

**CAPSTONE PROJECT REGISTER**

**Class**: **Duration time**: From … 04/01/2025… to … 30/04/2025…

**(\*) Profession:** Software Engineer **Specialty**: NestJS - NextJS - React Native

**(\*) Kinds of person make registers:**  Lecturer Students Hộp Văn bản

**1. Register information for the supervisor**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Full name** | **Phone** | **E-Mail** | **Title** |
| Supervisor 1 | Nguyễn Thế Hoàng | 0986 628 525 | hoangnt20@fe.edu.vn | Mr. |

**2. Register information for students**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Full name** | **Student code** | **Phone** | **Email** | **Role in Group** |
| 1 | Hồ Dương Trung Nguyên | SE172921 | 0847919292 | nguyenhdtse172921@fpt.edu.vn | Leader |
| 2 | Phạm Vĩnh Sơn | SE172457 | 0989042906 | sonpvse172457@fpt.edu.vn | Member |
| 3 | Trần Ánh Minh | SE172473 | 0772890822 | minhtase172473@fpt.edu.vn | Member |
| 4 | Võ Nguyễn Trung Sơn | SE172952 | 0707158436 | sonvntse172952@fpt.edu.vn | Member |

**3. Register content of the Capstone Project**

**(\*) 3.1. Capstone Project name:**

* English: **SmashLeague** - A Platform for Supporting and Organizing Sports Tournaments
* Vietnamese: ***SmashLeague -*** Nền tảng hỗ trợ và quản lý tổ chức giải đấu thể thao

1. **Context:**

In the current context, many athletes face difficulties in registering for tournaments and cannot promptly update information about tournaments or sudden changes from the organizing committee. Most solutions involve contacting the organizing committee through social media platforms like Facebook and Zalo. In reality, many athletes participate in numerous tournaments, even those far from their residential areas, which poses risks in terms of registration and sudden changes, especially in tournament regulations and competition rules. This significantly impacts athletes from distant locations when registering for multiple distant tournaments.

Organizing committees also face challenges in organizing tournaments. The lack of clear management is a major reason for unsuccessful tournaments or conflicts between competitors and organizers, damaging the organizers’ reputation. Additionally, the use of paper-based management in tournaments affects the efficiency of the organizing committee with limited staff.

The prevalence of “ghost” tournaments, where organizers collect registration fees and then disappear, is another pressing issue for competitors.

To address these problems, many organizers and competitors have sought solutions such as hiring professional tournament organization teams and experienced referees, but still at high cost, not suitable for some small tournaments such as for a company or a school. That is why ***SmashLeague*** should be created.

1. **Proposed Solutions**:

**SmashLeague** is a cross-platform application that provides tournament organizers with tools to manage tournaments, from athlete management to managing the entire tournament match throughout the duration of the tournament, and athletes will be able to register for tournaments on the platform and receive the latest notifications from the tournament.

In which, users can register in two forms: as a representative registering for a team, or as a free registration. The representative registering for a team will receive the latest information from the organizer about the tournament, including information to the team members. Players will be able to register for free without a registration unit and will also receive the above information.

**SmashLeague** may not include the small steps in organizing tournaments for organizers, however, the platform will allow organizers to optimize the complex steps in organizing tournaments, as well as fully support features to help organizers conveniently operate and organize tournaments. In this system, the platform will provide 2 solutions for organizers or organizing committees to build a tournament with **round robin** type or direct method.

In addition, **SmashLeague** also includes an information management website for system administrators to be able to administer the system to support users and browse information of organizers as well as tournament participants, to ensure stable system operation. **SmashLeague** will also include a live stream server for organizing committees to live stream in **SmashLeague** (optional).

*Note: An authenticated user can simultaneously be all roles in the system*

* **Functional requirements:**

|  |  |  |
| --- | --- | --- |
| **Guest** | | |
| **No.** | **Function** | **Description** |
| **1** | **Visit landing page** | Guests can visit the landing page of the website for viewing details of the whole system and all tournaments are on stage. |
| **2** | **Register as competitors** | Guests can register as a competitor for applying to a tournament. |
| **3** | **Register as an organizing committee** | Guests can register as an organizing committee for organizing a sport tournament. |
| **4** | **View & search all tournaments** | Guests can search and view all tournaments that are ongoing, ended or not start. |
| **5** | **View tournament details** | Guests can view tournament details to see bracket, matchday and result of a match. |
| **6** | **View all matches of a tournament** | Guests can view all matches that belong to a specific tournament. |
| **7** | **View next match** | Guests can view the next match of the ongoing tournament. |
| **8** | **View the livestream** | Guest can watch the live stream of ongoing matches |

|  |  |  |
| --- | --- | --- |
| **Organizing committees (abbreviate to OCs)**  ***(specific to an organizer)*** | | |
| **No.** | **Function** | **Description** |
| **1** | **Login** | To access all features for OCs. |
| **2** | **Logout** | OCs can log out of the system. |
| **3** | **Change password** | OCs can change new password. |
| **4** | **Edit personal Profile** | OCs can edit their personal profile. |
| **5** | **Upload identification for verification** | OCs upload identification for verification to create a tournament. |
| **7** | **Search and view history tournaments and results** | OCs can view the result of the tournament that they organized. |
| **8** | **View & search all tournaments** | OCs can search and view all tournaments that are ongoing, ended or not starting. |
| **9** | **View tournament detail** | OCs can view tournament details to see bracket, matchday and result of a match. |
| **10** | **View all matches of a tournament** | OCs can view all matches that belong to specific tournament. |
| **12** | **Manage tournament** | OCs can create, view, update their tournaments |
| **14** | **Manage supplies for tournament** | OCs can add a supplement of the tournament to the system, in order to count if the supply is enough for all the time of the tournament. |
| **15** | **Post for tournament** | Ocs can create posts to promote their tournament. |
| **16** | **Manage list competitors** | OCs can manage list of competitor participate OCs’s tournament, include charter, rules, and prizes. |
| **17** | **Update charter of the tournament** | OCs can update the charter of their tournament. |
| **18** | **Send notification to the competitors** | OCs can send notification to competitors if there are any updates about the tournament, or remind if the competitors are not attended. |
| **19** | **Manage matches** | OCs can view, update match information of their tournament. |
| **20** | **Assign competitor for match (Create poll)** | OCs can assign competitor to each branch in order to management |
| **21** | **Export matches results** | OCs can export match result to Excel |
| **22** | **Assign matches in real time** | OCs can assign which match is the next match in order to manage the time through the tournament. |
| **23** | **Assign referee for match** | OCs can assign referee for specific match |
| **24** | **Manage settings for each match based on**  **the round** | OCs can manage settings for each match to match with the charter of the tournament, including how many points, type of match. |
| **25** | **View feedback** | OCs can view feedback from competitors on specific tournaments. |
| **26** | **Ban competitors from tournament** | OCs can ban a competitor from a tournament if that competitor violates the charter of the tournament or being reported from another competitor (after confirmation). |
| **28** | **View Transaction History** | OCs can view their transaction history, including registration fees from competitors or upgrading packages. |
| **29** | **View Transaction Detail** | OCs can view their transaction details, including transaction time and amount of transaction. |
| **30** | **Manage all transactions of competitors and referees in their tournaments** | OCs can manage all transactions of competitors and referees in their tournaments, OCs can also use the tools to count how much money has been paid through all tournaments or how much to pay for upgrading packages. |
| **31** | **Live streaming ongoing matches for each courts** | OCs can manage and livestream ongoing matches in the tournament on a platform with the server and stream key, which are two parts needed in every live stream softwares. |

|  |  |  |
| --- | --- | --- |
| **Referee** | | |
| **No .** | **Function** | **Description** |
| **1** | **Login** | To access all features for Referees, a Referee has to log in with an email/password or via Google. |
| **2** | **Logout** | Referees can log out of the system. |
| **3** | **Manage user profile** | Referees can manage their profile information, update names, avatars, backgrounds, phone numbers, and passwords, bank accounts... |
| **3** | **Verify account by OTP** | To activate an account, the referee must verify the account by OTP through email. |
| **4** | **Change password** | Referees can change new password |
| **5** | **View and search all tournaments** | Referees can view and search all the tournaments that there are in the web app. |
| **6** | **Search and view history tournaments and results** | Referees can view the result of tournament that they have participated in |
| **7** | **View & search all tournaments** | Referees can search and view all tournaments that are ongoing, ended or not start |
| **8** | **View tournament details** | Referees can view tournament detail to see bracket, matchday and result of a match |
| **9** | **View all matches of tournaments** | Referees can view all matches that belong to specific tournament |
| **10** | **View all participated tournaments** | Referees can view the tournament that they were participated in |
| **11** | **View the details of next match** | Referees can view the details of the next match. |
| **12** | **Verify competitors before match** | Referees can be allowed to access the competitors list and check the attendance of each competitor before match starts. |
| **13** | **Record competitors point of match** | Referees can score for players that participate in each match |
| **14** | **Record match result** | Referees can record the ratio of match in which they join |
| **15** | **View participated match** | Referees can view all the matches in which the referees join. |
| **16** | **Verify information after the matches (number of shuttles used, duration of match,...)** | Referees can check the information that are correct for each match they have responsibility. |
| **17** | **Receive reminds for next match and locations (includes details)** | Referees can receive information of the next match and location in the participating tournament. |
| **18** | **View policies** | Referees can view the policy of **SmashLeague** |
| **19** | **View the live stream** | Referees can watch the live stream of ongoing matches. |

|  |  |  |
| --- | --- | --- |
| **Team Leader** | | |
| **No.** | **Function** | **Description** |
| **1** | **Login** | To access all features for Team Leaders |
| **2** | **Logout** | Team Leaders can log out of the system. |
| **3** | **Verify account by OTP** | To activate an account, competitors must verify the account by OTP through email. |
| **4** | **Change password** | Team Leaders can change new password |
| **5** | **Edit personal profile** | Team Leaders can edit their personal profile |
| **6** | **Edit team profile** | Team Leaders can edit the team information |
| **7** | **Update team members profile** | Team Leaders can edit the team members information |
| **8** | **Search & view history tournaments and results** | Team Leaders can view the result of tournament that they have participated in |
| **9** | **View & search all tournament** | Team Leaders can search and view all tournaments that are ongoing, ended or not start |
| **10** | **View tournament details** | Team Leaders can view tournament detail to see bracket, matchday and result of a match |
| **11** | **View all matches of Tournament** | Team Leaders can view all matches that belong to specific tournament |
| **12** | **View Participated Tournament** | Team Leaders can view the tournament that they are participated in |
| **13** | **Register to tournament for team members** | Team Leaders can register for team members to play a specific tournament |
| **14** | **Follow tournament** | Team Leaders can follow specific tournament to receive notification about that tournament |
| **15** | **View all favorite tournaments** | Team Leaders can add tournaments to favorite list |
| **16** | **View all matches of tournaments** | Team Leaders can view the matchday and results of the matches |
| **17** | **View next matches of each team member** | Team Leaders can view all next matches details in the tournament that team member participate |
| **18** | **View participated matches of each team member** | Team Leaders can view matches details that the team members participated |
| **19** | **Feedback tournament** | Team Leaders can send feedback after completing the tournament |
| **20** | **Send report for organizing committee** | Team Leaders can send report to organizing committee if there were some problems |
| **21** | **Receive notification for the next match** | Team Leaders can receive information of the next match in participated tournament to ready |
| **22** | **Receive notification for update of the charter of the tournament** | Team Leaders will receive new update of the charter of the tournament if there is any update from the **Organizing Committee** |
| **23** | **Receive information about the results of each team members matches** | Team Leaders can receive results of the team members matches that participated in the tournament. |
| **24** | **Create a new transaction** | Team Leaders can create a new transaction ( Register to a tournament ) |
| **25** | **View transaction history** | Team Leaders can view their transaction history |
| **26** | **View transaction details** | Team Leaders can view their transaction details |
| **27** | **Cancel the transaction** | Team Leaders can cancel their transaction details |
| **28** | **View policies** | Team Leaders can view the policy of **SmashLeague** |
| **29** | **View the live stream** | Team Leaders can watch the live stream of ongoing matches |

|  |  |  |
| --- | --- | --- |
| **Competitors** | | |
| **No.** | **Function** | **Description** |
| **1** | **Login** | To access all features for competitor. |
| **2** | **Logout** | Competitors can log out of the system. |
| **3** | **Verify account by OTP** | To activate an account, competitors must verify the account by OTP through email. |
| **4** | **Change password** | Competitors can change new password |
| **5** | **Edit personal profile** | Competitors can edit their personal profile |
| **7** | **Search & view history tournaments and results** | Competitors can view the result of tournament that they have participated in |
| **8** | **View & search all Tournament** | Competitors can search and view all tournaments that are ongoing, ended or not start. |
| **9** | **View tournament details** | Competitors can view tournament detail to see bracket, matchday and result of a match. |
| **10** | **View all matches of tournament** | Competitors can view all matches that belong to specific tournament. |
| **11** | **View Participated Tournament** | Competitors can view the tournament that they are participated in. |
| **12** | **Register to tournament** | Competitors can register to play a specific tournament. |
| **13** | **Follow tournament** | Competitors can follow specific tournament to receive notification about that tournament. |
| **14** | **Favorite tournament** | Competitors can add tournaments to favorite list. |
| **15** | **View next match** | Competitors can view next match detail in the tournament that they participate |
| **16** | **View participated match** | Competitors can view match detail that they participated |
| **17** | **Feedback tournament** | Competitors can send feedback after completing the tournament |
| **18** | **Send report for organizing committee** | Competitors can send report to organizing committee if there were some problems |
| **19** | **Receive notification for the next match** | Competitors can receive information of the next match in participated tournament to ready |
| **20** | **Receive notification for update of the charter of the tournament** | Competitors will receive new update of the charter of the tournament if there is any update from the **Organizing Committee** |
| **21** | **Create a new transaction** | Competitors can create a new transaction (Register to a tournament) |
| **22** | **View transaction history** | Competitors can view their transaction history |
| **23** | **View transaction details** | Competitors can view their transaction details |
| **24** | **Cancel the transaction** | Competitors can cancel their transaction details |
| **25** | **View policies** | Competitors can view the policy of **SmashLeague** |
| **26** | **View the live stream** | Competitors can watch the live stream of ongoing matches. |

|  |  |  |
| --- | --- | --- |
| **Admin** | | |
| **No.** | **Function** | **Description** |
| **1** | **Login** | To access all features for admin, a user has to log in with an email/password or via Google. |
| **2** | **Logout** | The admin can log out of the system. |
| **3** | **Change password** | Admin can change new password |
| **4** | **Manage user profile** | Admin can manage their profile information, update names, avatars, backgrounds, phone numbers, and passwords. |
| **5** | **Manage all users profiles** | Admin can view and update the users profiles |
| **6** | **Verify the credibility of the OCs** | Admin can check the suitable information of OCs from the registration form. |
| **7** | **Verify the credibility of the Team Leaders** | Admin can check the suitable information of Team Leaders from the registration form. |
| **8** | **Verify all the tournaments** | Admin can check the suitable details of the tournament from the create form. |
| **9** | **Ban the OC have bad reports** | Admin can ban the the OC's account if it has a lot of bad reports |
| **10** | **Ban the competitors in the system due to the violation of the policies** | Admin can ban the account the competitors if it has a lot of bad reports according to the policies |
| **11** | **View all transactions** | Admin can view the transaction list |
| **12** | **Verify the transactions of tournaments** | Admin can check the information the transactions when it created |
| **13** | **Receive real-time notifications** | Admin can get real-time notifications from the systems. |
| **14** | **Manage all notifications** | Admin can manage all notifications from the web app |
| **15** | **Manage the packages** | Admin can manage, change setting or add sales for all packages from the web app |
| **16** | **Manage the policies** | Admin can manage view and update the policies |
| **17** | **Manage the permissions for users** | Admin can manage and edit the permissions for users |
| **18** | **System configuration** | Admin can manage the system during updating, and manage which URL is for. |

(\*) 3.2. Main proposal content (including result and product)

1. **Theory and practice (document):**

* Students should apply the software development process and UML 2.0 in the modeling system.
* The documents include User Requirements, Software Requirement Specification, Architecture Design, Detail Design, System Implementation, and Testing Document, Installation Guide, source code, and deployable software packages.
* Source Code Management: GitHub.
* Server-side technologies:
* Server: NestJS, Docker
* Database: PostgreSQL, MongoDB, Redis
* Client-side technologies:
* Web Client: NextJS, TailwindCSS, Vercel
* Mobile app: React Native

1. **Products:**

* Web application
* Mobile app

1. **Proposed Tasks:**

* Task package 1: Deploy database
* Task package 2: Deploy back-end server
* Task package 3: Deploy web front-end, mobile application for Organizing Committees, Referees, Competitors, and Team Leaders
* Task package 4: Deploy web front-end for admin

4. Other comments.

|  |  |
| --- | --- |
| **Supervisor**  *(Sign and full name)*  Nguyễn Thế Hoàng | HCM, date 27/12/2024  **On behalf of the Registers**  *(Sign and full name)*  Hồ Dương Trung Nguyên |