sport list	<ul style="list-style-type: none"> - sport - tree structure leagues / competitions 	<ul style="list-style-type: none"> - search by sport / competition
Bet list	<ul style="list-style-type: none"> - sport - date - competition - teams - odd 	<ul style="list-style-type: none"> - infinite scroll - bet of the day tab
Summary of selected bets	<ul style="list-style-type: none"> - teams - result - odd - stake - single / multiple tab - add bet button 	<ul style="list-style-type: none"> - amount to enter on each bet for the single set - total amount to be entered for the multiple set

Add bets button allows you to validate the forecast with the selected bets.

PUBLISHED BETS

List of bets	<ul style="list-style-type: none"> - name tipster - sport - date - competition - teams - result - odd 	<ul style="list-style-type: none"> - infinite scroll - bets of the day tab - filter by tipster - filter by sport - filter by date - single / multiple filter - bookmaker filter
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PAYMENT PAGE

Subscription summary	<ul style="list-style-type: none"> - photo of the tipster 	
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	<ul style="list-style-type: none"> - name of the tipster - subscription price 	
Payment Form	<ul style="list-style-type: none"> - paypal - card number - name of the holder - expiry date - cryptogram - invoice address <ul style="list-style-type: none"> - name - first name - address - zip code - city - checkout button 	

Checkout button allows you to pay and redirects to the previous page.

LOGIN PAGE

Login form	<ul style="list-style-type: none"> - email / username - password - forgotten password link - login button - register button 	
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Login button allows you to login and redirect to the previous page.

Register button redirects to the registration form.

REGISTER PAGE

Register form	<ul style="list-style-type: none"> - first name - last name - username - email - password - password confirmation - phone (optional) - signup button 	
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Register button creates a user account, login and redirect to the previous page.

USERS

Users list	<ul style="list-style-type: none"> - last name - first name - status (tipster / bettor) - date of registration - connection status - activate account button - disable account button - delete account button 	<ul style="list-style-type: none"> - filter last name / first name - connection status filter - sort by last name - sort by first name - sort date of registration
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Activate account button allows you to activate an account.

Disable account button allows you to deactivate an account and make it inaccessible.

Delete account button allows you to delete an account permanently.

USER DETAILS

User form	<ul style="list-style-type: none"> - first name - last name - phone number (optional) - username - photo - email 	
Payment informations	<ul style="list-style-type: none"> - credit card saved - invoice address <ul style="list-style-type: none"> - first name - last name - address - zipcode - city - paypal 	
Current subscriptions	<ul style="list-style-type: none"> - photo - name - unsubscribe button 	
Completed subscriptions	<ul style="list-style-type: none"> - photo - name 	
Tipster informations	<ul style="list-style-type: none"> - subscription price - tag favorite sports - bankroll amount - favorite bookmaker 	Only if user is a tipster

	<ul style="list-style-type: none"> - number of subscribers this month - total amount of subscriptions 	
Bet in progress	<ul style="list-style-type: none"> - date - sport - teams - odd - stake - potential profit - delete bet button 	Only if user is a tipster
Bets made	<ul style="list-style-type: none"> - date - sport - teams - result - odd - stake - profit / loss 	Only if user is a tipster
Action	<ul style="list-style-type: none"> - update account - delete account 	Only if user has right role

Unsubscribe button allows you to unsubscribe from a tipster. The current subscription will be lost.

Delete bet button allows you to delete a bet before the first game has started.

Update account button allows you to update your account information.

Delete account button allows you to delete your account.

STATISTICS

Member statistics	<ul style="list-style-type: none"> - total registrations - total tipsters - total currently connected 	
Bet statistics	<ul style="list-style-type: none"> - total bets submitted by predictors - total upcoming bets - total bets made - total bankroll committed 	
Subscription statistics	<ul style="list-style-type: none"> - total number of subscribers - total number of paying subscribers - total number of free subscribers - total amount of subscriptions - estimate of our profit 	

WEB SCRAPING MANAGEMENT

Bots	<ul style="list-style-type: none">- bot name- target bookmaker- active / inactive- refresh rate- last scrapping date- disable / enable button- access to log button	
Bot logs	<ul style="list-style-type: none">- number of odds collected- bookmaker- robot- success / failure- collection date	

Disable / enable button allows you to stop or start a robot.

Access to log button allows to display the logs of this bot.

SUPPORT TICKETS

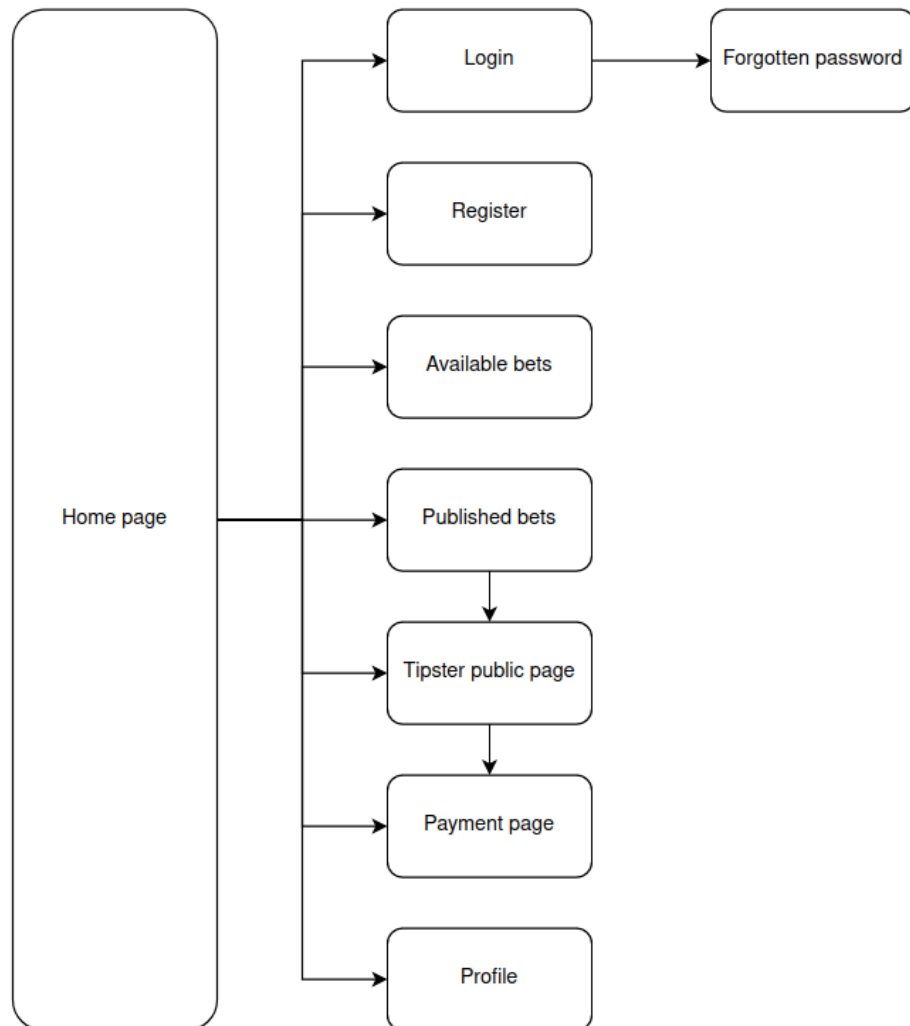
List of open tickets	<ul style="list-style-type: none">- date- requester- subject- close button- see conversation button	<ul style="list-style-type: none">- sort by date- search for keywords in conversations
List of closed tickets	<ul style="list-style-type: none">- date- requester- subject- see conversation button	<ul style="list-style-type: none">- sort by date- search for keywords in conversations
Ticket details	<ul style="list-style-type: none">- messages requester- messages support- message input- send message	

Close button moves a ticket from the list of open tickets to the list of closed tickets.

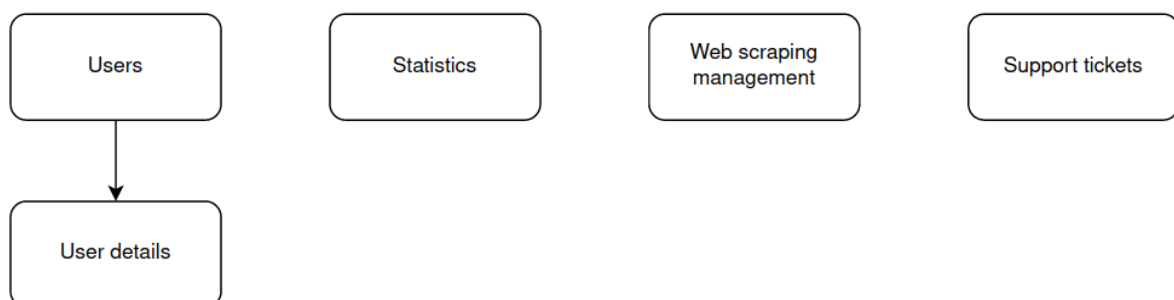
See conversation button allows access to the conversation between the member and the admin.

2.2. Tree structure

2.2.1. Front office



2.2.2. Back office



3. Technical specifications

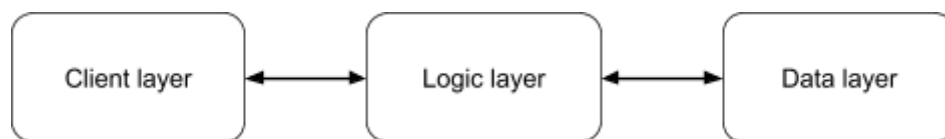
3.1. Technical constraints

The choice of technologies will be left to the developers. On the other hand, we impose the use of Vuejs for the frontend interface.

The site should guarantee an optimal experience on Firefox version 28 or higher, Chrome version 21 or higher, Safari version 8 or higher. These three browsers represent a large part of the internet users, and for technical issues, performance and user experience will not be guaranteed on previous versions or different browsers.

3.2. Application structure

This web application will be structured according to the 3-tier architecture model. The client layer will be commonly called the frontend, the logical layer will be the backend and the data layer will be the database.



In our case, this model will be built around a REST API. The API will act as an interface between frontend requests and backend processing. It will ensure communication between these two parts. The API will have to return all this data in JSON format.

The implementation of this model with an API allows us to structure our application in a clean way. Moreover, it will be easy in the future to add new services such as a mobile application.

In this pattern, the frontend must never communicate directly with the raw data stored in the database.

3.3. Web scraping

The application must be able to propose upcoming sports meetings with various information such as the teams, the date and time of the meeting, the competition and especially the associated odds. This data is essential to the operation of our solution.

It will be necessary to collect this information from different betting sites and store it in our database. This process will have to be repeated several times a day to follow the evolution

of the odds. This is a massive and complex processing, for this reason we will limit our data collection to the following bookmakers : Winamax, Unibet, Betclic, Parions Sport and PMU.

This collection task will be carried out by a bot every 10 minutes, to follow the evolution of the odds mentioned above. Five bots will be active, one per bookmaker.

Below, a summary of the script steps to be executed by a bot:

- Load the bookmaker's HTML page with all available bets
- Identify bets in the DOM.
- For each bet, retrieve the following information :
 - Sport
 - Competition
 - Teams
 - Date and time of the meeting
 - Odds for the victory of team 1, the victory of team 2, and the draw.
- Gathering the collected information
- Retrieve all available bets stored in our database.
- For each bet collected from the bookmaker
 - If the bet does not yet exist, create a new entry with :
 - Sport
 - Competition
 - Date and time of the meeting
 - Odds for the victory of team 1, the victory of team 2, and the draw
 - If the bet already exists, create or update the odds for this bookmaker

This procedure is a quick summary and to evolve according to the needs and constraints of each bookmaker.

Be careful, the collected data is shared between the bots. Thus, bot 1 was able to create the meeting before bot 2. In this case, bot 2 will only have to fill in the odds of its bookmaker without creating the meeting again in our database.

The web platform and the bots share the same database, but will never communicate directly with each other. For example, a bot will never use the API of the platform. Apart from the database, nothing unites them and they are two very distinct processes.

Finally, some platforms implement measures to prevent web scraping. Some sites blacklist IPs that execute requests too often. With requests every 10 minutes maximum, our robot should not be considered as SPAM. Nevertheless, this dimension will have to be taken into

account in the creation of our bots, so that it will be efficient and accepted by bookmakers.

3.4. Database structure

The database will be shared between the web platform and the bots in charge of collecting data from the bookmakers. Only the bots and the backend must be able to communicate with the database.

This relational database is specified in the attachment *mcd_database.png*.

3.5. Security

The site should have a system of roles and permissions limiting functionality to users. To access a resource through the API, the user must be authenticated and have the appropriate conditions. In the case of unauthorized access, a notification page will be displayed to the user. Roles can be accumulated.

Roles	Permissions	Access
Bettor	edit better profile	<ul style="list-style-type: none">- see password- edit password- see email- edit email input- see payment informations- edit payment informations- edit profile photo- add credit card- remove credit card- see current subscriptions- unsubscribe button- see completed subscriptions- subscribe again button- update account button- edit account button
	access payment page	<ul style="list-style-type: none">- add payment informations- checkout button
Tipster	edit tipster profile	<ul style="list-style-type: none">- see tipster informations- edit subscription price- add favorite sport- remove favorite sport- edit favorite bookmaker- edit description
	edit tipster page	<ul style="list-style-type: none">- delete bet button- add bet button

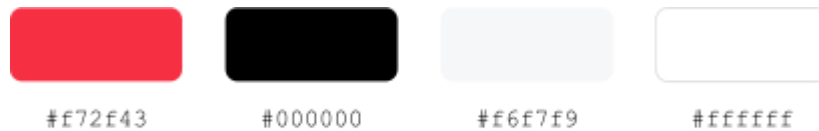
Support	access user list	<ul style="list-style-type: none"> - see user list - activate account button - disable account button - delete account button
	access user details	<ul style="list-style-type: none"> - see all user details mentioned in user details page - edit all user details mentioned in user details page - unsubscribe button - delete bet button - update account button - delete account button
	access opened support tickets	<ul style="list-style-type: none"> - see opened tickets list
	access closed support tickets	<ul style="list-style-type: none"> - see closed tickets list
	access support ticket details	<ul style="list-style-type: none"> - see conversation between support and requester
	send messages	<ul style="list-style-type: none"> - send message to requester as support team
Administrator	web scraping management	<ul style="list-style-type: none"> - enable bot - disable bot - edit refresh rate - see log button
	access statistics	<ul style="list-style-type: none"> - see member statistics - see bet statistics - see subscription statistics

 Front office
  Back office

4. Design specifications

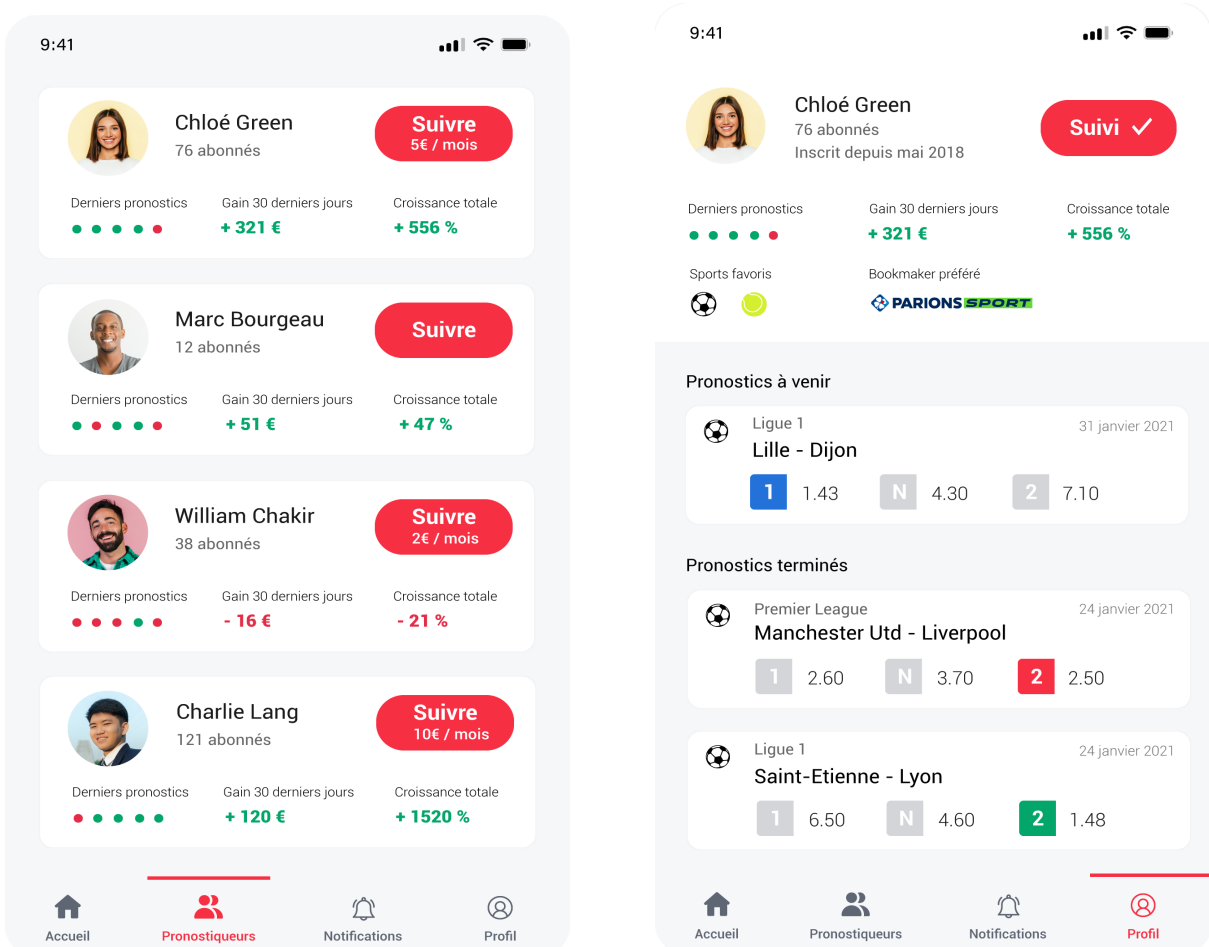
4.1. Visual Identity

Our design will be based on a flat design model. The dominant color will be red, symbolizing the intensity of sports betting. This same color is found on many sports betting sites and allows us to strengthen our relationship with this environment. This dominant color will be completed by monochrome colors: black, gray and white.



The site will display the **Roboto** font in different weights.

To begin, our solution will only be offered under a web platform. On the other hand, the site should submit to responsiveness to be displayed on a wide range of devices: smartphone, tablet and computer.



4.2. Wireframes

We have had a lot of thought about the user experience. We suggest that you consult the wireframes that model the front-end interface that will be available to our users in the attachment *wireframes folder*.