

# Tennis Tournament : Requirements, methodology and planning

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## 1 Introduction

For the course Software Engineering Project (LINGI2255) we were asked to create a website for a Belgium tennis tournament "Le Charle de Lorraine". The main objective of this website is to help the organizing staff to organize the registration of the tennis players, the registration of tennis courts and the organization of the different tournaments.

In this report we will analyze only the requirements, the methodology and the planning that we need to accomplish the final website.

## 2 Software Development Method

The software development methods you choose to follow for this project are *Agile software development* and *Waterfall Model*.

### 2.1 Agile software development

We choose the Agile software developement method beacause we prioritize the collobaration with the customers, adapatation to change, individuals and their interactions and operational software.

### 2.2 Waterfall model

We also choose the waterfall model because we insist that the features implemented must be verified to work and must work perfectly. We also insist on the maintenance of the application because it ensures the safety of the application.

### 2.3 Tools

We are going to use the following tools for our projet : Post it, PHP, MySQL, HTML, CSS, Agile method, Watefall model, GitHub, Trello.

### 3 User Interface



Figure 1: Log in interface

As your can see on the Figure 2, On the left the staff member can take a court or a team and drop it to the right table to compose the different groups.

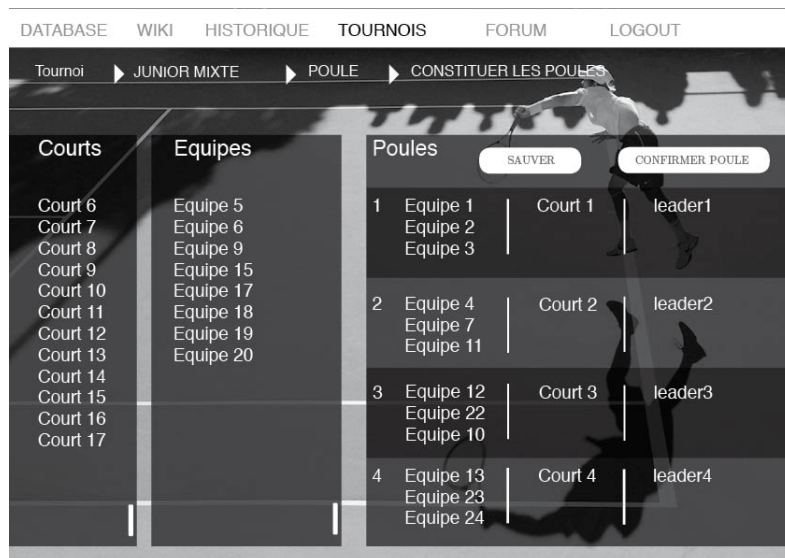


Figure 2: Staff interface

## 4 Use cases

### 4.1 Use case diagram

This use case diagram contains four actors : PHP Administrator, Guest, Staff and User. PHP Administrator is an administrator of all the systems. Guest is somebody which can create an account. Staff is an entity which organizes the tournament. User represents either a player or a court owner.

### 4.2 Course of action

#### 4.2.1 Inscription of a user

- The user clicks on the button «Créer un compte» on the welcome page.
- The inscription page opens and the user inputs this next fields and clicks on «confirmer » : Sex, First name, Last name, Address, Telephone number, Cellphone number, Email address, Password and Confirm the password.
- The system verifies if all the required fields are filled and if there is empty fields the user is invited to fill it.
- If all the fields are filled a new web page is displayed to inform that a confirmation mail is send to the user's email address.
- The user clicks on the link in the confirmation link.
- The system valid the user account and the link connect the user to the home page of the site.

#### 4.2.2 Inscription to a tournament

- If the user is connected he can click on the tab «Inscription tournoi».
- The system display the list of the tournament which the user can subscribe due to several criteria (birthday, sex, etc).
- The user choose a tournament.
- The system display a list of potential partners for the next tournament and adapt it in function of the tournament, the sex, the age, etc.
- The user choose a partner in the list.
- The system display the personal information of the user contained in the database.
- The user completes or corrects the different next fields and clicks on «Confirmer»: Sex, First name, Last name, Address, Telephone number, Cellphone number, Birthday, Email address and the Classification.
- The system verifies if all the required fields are filled and if there is empty fields the user is invited to fill it.

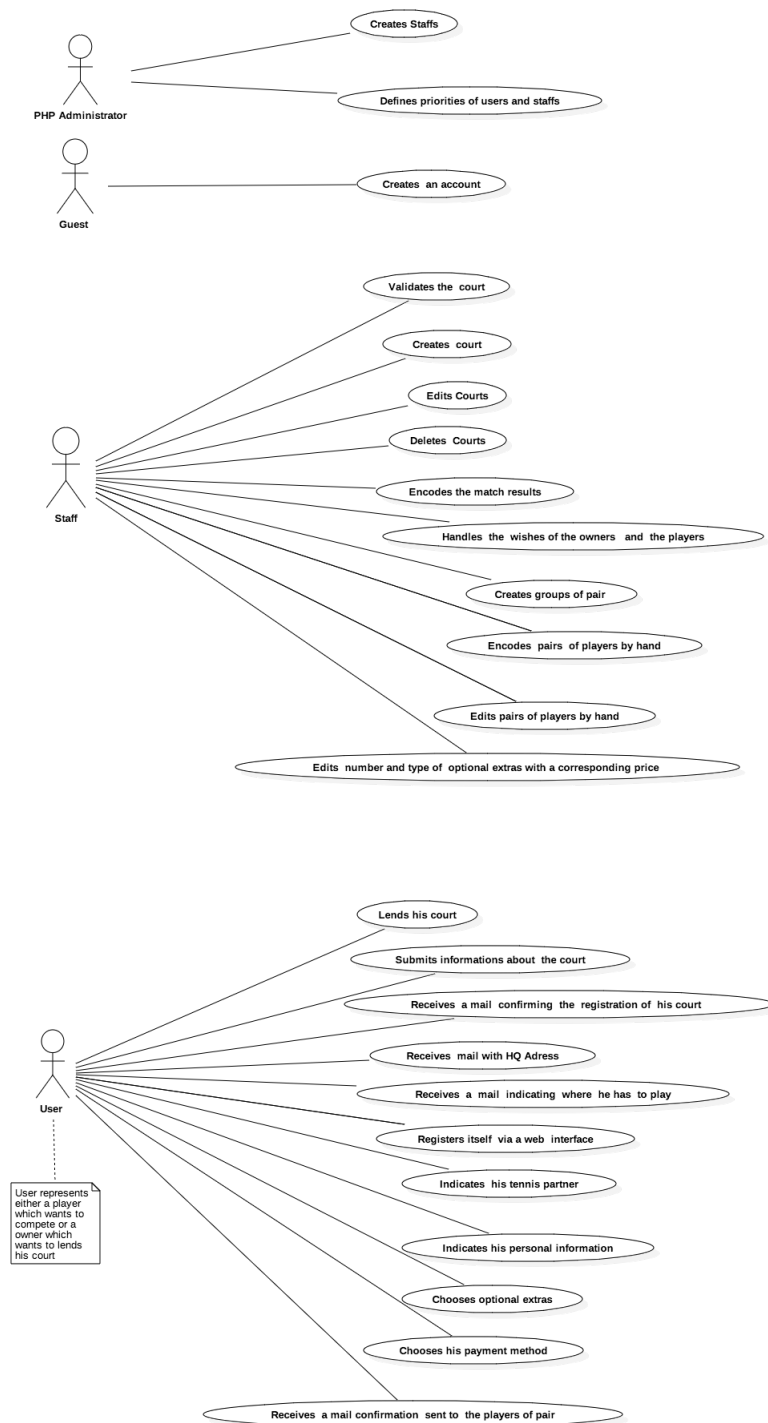


Figure 3: The use case diagram

- If all the fields are filled a new web page is displayed with a summary of the request (information of the tournament and tennis partner), the extras that the user can possibly choose(barbecue), a field to indicate the total and the method of payment, and a field for special remarks and requests.
- The user completes the page and clicks on «Confirmer».
- The system indicates to the user that the registration will be effective only if the tennis partner confirm the request. The request is marked «En attente» and a email is sent to the tennis partner.
- Once connected to the website, the second user receive one notification indicating that a tennis partner wants to play in a tournament with him. He can't form a other team until he don't have answer to this request.
- The user click on «Inscription tournoi».
- The system display a summery of the request : informations about the tournament and the partner. The User can click on two button : « accepter» and «refuser».
- If the user clicks on «refuser» the pending request is removed. The system send a message to the first user.
- If the user clicks on «Accepter». The system display a new page with a summary of the request (informations of the tournament and tennis partner), the extras that the user can possibly choose(barbecue), a field to indicate the total and the method of payment, and a field for special remarks and requests.
- The user completes the page and clicks on «Confirmer».
- The system register the team as player to the tournament. A email is sent to the two participants.

### 4.3 Register a tennis court

A tennis court can be recorded either directly by its owner on the site, or by the staff on the basis of information supplied by it.

To put his tennis court available an owner must have an account (See details at section ...).

- Once the owner is logged in, he clicks on «Prêter un terrain».
- If the owner has previously registered one or many court before (past year for example), a list of his courts is displayed. There is also a button «Ajouter un terrain».
- The owner can select a item in the list by clicking on it.
- The system display a new page containing the information of his court, if is not done yet, the owner can click on «Renouveler».

- The system display a new page where the owner is invited to complete or correct the information about his tennis court and adds some remarks and requests. The owner can clicks on «Confirmer». If he clicks, the court is register as «En attente de confirmation du staff».
- The court need to be validate by a staff member to be considered available.
- If the owner want to add a new court, he clicks on the button «Ajouter un terrain»
- The system display a new page where the owner is invited to complete the different next fields and clicks on «Confirmer»: Name of the court, Address of the court, Access and Remarks.
- The system display the new court on the owner's list of courts with the mention en «attente de validation». The new court need to be validate by a staff member.
- If a staff member validates the new court, it is register as available for the tournament of the actual year.

Also, a staff member can add a new court based on information sent by a owner by mail, fax, phone, etc.

- Once the staff member is logged in, he clicks to the tab «Terrains».
- The system display the list of courts registered on the database and a button «Ajouter un terrain».
- If the staff member clicks on a court, the system display a new page with some information about the court.
- The staff member can modify the information and marks the court as available for the tournament of the current year.
- If the staff member clicks on the button «Ajouter un terrain», the system display a new page where the staff member is invited to complete the different next fields and clicks on «Confirmer»: Name of the court, Address of the court, Access and Remarks.

#### 4.3.1 Creation of group

- Registration Of players and fields must be completed. (As said in the statement;)
- A member of the staff logs in to his account (staff)
- He selects tournament tab
- He selects the desired tournament (Saturday junior mixed, for example)
- He selects a groups category

- He select "constituer les poules"
- The system will show:
  - A table containing the fields that are not assigned yet. (1 column)
  - A table containing the pairs registered in this tournament but not within a group yet. (1 column)
  - A table of 4 columns (1. group number, 2. Identifiers of the Pairs, 3. Identifier (Identifiers) of the fields assigned to the group, 4. The name of the group leader)

It is possible to click on an item in the table to see its complete information in a new page or notification ...

The pairs and fields having special situations will have different colors to be easily identified.

Temporary changes made in the tables are saved, even if the final formations are not formed yet.

- For adding a pair to a group, staff member must click on the pair in the first table and choose "add to a group"
- Then he must indicate how the pair should be added to the group.
- The pair then changes table
- To Add a field to a group, staff member clicks on the field and selects "assigner à une poule"
- This field then changes Table
- This field disappears from the tables of the tournaments taking place. This avoids conflicts of assignments
- The Staff must assign a group leader. To do this, he clicks on the empty box "group leader" in the table and selects "désigner un group leader"
- The List of the members of the groups appears, with the ability to click on the desired person.
- Once every pair is in a group, and each pool has a field, "confirmer poule" button becomes possible.
- The click on "confirmer poule" button opens a notification window.
- Once all the information is complete, the system proposes an emails to be sent to all participants with the information they need.
- Staff member sends this email.

## 4.4 Group points registration

Once a group member reports the paper sheet with the results, the staff can enter the results.

For that:

- A member of the Staff logs in to his account (staff)
- He selects the tournament tab
- He selects the desired tournament (Saturday junior mixed, for example)
- He selects groups category
- He selects "constituer les poules"
- The System displays a table showing each game of the group
- To enter a result, he must click on the box for a game
- Either The System opens a dialog window or staff can record the results and clicks "ok"
- The Result is stored in the DB.

It is always possible to correct the result in case of errors.

## 5 Mandatory requirements

This functionality is going to be made by the end of the project.

### 5.1 Knock-off Management

Once the group matches finish, staff member will be shown all the groups with their teams ordered. The staff member will have the option to specify how many teams of each group should be nominated to the knock-off round. With each alteration of the nominated players number, a new table containing the players and the court will be displayed. Staff member has the ability to alter the players (who plays against whom in the matches) and he can assign a court to each match. Once all the matches are assigned and accompanied with courts, a button for registering the schedule will be enabled. This button will register table in the DB so its info can be later shown to the staff member to enter matches results. Another button will be enabled to print a table containing each match information (information about the teams and the court of this match). The staff member will have the ability to filter the already created matches by date, in order to enter its result. Once each result is entered an updated temporary table is shown indicating the matches of the next round and subsequent rounds. Once each match has its participants known, the staff member can assign a field and a date to that match.



## **6 Optional Requirements**

These functionalities will be implemented only if we have enough time.

1. History of modifications (Non-functional): modifications to pairs, courts, groups, and knock-off tables will be registered along with staff member who did them and their dates.
2. Linking to the players annually (Non-functional): The system will send e-mails to the already registered players each year to ask them if they want to register for the new tournament.
3. Fully Automated Payments.
4. New Group Creation in Case of Rain.
5. Mobile Friendly Website.
6. Possibility of Submitting Matches Results Via Smartphones.

## **7 Requirements which will not be implemented**

1. Automatic generation of the groups.
2. Automatic Check for AFT Ranking of the players.

## 8 Planning

| Week | Date    | Deadlines | To do   |
|------|---------|-----------|---|
| 1    |         |           |   |
| 2    | 25 Sep. | D1        |   |
| 3    |         |           | Make the most complete database<br>The welcome page UI<br>The user registration UI<br>staff account creation                      |
| 4    | 9 Oct.  | D2        | Connect the user registration UI to the database<br>The user home page UI<br>Database management system (staff)<br>Multiple tests |
| 5    |         |           | The player registration UI<br>The court registration UI<br>Connect the court registration UI to the database                      |
| 6    | 23 Oct. | D3        | Connect the player registration UI to the database<br>Multiple tests  |
| 7    | 30 Oct. | D3'       | Group creation UI<br>Group creation management system   |
| 8    |         |           | knock-off UI<br>knock-off management system   |
| 9    | 13 Nov. | D4        | wiki page<br>Multiple tests<br>Add functionalities  |
| 10   |         |           | Add functionalities   |
| 11   | 27 Nov. | D5        | Add functionalities<br>Final tests  |
| 12   |         |           |   |
| 13   |         |           |   |
| 14   | 15 Dec. | D6        |   |

## 9 Tasks assignment

Simon take the role of the project manager and write the use case. Scott draw the use case diagramms and wrote the work method section. Maximilien write the use case, and make the planning. Jos design the UI. Saleh had less time than the rest of the group during these first two weeks because of his work. So he helps us for a lot of details without yet taking a specific task.