# Software Requirement Specifications

## User Requirement Specification

### Guest Requirement

Guest is a person who loves to play football. Guest can do the following functions:

* Sign up
* Sign in

### User Requirement

User is a person who represents a football team to reserve field. User can do the following functions:

* Manage account:
  + Get profile’s information
  + Edit profile
* Search field
* Reserve field (reserve friendly match: user finds and reserves a field)
* Manage matching requests:
  + Create reservation requests
  + Cancel reservation requests
  + Reserve tour match (user finds opponent, chooses suitable field from suggest of system and reserves a match)
* Get history (user views history about created reservation request and created matching request)
* Rating field/opponent
* Send report (report bad user or bad field owner)
* Set favorites field.
* Add opponent to blacklist
* Deposit (deposit money to user’s wallet in system)

### Field Owner Requirement

Field owner is a person who has football fields and let users reserve his/her fields by using our application. The following functions are available for field owner to use:

* Manage account:
  + Get profile’s information
  + Edit profile
* Manage field:
  + Create field
  + Disable field
  + Create promotions (discount reservation fee or free services for user)
* Manage active time:
  + Create active time
  + Update active time
* Send report (report bad user)
* Set field for match
* Get bills by date

### Admin Requirement

Admin is an employee from our company. Admin is responsible for managing service provider system and accounts. Admin can do following functions:

* Lock users’ accounts

### Staff Requirement

Staff is an employee from our company. Staff solves the problem for the user and field owner. Staff can do following functions:

* Accept the field owner’s account creation request (when field owner creates an account, staff will authenticate the actual situation of field owner to approve field owner’s account)
* Get report from user (view reports from user and field owner)
* Send lock account request (request admin to lock account of bad user, field owner)
* Set standard price of field (control reservation field fee to avoid devaluation)
* Change user’s balances (when user makes a transaction at a company office, staff will use this function to solve money problems)

### System Requirement

System performs functions that run underground and connects to external system (deposit money, notification system). System do following functions:

* Calculate bonus point (based on rating of user)
* Calculate rating score (based on rating of user)
* Send notification (when user reserves field, found suitable opponents…; field owner has reservation request)

## Software Requirement Specification

### External Interface Requirement

#### User Interface

* Mobile and Web application use Vietnamese interface, suitable for Vietnamese user.

#### Hardware Interface

* N/A

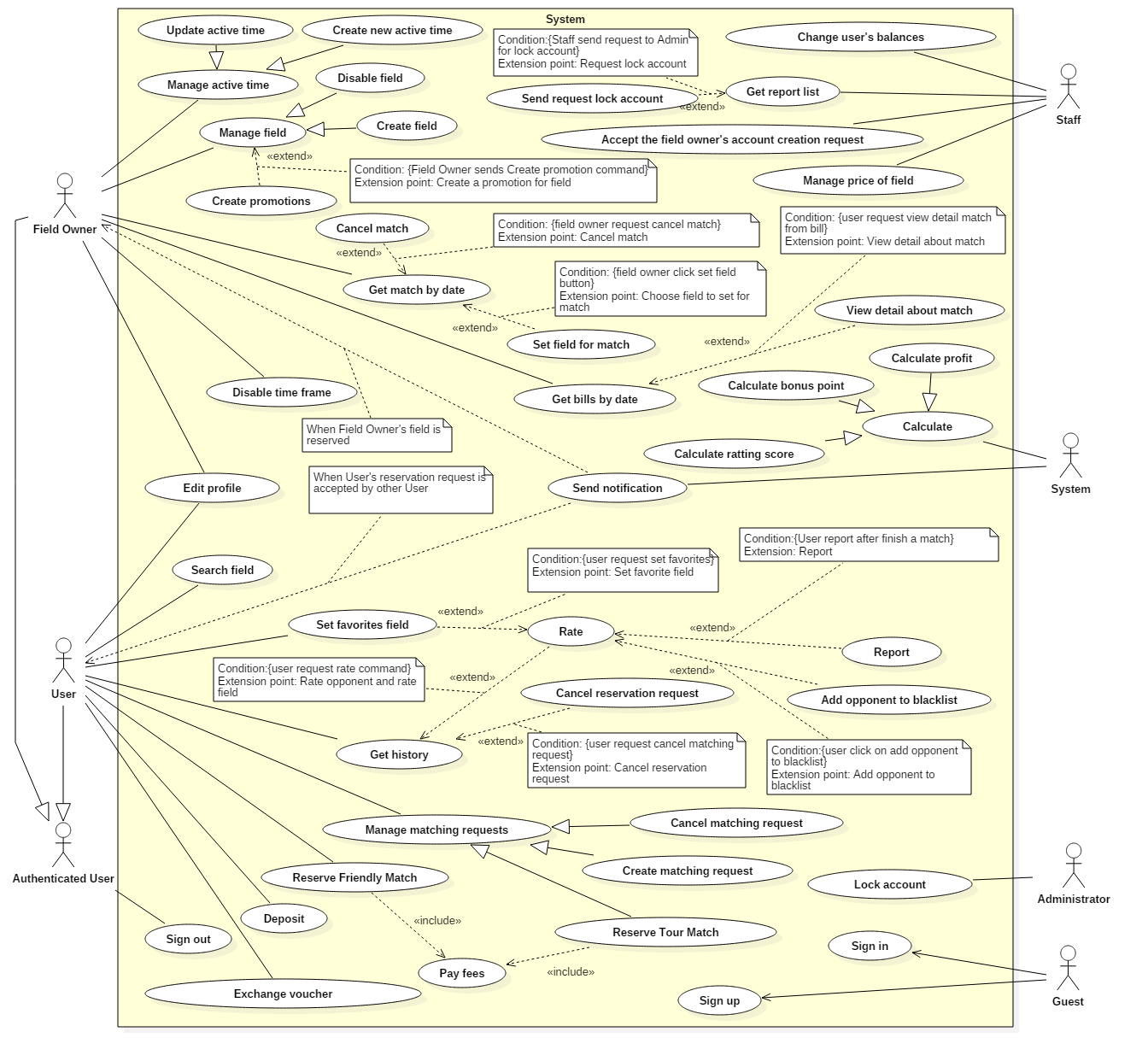
#### Software Interface

* JSON library,
* Ngân lượng payment gateway, Paypal payment gateway support to payment.
* Twilio supported to send SMS.
* Firebase: Google’s mobile platform supported to notify.

#### Communication Protocol

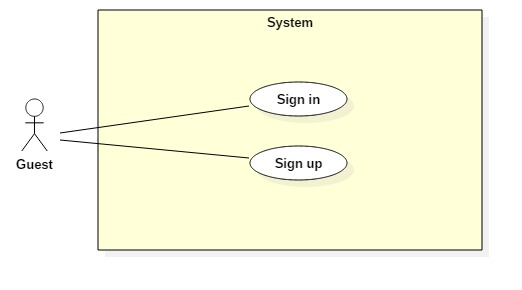
* Use HTTP protocol 1.1 for communication between the web browser and the web server, mobile application and the server, the server and the Microsoft services.

### System Overview Use Case

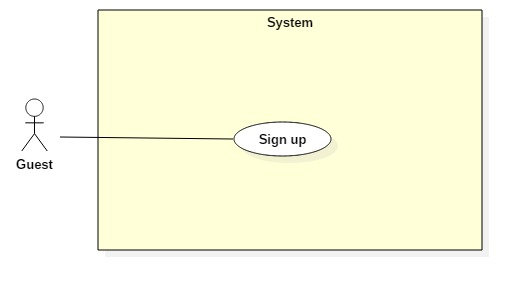


### List of Use Case

#### Guest Use Case

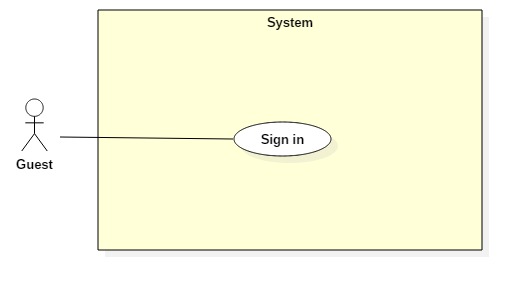


##### <Guest> Sign up



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| --- | --- | --- | --- |
| **USE CASE – UC001** | | | |
| **Use Case No.** | 001 | **Use Case Version** | 1.0 |
| **Use Case Name** | Sign up | | |
| **Author** | HieuPT | | |
| **Date** | 10/10/2017 | **Priority** | High |
| **Actor:**   * Guest   **Summary:**   * This use case allows Guest to sign up new account.   **Goal:**   * Account is sign up successfully and store in database of the system.   **Triggers:**   * Guest sends command to sign up.   **Preconditions:**   * Actor has not accessed in the system.   **Post Conditions:**   * **Success:** New account is created. * **Fail:** Account is not created.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Guest sends command to request sign up. | System requires information from Guest:   * Full name: free text input, required, length (10-50) * Username: free text input, required, length (9-20) * Phone: free number input, required, length (10-12) positive integer, values: [0,9] | | 3 | Guest inputs information and sends command to sign up.  [Alternative 1]  [Alternative 2] | Account registered.  System will send password to phone number and display login view.  [Exception 1]  [Exception 2]  [Exception 3] |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Guest sends command to reset. | System reset all field to blank. |   **Alternative Scenario 2:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Guest send command to back to login view. | System shows login view.  Account isn’t created. |   **Exceptions :**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Guest input already exist username. | System show warning message “Tên đăng nhập này đã tồn tại”. | | 2 | Guest does not input required field. | System notices that guest need to input all these field:   * “Full name”: System display warning message: “Vui lòng điền dữ liệu vào trường này”. * “Username”: System display warning message: “Vui lòng điền dữ liệu vào trường này”. * “Phone”: System display warning message: “Vui lòng điền dữ liệu vào trường này”. | | 3 | Guest input wrong some fields with requirement. | System notices that guest need to re-input all these field:   * “Full name”: System display warning message: “Tên đầy đủ của đội từ 10-50 ký tự”. * “Username”: System display warning message: “Tên đăng nhập phải từ 6-20 ký tự”. * “Phone”: System display warning message: “Số điện thoại không đúng”. |   **Relationships:** N/A  **Business Rules:**   * If guest signs up a user account, system will send an authentication message for user to login to system. Guest will become a user immediately and can reserve a field. * If guest sign up a field owner account, guest must enter phone number to authenticate. In addition, system will require guest inputs address. If guest does not input address, system will get the current location as the guest address automatically. This registration will be reported to the staff. The field owner’s account will be valid only when staff check the authenticity of the address and approve. | | | |

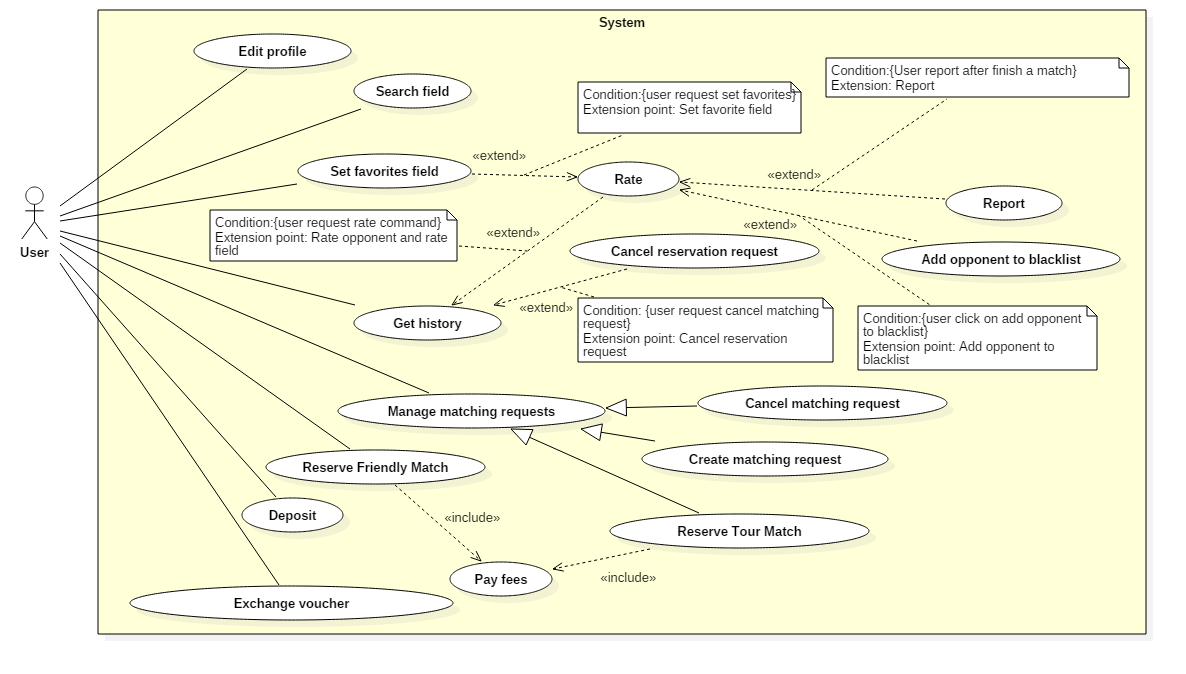
##### <Guest> Sign in



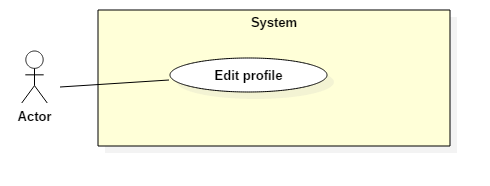
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| **USE CASE – UC002** | | | |
| **Use Case No.** | 002 | **Use Case Version** | 1.0 |
| **Use Case Name** | Sign in | | |
| **Author** | HieuPT | | |
| **Date** | 24/10/2017 | **Priority** | High |
| **Actor:**   * Guest   **Summary:**   * This use case allows Guest sign in to the system on website and mobile application.   **Goal:**   * Guest sign in successfully with the proper role.   **Triggers:**   * Guest send the sign in command.   **Preconditions:**   * Guest has an account.   **Post Conditions:**   * **Success:** Guest accesses the system successfully. * **Fail:** System shows error message “Invalid username or password”.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Guest sends command to request sign in. | System requires identity information form Guest:   * Username: free text input. * Password: free text input. | | 2 | Guest inputs information |  | | 3 | Guest sends command to sign in to system.  [Alternative 1] | Guests will sign in system with their specific role. |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor action | System Response | | 1 | Guest input invalid username or password. | System show error message “Tên đăng nhập hoặc mật khẩu không đúng”. |   **Exceptions:** N/A  **Relationships:** N/A  **Business Rules:**  - After sign in to system, guest will be redirected to specific view based on their role on the system: owner or user.   * If role is “User”, the system will display to User view. * If role is “Owner”, the system will display to Owner view. | | | |

Table : Sign in specification

#### User Use Case

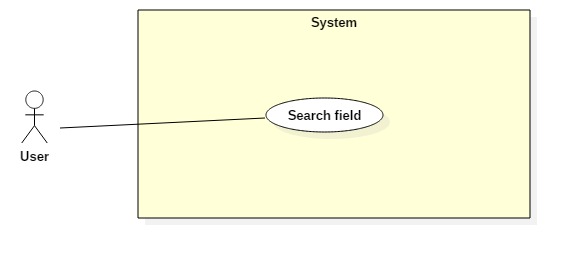


##### <User, Field Owner> Edit profile



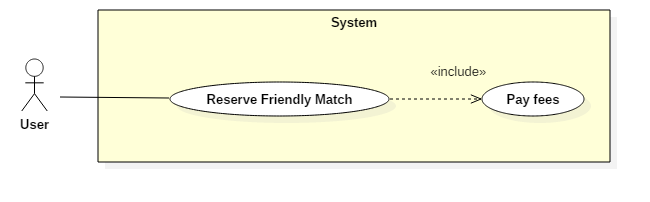
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| **USE CASE – UC003** | | | |
| **Use Case No.** | **003** | **Use Case Version** | 1.0 |
| **Use Case Name** | Edit profile | | |
| **Author** | HieuPT | | |
| **Date** | 24/10/2017 | **Priority** | Normal |
| **Actor:**   * User, Field Owner   **Summary:**   * This use case allows Actor to edit account profile.   **Goal:**   * Profile of account are updated.   **Triggers:**   * Actor sends command to edit profile.   **Preconditions:**   * Actor has accessed the system under user role or field owner role.   **Post Conditions:**   * **Success:** Information of account is updated and display. * **Fail:** .Information of account is not updated.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends command to request edit profile. | System requires information from Actor.   * Full name: free text input, required, length (10-50) * New Password: free text input, required, length (6-12) * Repeat new password: free text input, required, length (6-12) * Address: free text input, required, length (6-500). System will automatically get the current position. * Phone: free number input, length(10-12), positive integer, value: [0,9] | | 2 | Actor inputs information, sends command to save edit.  [Alternative 1]  [Alternative 2] | System shows edit successfully.  [Exception 1]  [Exception 2]  [Exception 3] |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends command to reset. | System resets all field to blank. |   **Alternative Scenario 2:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends command to pick location via google maps. | System saves location Actor picked to Address field. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Actor inputs already exist phone. | System shows warning message “This phone number has been used to create an account”. | | 2 | Actor does not input required field. | System notices that Actor need to input all these field:   * “Full name”: System display warning message: “Vui lòng nhập tên”. * “Password”: System display warning message: “Vui lòng nhập mật khẩu”. * “Repeat password”: System display warning message: “Vui lòng nhập lại mật khẩu”. * “Phone”: System display warning message: “Vui lòng nhập số điện thoại”. | | 3 | Actor inputs wrong some fields with requirement. | System notices that Actor need to re-input all these field:   * “Full name”: System display warning message: “Tên đầy đủ phải từ 10-50 kí tự”. * “Password”: System display warning message: “Mật khẩu phải từ 6-12 kí tự”. * “Repeat password”: System display warning message: “Không đúng với mật khẩu được nhập”. * “Phone”: System display warning message: “Số điện thoại phải là số”. |   **Relationships: N/A**  **Business Rules:**   * After edited, new information will be save to profile of account. * Approximate address depends on GPRS and Google maps. * Only Field Owner has longitude and latitude, it will be get based on address through Google API from input of user. | | | |

##### <User> Search field



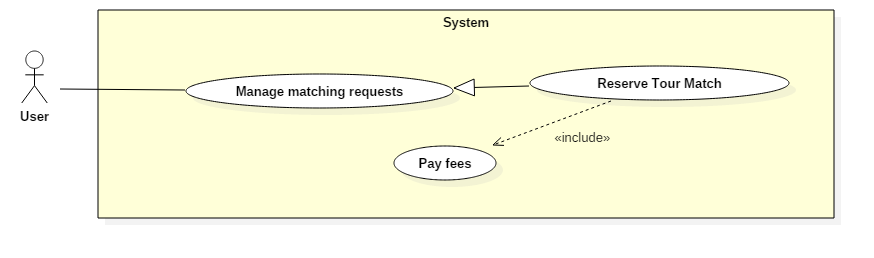
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| **USE CASE – UC004** | | | |
| **Use Case No.** | 004 | **Use Case Version** | 1.0 |
| **Use Case Name** | Search field | | |
| **Author** | HieuPT | | |
| **Date** | 24/10/2017 | **Priority** | High |
| **Actor:**   * User   **Summary:**   * This use case allows User to search Field Owner by input keyword.   **Goal:**   * User finds available Field Owner base on keyword.   **Triggers:**   * User sends command to search field.   **Preconditions:**   * User has accessed the system under user role or field owner role.   **Post Conditions:**   * **Success:** list field owners have suitable name are display. * **Fail:** No response from system.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User inputs keyword to search |  | | 2 | User sends Search Field command.  [Alternative 1] | System will search and return any field owners whose name matches the keyword entered. |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User inputs blank in textbox. | System show 10 field owners near based on user’s location. |   **Exceptions :**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | No field owner matches the keyword inputted. | System shows warning message “Không tìm thấy sân phù hợp”. |   **Relationships:** N/A  **Business Rules:**   * Use likely search for search command | | | |

##### <User> Reserve friendly match



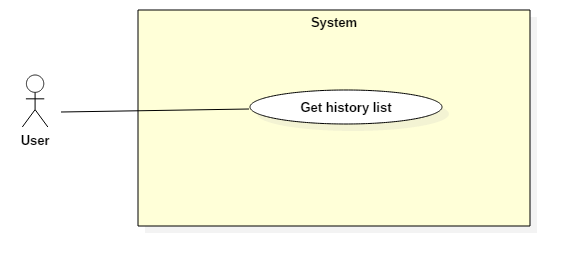
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| **USE CASE – UC005** | | | |
| **Use Case No.** | 005 | **Use Case Version** | 1.0 |
| **Use Case Name** | Reserve friendly match | | |
| **Author** | QuyMM | | |
| **Date** | 24/10/2017 | **Priority** | High |
| **Actor:**   * User   **Summary:**   * This use case allows User to reserve field by chose field and time.   **Goal:**   * User reserves field successful.   **Triggers:**   * User sends command to reserve field.   **Preconditions:**   * Actor has accessed the system under user role.   **Post Conditions:**   * **Success:** User reserves friendly match successful and display field’s information. * **Fail:** Friendly match is not created.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User chooses expected field from list of fields. | System finds active time of field and response to User. | | 2 | User chooses field type and date. | System responses free time of field. | | 3 | User inputs start time, end time and sends reservation field command. | System responses information about match follow user’s choice (field owner, field type, start time, end time, price). | | 3 | User sends command to pay fees.  [Alternative 1] | System shows message: “Đặt sân thành công” and displays reservation request ‘s information.  System will decrease money from user’s wallet automatically, send notification to Field Owner and save information about friendly match.  [Exception 1]  [Exception 2] |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User cancels reservation command. | System comes back to information detail of field owner view |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Another reservation request has same time, that has reserved and paid off in advance. The time frame is already reserved by another user. | System shows message “Sân bạn đặt đã hết khung giờ trống”. | | 2 | User’s balance is not enough to pay for the match. | System shows message “Bạn không đủ tiền để thanh toán”.  System require deposit to checkout. |   **Relationships:** Include Pay fees  **Business Rules:**   * For the field owner has an optimal time frame, user must reserve the entire time frame. (start time and end time of reservation request must equal start time and end time of optimal time frame). * For regular time frames, the minimum duration that a user must reserve is one hour. User is not limited about maximum duration as long as field owner have enough free time. * User can review the field reservation information in the reservation history. * The field reservation request of user is successful if and only if the user has paid. * After field reservation request to be paid, the system will get the field information, time then send notification to field owner and save information about friendly match. | | | |

##### <User> Reserve tour match



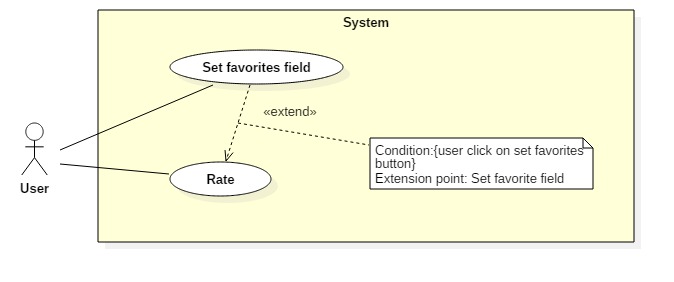
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| **USE CASE – UC006** | | | |
| **Use Case No.** | 006 | **Use Case Version** | 1.0 |
| **Use Case Name** | Reserve tour match | | |
| **Author** | QuyMM | | |
| **Date** | 24/10/2017 | **Priority** | High |
| **Actor:**   * User   **Summary:**   * This use case allows user reserves tour match.   **Goal:**   * User reserves tour match successful.   **Triggers:**   * User sends reservation tour match command.   **Preconditions:**   * Actor has accessed the system under user role.   **Post Conditions:**   * **Success:** User reserves tour match successfully and system show match’s information. * **Fail:** Tour match is not created.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User requires matching request function.  [Alternative 1] | System requires information from User:   * Start time and end time. * Duration. * Field type. * Distance expected.   System will automatically get the current location using GPS fill to address’s information. | | 2 | User inputs information and sends command to find opponent.  [Alternative 2] | System receives information inputted, find suitable opponents and return list suitable opponents.  Display list opponent.  [Exception 1]  [Exception 2] | | 3 | User chooses an opponent in list and sends command to choose suitable field.  [Alternative 3]  [Alternative 5] | System will find and return suitable field list.  Get first field in suitable field list and display. System allow user to change field in suitable field list.  [Exception 3] | | 4 | User sends command to pay fees.  [Alternative 4] | System shows reservation match’s information.  System will decrease money from user’s wallet automatically, send notification to Field Owner, opponent about tour match and save information about tour match.  [Exception 4]  [Exception 5] |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 |  | System notifies about matching request has opponent to user. | | 2 | User views notifies | System displays list suitable opponents. | | 3 | User chooses an opponent in list and sends command to choose suitable field.  [Alternative 3]  [Alternative 5] | System will find and return suitable field list.  Get first field in suitable field list and display. System allow user to change field in suitable field list.  [Exception 3] | | 4 | User sends command to pay fees.  [Alternative 4] | System shows reservation match’s information.  System will decrease money from user’s wallet automatically, send notification to Field Owner, opponent about tour match and save information about tour match.  [Exception 4]  [Exception 5] |   **Alternative Scenario 2:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User chose other position by input address to “address” text input. | System call google map API to get address same with input text of user.  [Exception 1] |   **Alternative Scenario 3:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 |  | If duration of request is less than end time – start time of matching request.  System will require user input start time and end time equal expected duration. | | 2 | User input start time | System will response end time automatically with end time – start time equal duration of matching request. | | 3 | User sends choose suitable field command. | System will find and return list suitable field.  Get first field in list suitable field and display.  System will continue processing like step 4 of main scenario.  [Exception 3] |   **Alternative Scenario 4:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User chooses another field in suitable field list. | System will display information of the selected field.  System will continue processing like step 4 of main scenario. |   **Alternative Scenario 5:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User dislikes all suggested opponent from system and sends command to comes back. | System will come back to main view.  If user created matching request, user’s matching request is saved and system will continue find more suitable opponents. |   **Exception :**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | User input blank and wrong address. | System shows warning message “Không tìm thấy địa chỉ phù hợp”. | | 2 | System does not find suitable opponents | System shows warning message: “Không tìm thấy đối thủ phù hợp”. | | 3 | System does not find suitable field. | System shows warning message: “Không tìm thấy sân phù hợp.”  System will require extend searching radius. | | 4 | User’s balance is not enough to pay for the match. | System shows message “Bạn không đủ tiền để thanh toán”.  System shows “Nạp tiền” button to Deposit. | | 5 | Another reservation request has same time, that has reserved and paid off in advance. The time frame is already reserved by another user. | System shows message “Sân bạn đặt đã hết khung giờ trống”.  System will get another field in list suitable field and display. |   **Relationships:** Include Checkout  **Business Rules:**   * System will find similar matching with the criteria:   + Duration is equal or longer than duration of user inputted  + End time of information inputted must be longer than start time of matching request in database.  + Location of user have matching request in database must be within the searching radius request.  + Have same field type.  + 2 users must have difference ranking score is not exceed 50 points.  + Opponent is not in the user’s blacklist.   * System will suggest suitable field for match with criteria:   + Search for field in the search radius requested by two users, the returned list contain common field of two lists found.  + If in the returned list, there are common favorites field of two user or one of two users, system will only recommend these fields.  + If in the returned list, there is no favorites field of any user, system will return all returned list   * User pays haft reservation field fee; the other half is paid by opponent. * When user reserves tour match successful, system will decrease money from opponent’s wallet and return money that was taken when the opponent created matching request. | | | |

* + - 1. **<User> Get History List**



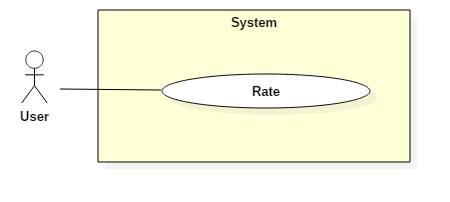
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| **USE CASE – UC007** | | | |
| **Use Case No.** | 007 | **Use Case Version** | 1.0 |
| **Use Case Name** | Get history list | | |
| **Author** | HuanPM | | |
| **Date** | 2/12/2017 | **Priority** | High |
| **Actor:**   * User   **Summary:**   * This use case allows Actor to get Actor’s history list.   **Goal:**   * System gets history list and display it to Actor.   **Triggers:**   * Actor sends get history command.   **Preconditions:**   * Actor has accessed the system under User role.   **Post Conditions:**   * **Success:** History list is displayed. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends get history list command. | System gets history list.  [Exception 1]  System displays history list to Actor. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Actor’s history list is empty | System shows error message “Không có danh sách lịch sử”. |   **Relationships:**  N/A  **Business Rules:**   * History consists of reserved matches and pending matching requests. | | | |

* + - 1. **<User> Set favorite field**



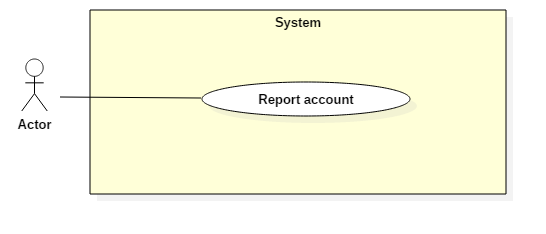
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| **USE CASE – UC008** | | | |
| **Use Case No.** | 008 | **Use Case Version** | 1.0 |
| **Use Case Name** | Set favorites field | | |
| **Author** | HuanPM | | |
| **Date** | 2/12/2017 | **Priority** | Normal |
| **Actor:**   * User   **Summary:**   * This use case allows Actor to add a field to favorite field list.   **Goal:**   * System update favorite field list.   **Triggers:**   * Actor sends add to favorite command.   **Preconditions:**   * Actor has accessed the system under User role.   **Post Conditions:**   * **Success:** Favorite field is saved into user’s profile. * **Fail:** Favorite field is not saved into user’s profile.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends add to favorite command. | System adds field to Actor’s favorite field list.  System displays message “Bạn đã thêm sân vào danh sách yêu thích”. |   **Relationships:**  Extends use case Rate.  **Business Rules:**   * The field in favorite list has higher priority (than others field) when Actor search field. | | | |

* + - 1. **<User> Rate field/opponent**



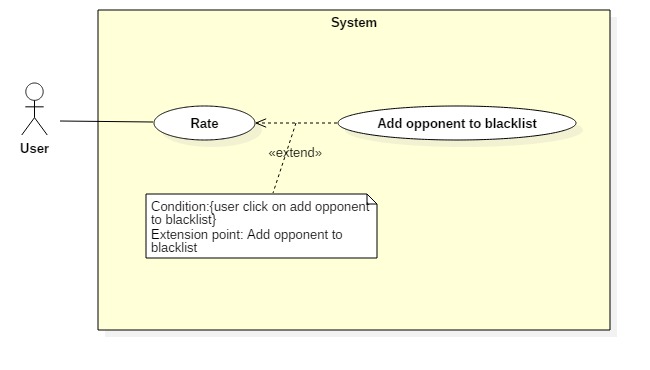
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| --- | --- | --- | --- |
| **USE CASE – UC009** | | | |
| **Use Case No.** | 009 | **Use Case Version** | 1.0 |
| **Use Case Name** | Rate field/opponent | | |
| **Author** | QuyMM | | |
| **Date** | 01/11/2017 | **Priority** | Normal |
| **Actor:**   * User   **Summary:**   * This use case allows User to rate field or opponent.   **Goal:**   * User rate field or opponent successful.   **Triggers:**   * User sends rating command.   **Preconditions:**   * Actor has accessed the system under User role.   **Post Conditions:**   * **Success:** Rating result of user is saved and calculated. * **Fail:** System will rollback and user can rate again.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User sends rate opponent command.  [Alternative 1] | System will require user to rate with criteria:   * Result of match * Level of opponent with 3 level:   + Yếu (Amateur)  + Bình thường (Regular)  + Hay (Professional)   * Goals difference | | 2 | User inputs all and sends submit rating opponent command. | System receives information and show message: “Bạn đã đánh giá thành công”.  [Exception 1] |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User sends rate field command. | System will require user to rate with criteria.   * 5 stars (user can choose haft a star) * Comment | | 2 | User inputs all and sends submit rating field command. | System receives information and show message: “Bạn đã đánh giá thành công”.  [Exception 1] |   **Exceptions :**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | User does not input to all field. | System shows warning message “Vui lòng điền đầy đủ thông tin”. |   **Relationships:** N/A  **Business Rules:**   * User will be rewarded bonus points when rating to encourage user to perform the rating. * Rating field is relative so all rating field will be accepted. * Rating opponent affects to evaluate user’s level, supports for finding suitable opponent in the future so rating opponent results must be checked for correctness before evaluate. | | | |

* + - 1. **<User, Field Owner> Report account**



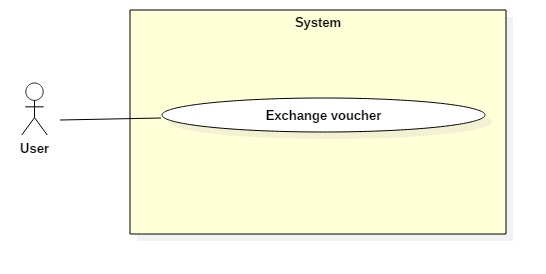
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| **USE CASE – UC010** | | | |
| **Use Case No.** | 010 | **Use Case Version** | 1.0 |
| **Use Case Name** | Report account | | |
| **Author** | QuyMM | | |
| **Date** | 01/11/2017 | **Priority** | Normal |
| **Actor:**   * User, Field Owner   **Summary:**   * This use case allows User to report account.   **Goal:**   * Actor sends report account successful.   **Triggers:**   * User sends report command.   **Preconditions:**   * Actor has accessed the system under User or Field Owner role.   **Post Conditions:**   * **Success:** Report is saved and calculated. * **Fail:** System will rollback and user can report again.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User sends report command. | System will display report view with requires:   * Accused * Reason * Match | | 2 | User inputs all and sends submit report command. | System receives information and show message: “Bạn đã tố cáo thành công”. |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User sends rate field command. | System will require user to rate with criteria.   * 5 stars (user can choose haft a star) * Comment | | 2 | User inputs all and sends submit rating field command. | System receives information and show message: “Bạn đã đánh giá thành công”. |   **Exceptions :**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | User does not input to all field. | System shows warning message “Vui lòng điền đầy đủ thông tin”. |   **Relationships:** N/A  **Business Rules:**   * User will be rewarded bonus points when rating to encourage user to perform the rating. * Rating field is relative so all rating field will be accepted. * Rating opponent affects to evaluate user’s level, supports for finding suitable opponent in the future so rating opponent results must be checked for correctness before evaluate. | | | |

* + - 1. **<User> Add opponent to blacklist**



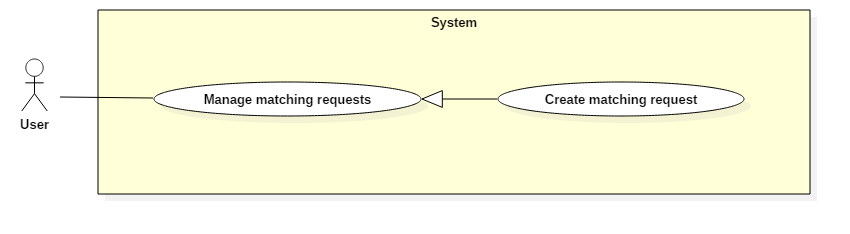
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| **USE CASE – UC011** | | | |
| **Use Case No.** | 011 | **Use Case Version** | 1.0 |
| **Use Case Name** | Add opponent to blacklist | | |
| **Author** | HuanPM | | |
| **Date** | 2/12/2017 | **Priority** | Normal |
| **Actor:**   * User   **Summary:**   * This use case allows Actor to add another Actor to blacklist.   **Goal:**   * System update Actor’s blacklist.   **Triggers:**   * Actor sends rating command.   **Preconditions:**   * Actor has accessed the system under User role.   **Post Conditions:**   * **Success:** The rating is created. Actor’s blacklist is updated. * **Fail:** Actor’s blacklist is not updated.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends add User to blacklist command. | System saves User’s information to Actor’s blacklist.  System displays message “Bạn đã thêm đối thủ vào danh sách chặn” |   **Relationships:**  Extends use case Rate.  **Business Rules:**   * User that is in Actor’s blacklist cannot find Actor when using find matching request function. | | | |

##### <User> Exchange voucher



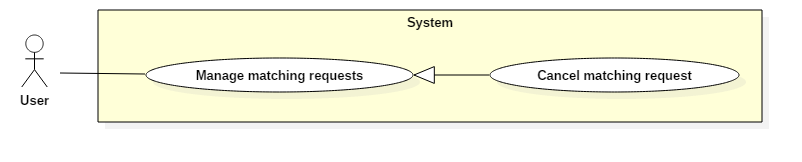
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| **USE CASE – UC012** | | | |
| **Use Case No.** | 012 | **Use Case Version** | 1.0 |
| **Use Case Name** | Exchange voucher | | |
| **Author** | HuanPM | | |
| **Date** | 2/12/2017 | **Priority** | Normal |
| **Actor:**   * User   **Summary:**   * This use case allows Actor to exchange bonus point to voucher code.   **Goal:**   * Update voucher bonus point after exchange, save voucher code in database.   **Triggers:**   * Actor sends exchange voucher command.   **Preconditions:**   * Actor has accessed the system under User role.   **Post Conditions:**   * **Success:** System updated Actor’s balance and bonus point. * **Fail:** User’s bonus point is not changed and user is not received voucher.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends get voucher list command | System displays voucher list. | | 2 | Actor sends exchange voucher command.  [Alternative 1] | System checks if Actor’s bonus point is enough to exchange voucher.  [Exception 1]  System updates Actor’s bonus point and balance.  System display successful message “Bạn đã đổi thưởng thành công”.  System creates voucher code and display voucher code. |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor send cancel command. | System back to previous window and allow Actor choose other voucher. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Actor’s bonus point is not enough to exchange the voucher. | System shows error message “Không đủ điểm để đối thưởng”. |   **Relationships:** N/A  **Business Rules:**   * Voucher code is used to discount field’s price. | | | |

##### <User> Create matching request



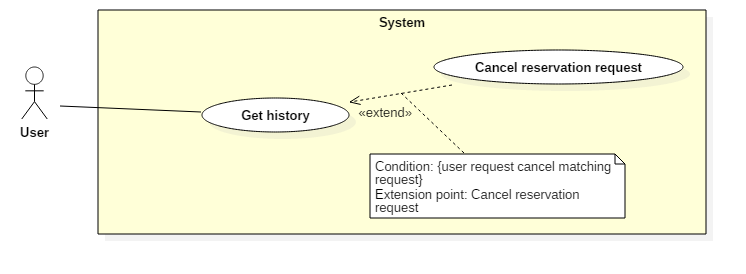
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| **USE CASE – UC013** | | | |
| **Use Case No.** | 013 | **Use Case Version** | 1.0 |
| **Use Case Name** | Create matching request | | |
| **Author** | HuanPM | | |
| **Date** | 28/10/2017 | **Priority** | High |
| **Actor:**   * User   **Summary:**   * This use case allows User to create a matching request.   **Goal:**   * User creates a matching request successful.   **Triggers:**   * User sends command to create matching request.   **Preconditions:**   * Actor has accessed the system under user role.   **Post Conditions:**   * **Success:** User creates matching request successful and system saves information about matching request. * **Fail:** Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User requires the matching request function. | System requires information from User:   * Start time and end time. * Duration. * Field type. * Distance expected.   System will automatically get the current location using GPS fill to address information. | | 2 | User inputs information and sends new creation matching request command.  [Alternative 1] | System takes information inputted and saves information of matching request. System will decrease money from user’s wallet automatically.  [Exception 1]  [Exception 2] |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User chooses other position by input address to “address” text input. | System call google map API to get address same with input text of user. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | User’s balance is not enough to pay for the match. | System shows warning message “Không đủ tiền để tạo yêu cầu mới”.  System shows link to Deposit. | | 2 | User input blank in search address field or wrong address. | System shows warning message “Không tìm thấy địa chỉ phù hợp”. |   **Relationships:** N/A  **Business Rules:**   * Start time and end time when user input to create matching request is time frame that user is free. So, it may be larger than or equal to expected duration of user. * Duration of matching request must be longer than one hour. * The expected distance is radius for the system to find the opponent, it is also used as the search radius of the field. * System will take up some money from user’s wallet, this amount is half the maximum of reservation field fee. This amount will be refunded if the actual reservation field fee is lower. * After create new request, system will save information matching request and find suitable opponent. If the suitable opponent is found, the system will notify the user. | | | |

##### <User> Cancel matching request



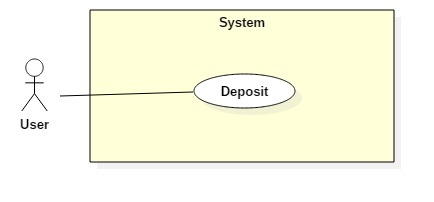
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| **USE CASE – UC014** | | | |
| **Use Case No.** | 014 | **Use Case Version** | 1.0 |
| **Use Case Name** | Cancel matching request | | |
| **Author** | HuanPM | | |
| **Date** | 24/10/2017 | **Priority** | Normal |
| **Actor:**   * User   **Summary:**   * This use case allows User cancels previously created matching request.   **Goal:**   * User cancels matching request successful.   **Triggers:**   * User sends command to cancel matching request.   **Preconditions:**   * Actor has accessed the system under user role.   **Post Conditions:**   * **Success:** Matching request is canceled and display in user’s history. * **Fail:** Show matching errors.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User sends command to view matching request history | System finds matching request and display user’s matching request. | | 2 | User chooses a matching request | System displays matching request’s information. | | 3 | User sends canceling matching request command. | System refunds money that was taken when user created matching request.  System show message: “Đã hủy yêu cầu thành công”.  [Exception 1] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Matching request was accepted by another user. | System shows message “Yêu cầu tìm kiếm đối thủ của bạn đã được tạo thành trận đấu. Bạn không thể hủy”. |   **Relationships:** N/A  **Business Rules:**   * When user cancels matching request, this matching request will not be deleted. It will change to disabling status. If user cancels a lot of matching request, user will be reported. * User can view creation matching request’s history. | | | |

##### <User> Cancel reservation request



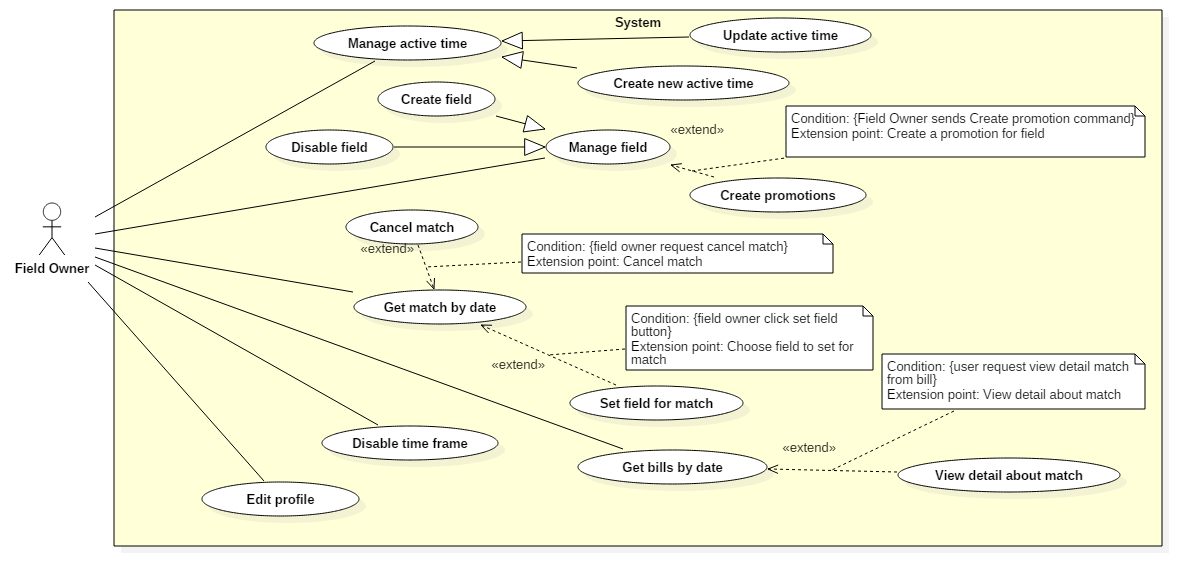
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| **USE CASE – UC015** | | | |
| **Use Case No.** | 015 | **Use Case Version** | 1.0 |
| **Use Case Name** | Cancel reservation request | | |
| **Author** | QuyMM | | |
| **Date** | 24/10/2017 | **Priority** | Normal |
| **Actor:**   * User   **Summary:**   * This use case allows User cancels reservation request.   **Goal:**   * User cancels matching request successful.   **Triggers:**   * User sends command to cancel reservation request.   **Preconditions:**   * Actor has accessed the system under user role.   **Post Conditions:**   * **Success:** Reservation request is canceled and user received refunds. * **Fail:** Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User sends command to view reservation request history | System finds reservation request and display user’s reservation request. | | 2 | User chooses a reservation request | System displays reservation request’s information. | | 3 | User sends canceling matching request command. | System shows warning message about cancellation fees.  [Exception 1] | | 4 | User agrees with cancellation fees.  [Alternative 1] | System refunds money that was taken when user reserved field.  System shows message: “Đã hủy trận đấu thành công”. |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User disagrees with cancellation fees. | System comes back to show match’s information and the match will still continue. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Match is about to begin. User can not cancel. | System shows message “Trận đấu sắp bắt đầu. Bạn không thể hủy lúc này”. |   **Relationships:** N/A  **Business Rules:**   * Depending on when user cancels match, cancellation fees will be difference.   + Before kickoff time greater than or equal 1 day, cancellation fees = 5% reservation fees.  + Before kickoff time greater than or equal 6 hours, cancellation fees = 10% reservation fees.  + Before kickoff time greater than or equal 3 hours, cancellation fees = 20% reservation fees.  + Before kickoff time less than 3 hours, user can not cancel reservation request. | | | |

##### <User> Deposit

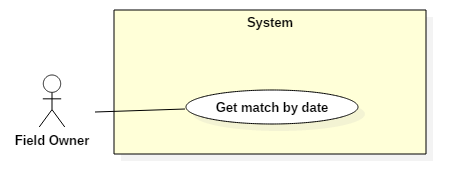


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| **USE CASE – UC016** | | | |
| **Use Case No.** | 016 | **Use Case Version** | 1.0 |
| **Use Case Name** | Deposit | | |
| **Author** | HuanPM | | |
| **Date** |  | **Priority** | High |
| **Actor:**   * User, Field owner   **Summary:**   * This use case allows Actor deposit money to wallet in system.   **Goal:**   * Actor can increase balance of user’s wallet in system.   **Triggers:**   * Actor sends deposit command.   **Preconditions:**   * Actor has accessed the system under User or Field owner role.   **Post Conditions:**   * **Success:** Actor’s balance is increased. * **Fail:** Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends command to requires deposit function. | System will show current balance and available balance and requires actor input the amount that the actor needs to deposit. | | 2 | Actor inputs the amount and sends command to deposit. | System will show many options about payment gateways for actor to deposit.  [Exception 1] | | 3 | Actor chooses a payment gateway to deposit | System will call payment gateway system.  [Exception 2] | | 4 | Actor performs the payment  [Alternative 1] | System will show messages “Bạn đã nạp tiền thành công” and show account’s balance.  [Exception 3] |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends command to decline. | System displays payment gateways for user chooses. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | The amount requested by user is too small or too large. | System shows message “Số tiền mà bạn muốn nạp không phù hợp”. | | 2 | System can not connect to payment gateway system. | System shows message: “Xảy ra lỗi khi kết nối thanh toán, bạn vui lòng thử lại sau”. | | 3 | Payment gateway system have exception when withdraw money to transfer to FFRS System | System shows message: “Có lỗi khi thực hiện thanh toán, bạn vui lòng thử lại sau”. |   **Relationships:** N/A  **Business Rules:**   * The currency of the system is Vietnam dong. * If the user’s payment gateways use a difference currency or not supports for Vietnam dong currency, the system will support convert automatically. * The system is not responsible when the users have problems with their payment gateway. * The amount that user requires is greater than 20 thousand and less than 5 million Vietnam dong. | | | |

#### Field Owner Use Case

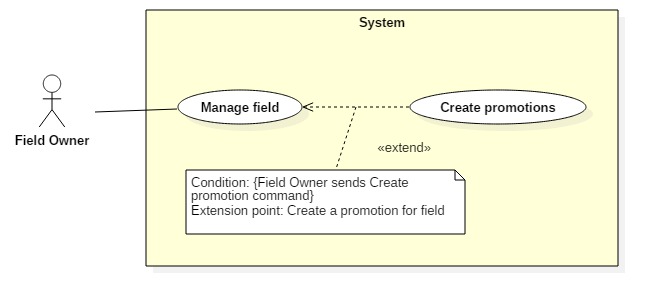


##### <Field Owner> Get match by date



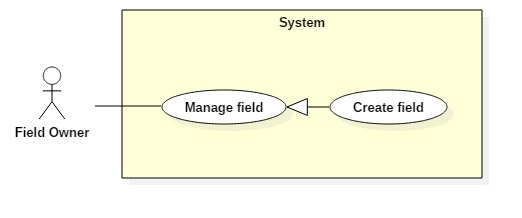
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| **USE CASE – UC0017** | | | |
| **Use Case No.** | 017 | **Use Case Version** | 1.0 |
| **Use Case Name** | Get match by date | | |
| **Author** | QuyMM | | |
| **Date** |  | **Priority** | Normal |
| **Actor:**   * Field Owner   **Summary:**   * This use case allows Field owner get match by date.   **Goal:**   * Field Owner get matches by date successful.   **Triggers:**   * Field owner sends get match by date command.   **Preconditions:**   * Actor has accessed the system under field owner role.   **Post Conditions:**   * **Success:** Field owner viewed matches by date. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Field owner sends a request to view reserved matches. | System returns reserved matches today and display.  [Exception 1] | | 2 | Field owner chooses a date in the future.  [Alternative 1] | System will return reserved matches in the day selected and display.  [Exception 1] |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Cause | System Response | | 1 | Field owner sends a request to get matches in the next day | System will return reserved matches in the next day and display. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | There are no matches today | System shows warning message “Không có trận đấu nào được đặt hôm nay”. |   **Relationships:** N/A  **Business Rules:**   * Field owner can only view matches in the current and in the next 7 days because the user only reserved field within 7 days. * The system will use difference color when display matches to help field owner distinguish matches are reserved by field owner and matches are reserved by user. * The field owner can view matches of the day on the field if the matches was set field. | | | |

##### <Field Owner> Create promotion



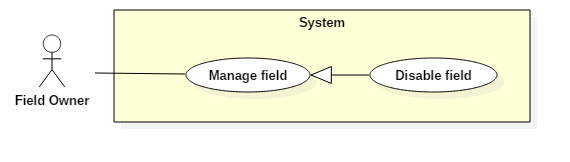
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| **USE CASE – UC018** | | | |
| **Use Case No.** | 018 | **Use Case Version** | 1.0 |
| **Use Case Name** | Create promotion | | |
| **Author** | ThanhTH | | |
| **Date** |  | **Priority** | Normal |
| **Actor:**   * Field Owner   **Summary:**   * This use case allows Field owner to create promotion.   **Goal:**   * Field owner creates promotion for field.   **Triggers:**   * Field owner sends create matching request command.   **Preconditions:**   * Actor has accessed the system under field owner role.   **Post Conditions:**   * **Success:** Field owner creates promotion and system displays promotion’s information. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends command to create field. | System requires information from Actor:   * Start time * End time * Start date * End date * Promotion content * Percent discount * Field type | | 2 | Actor sends create promotion command.  [Alternative 1] | System will create a new promotion with inputted information and save to database.  [Exception 1] |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Cause | System Response | | 1 | Actor send cancel command. | System comes back to previous view.  Promotion will not be created. |   **Exceptions 1:**   |  |  |  | | --- | --- | --- | | Step | Cause | System Response | | 1 | Actor input blank in required field. | System shows warning message “Vui lòng nhập đầy đủ thông tin”. |   **Relationships:** N/A  **Business Rules:**   * At the time of promotion, system will calculate field fee minus promotion fee. * Percent discount is promotion on total reservation field fee. * Promotion contents are services promotion like: free iced tea, no parking fee… | | | |

##### <Field Owner> Create field



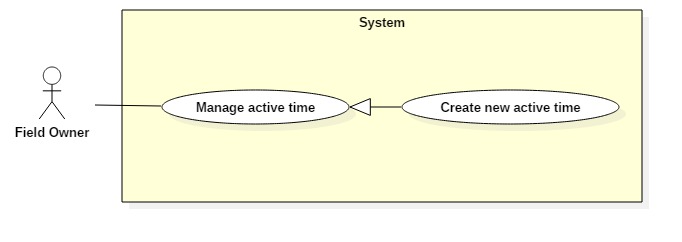
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| **USE CASE – UC019** | | | |
| **Use Case No.** | 019 | **Use Case Version** | 1.0 |
| **Use Case Name** | Create field | | |
| **Author** | ThanhTH | | |
| **Date** |  | **Priority** | High |
| **Actor:**   * Field Owner   **Summary:**   * This use case allows Field owner to create field.   **Goal:**   * Field Owner can create a new field.   **Triggers:**   * Field owner sends command to create field.   **Preconditions:**   * Actor has accessed the system under field owner role.   **Post Conditions:**   * **Success:** Field owner creates field successfully. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Field owner sends a request to create field. | System requires information:   * Field name. * Field Type. | | 2 | Field owner sends create field command. | System will create a new field.  [Exception 1]  [Exception 2] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Field owner inputs blank in field name. | System shows warning message “Vui lòng nhập tên sân”. | | 2 | Field owner inputs field name already exists. | System shows warning message “Tên sân này đã tồn tại”. |   **Relationships:** N/A  **Business Rules:**   * Field owner must be responsible for creating new field because the field can be reserved as soon as the new field is created finished. | | | |

##### <Field Owner> Disable field



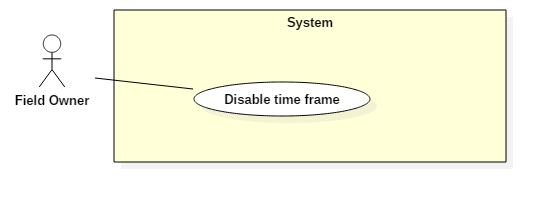
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| **USE CASE – UC020** | | | |
| **Use Case No.** | 020 | **Use Case Version** | 1.0 |
| **Use Case Name** | Disable field | | |
| **Author** | ThanhTH | | |
| **Date** |  | **Priority** | Normal |
| **Actor:**   * Field Owner   **Summary:**   * This use case allows Actor to disable field over a period of time.   **Goal:**   * Field owner disables field successful.   **Triggers:**   * Field owner sends disable field command.   **Preconditions:**   * Actor has accessed the system under Field Owner role.   **Post Conditions:**   * **Success:** Field is disabled over a period of time. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Field owner sends command request information about disable field. | System will check latest match and show message for field owner. System requires field owner input start time and end time of disabled period. | | 2 | Field owner inputs start time and end time of disable period and send command to disable field.  [Alternative 1] | System will update information about status of field and display for field owner.  [Exception 1] |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Field owner does not input end time of disable period. | System will update information about status of field and understand that the field will be remove from start time of disable period. |     **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Field owner inputs start time of disable period before day that have last reservation request. | System show error message: “Bạn không thể vô hiệu sân vào ngày x vì đã có yêu cầu đặt sân sau nó.” |   **Relationships:** N/A  **Business Rules:**   * If a field is disable, the user can not reserve the field or do any action. * Field owner can cancel matches to disable field at the expected time. | | | |

##### <Field Owner> Create active time



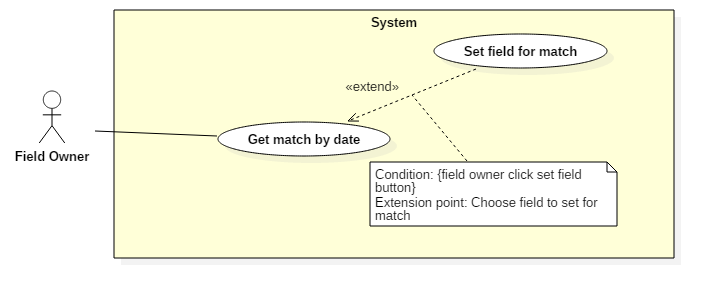
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| **USE CASE – UC021** | | | |
| **Use Case No.** | 021 | **Use Case Version** | 1.0 |
| **Use Case Name** | Create active time | | |
| **Author** | QuyMM | | |
| **Date** |  | **Priority** | High |
| **Actor:**   * Field Owner   **Summary:**   * This use case allows Field owner to create active time.   **Goal:**   * Field owner creates active time for the field successful.   **Triggers:**   * Field owner sends create active time command.   **Preconditions:**   * Actor has accessed the system under field owner role.   **Post Conditions:**   * **Success:** Actor create field successfully * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Field owner requests to create active time | System requires information from Actor:   * Opening time * Close time * Field Type * Day in week * Price of field per hour | | 2 | Field owner inputs and sends command to create active time.  [Alternative 1] | System will create active time and save information.  [Exception 1] |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Field owner requires optimal time in the rush hour. | System will require field owner input expected number of optimal time in rush hour. | | 2 | Field owner inputs number of optimal time. | System will display expected optimal time of field owner. | | 3 | Field owner sends command to create active time | System will save information and display active time of field. |     **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Field owner input blank in required field | System show warning message: “Vui lòng nhập đủ dữ liệu”. |   **Relationships:** N/A  **Business Rules:**   * The active time of field owner is set on each day in week. If field owner does not update, the active time will be continuing use for next 7 days. * If field owner set the active time of field, setup again will be understood as an update. The updated information will not be effective immediately if someone already reserve field in next 7 days. Effective date will be after the last day have match one day. * Optimal time frame is the time frame can not be broken down. User who reserve field must set entire this time frame. The function is used in rush hours when the field owner has too many matches. * Field owner can create active time for multiple days of the week by selecting multiple days of the week when creating active time. | | | |

##### <Field Owner> Disable time frame



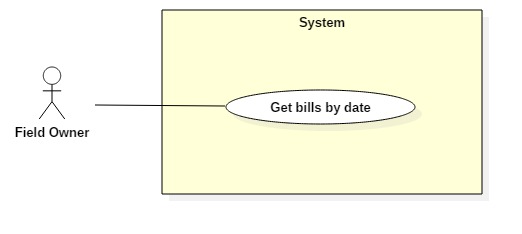
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| **USE CASE – UC022** | | | |
| **Use Case No.** | 022 | **Use Case Version** | 1.0 |
| **Use Case Name** | Disable time frame | | |
| **Author** | ThanhTH | | |
| **Date** | 24/10/2017 | **Priority** | High |
| **Actor:**   * Field Owner   **Summary:**   * This use case allows Field owner to disable time frame.   **Goal:**   * Field owner disables time frame successful.   **Triggers:**   * Actor sends disable time frame command.   **Preconditions:**   * Actor has accessed the system under field owner role.   **Post Conditions:**   * **Success:** Time frame is disabled. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Field owner sends command to get free time of field. | System will return free time of field by date and display. | | 2 | Field owner inputs start time, end time and send disable time frame command. | System shows free time after disable time frame and save information about disabled time frame.  [Exception 1] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | Step | Cause | System Response | | 1 | Time frame that are required had reserved a match. | System shows warning message “Khung giờ này đã có trận đấu”. |   **Relationships:** N/A  **Business Rules:**   * This function supports field owner when have user reserves field manually without account in FFR System. * Disabling time frame must also meet the conditions of the reserve field normal. Ex: When field owner disables optimal time frame, field must disable entire time frame. * Field owner can view disabled time frame by getting matches by date. | | | |

##### <Field Owner> Set field for match



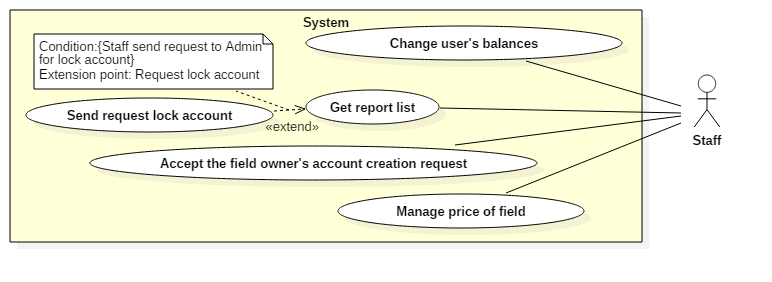
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| **USE CASE – UC023** | | | |
| **Use Case No.** | 023 | **Use Case Version** | 1.0 |
| **Use Case Name** | Set field for match | | |
| **Author** | QuyMM | | |
| **Date** | 01/11/2017 | **Priority** | High |
| **Actor:**   * Field Owner   **Summary:**   * This use case allows Actor set field for match.   **Goal:**   * Field owner set field for match successful.   **Triggers:**   * Field owner sends set command.   **Preconditions:**   * Actor has accessed the system under Field Owner role.   **Post Conditions:**   * **Success:** Match is set field by field owner. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Field owner sends a request to view reserved matches. | System will get reserved matches and display match list.  [Exception 1] | | 2 | Field owner sends command to get free field at the time that match kickoffs. | System will get free fields at the time that match kickoffs and display for field owner. | | 3 | Field owner chooses a field and send commands to set field for match  [Alternative 1] | System will update field for match, save information and display match list. |   **Alternative Scenario 1:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Field owner cancels process. | System will display match list and not save information about field for match. |   **Relationships:** N/A  **Business Rules:**   * When user reserves field, the match is created but not yet assigns field for match. User will choose field for the user at the start of the match. | | | |

##### <Field Owner> Get bills by date

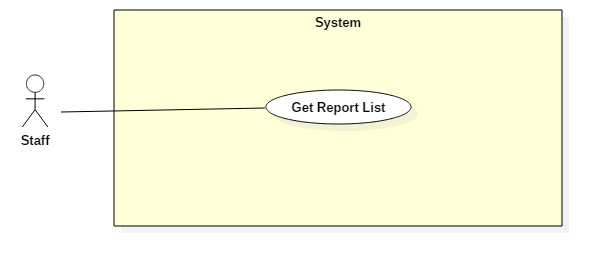


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| **USE CASE – UC024** | | | |
| **Use Case No.** | 024 | **Use Case Version** | 1.0 |
| **Use Case Name** | Get bills by date | | |
| **Author** | ThanhTH | | |
| **Date** | 01/11/2017 | **Priority** | High |
| **Actor:**   * Field Owner   **Summary:**   * This use case allows Field owner to get bills by input date.   **Goal:**   * Field owner gets bills by date successful.   **Triggers:**   * Actor sends get bills by date command.   **Preconditions:**   * Actor has accessed the system under field owner role.   **Post Conditions:**   * **Success:** System shows list of bills based on inputted date successfully. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Field owner inputs date and sends command to get bills by date | System will get bills by date and field owner to return bill list and display for field owner.  [Exception 1] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | There are no bills on date. | System show empty screen. |   **Relationships:** N/A  **Business Rules:**   * Bill is created when user pays reservation fee. * For friendly match, only one bill is created. For tour match, there are two bills is created for user and opponent. * Field owner can view detail match of bill with detailed view of the match function. | | | |

#### Staff Use Case

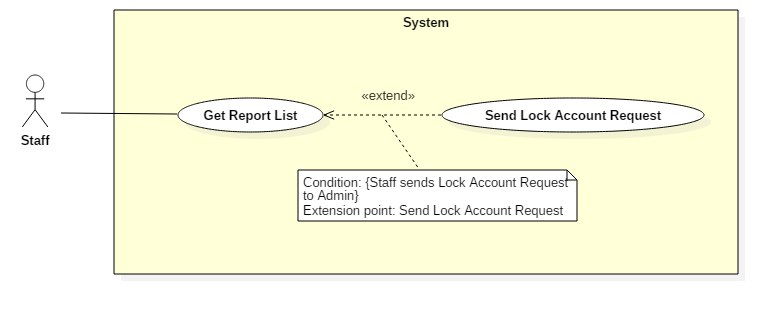


* + - 1. **<Staff> Get report list**



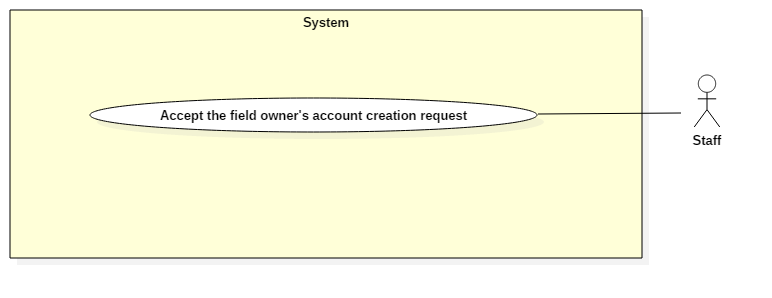
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| **USE CASE – UC025** | | | |
| **Use Case No.** | 025 | **Use Case Version** | 1.0 |
| **Use Case Name** | Get Report List | | |
| **Author** | HuanPM | | |
| **Date** | 10/11/2017 | **Priority** | Normal |
| **Actor:**   * Staff   **Summary:**   * This use case allows Actor to get report list.   **Goal:**   * System gets report list and display it to Actor.   **Triggers:**   * Actor sends get report list command.   **Preconditions:**   * Actor has accessed the system under Staff role.   **Post Conditions:**   * **Success:** Report list is displayed. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends get report list command. | [Exception 1]  System displays report list to Actor. |   **Exceptions 1:**   |  |  |  | | --- | --- | --- | | Step | Cause | System Response | | 1 | Report list is empty | System shows error message “Không có tố cáo”. |   **Relationships:** N/A  **Business Rules:**   * Report consists of field owner report and user report. | | | |

* + - 1. **<Staff> Send lock account request**



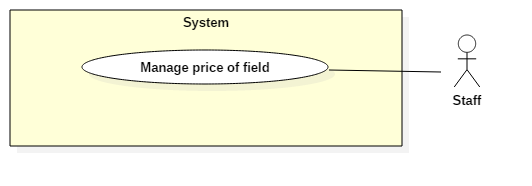
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| **USE CASE – UC026** | | | |
| **Use Case No.** | 26 | **Use Case Version** | 1.0 |
| **Use Case Name** | Send lock account request | | |
| **Author** | HuanPM | | |
| **Date** | 10/11/2017 | **Priority** | Normal |
| **Actor:**   * Staff   **Summary:**   * This use case allows Actor to send lock account request.   **Goal:**   * System saves lock account request and notify to Admin.   **Triggers:**   * Actor sends lock account request command.   **Preconditions:**   * Actor has accessed the system under Staff role.   **Post Conditions:**   * **Success:** Lock account request is saved. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends lock account request command. | System checks account information.  [Exception 1]  System saves request and notify to Admin.  System displays message “Đã gửi yêu cầu thành công”. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Account does not exist. | System shows error message “Tài khoản không tồn tại”. |   **Relationships:** Extends use case Get report list  **Business Rules:**   * Staff will directly view report of the user and make a lock account decision based on the level of violation of the user. * This request will be sent to admin. | | | |

* + - 1. **<Staff> Accept the field owner’s account creation request**



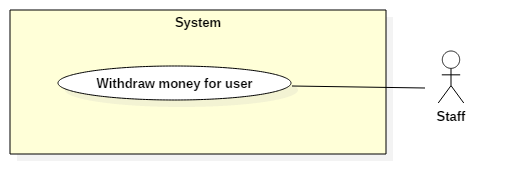
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| **USE CASE – UC027** | | | |
| **Use Case No.** | 027 | **Use Case Version** | 1.0 |
| **Use Case Name** | Accept field owner’s account creation request | | |
| **Author** | HuanPM | | |
| **Date** | 10/11/2017 | **Priority** | Normal |
| **Actor:**   * Staff   **Summary:**   * This use case allows Staff accept the field owner’s account creation request.   **Goal:**   * Staff accepts field owner’s account creation request successful.   **Triggers:**   * Staff sends active field owner’s account request command.   **Preconditions:**   * Actor has accessed the system under Staff role.   **Post Conditions:**   * **Success:** Field owner’s account is activated. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff send active account command. | System shows message: “Tài khoản của chủ sân đã được kích hoạt” |   **Alternative Scenario: N/A**  **Exceptions: N/A**  **Relationships:** Extends use case Get report list  **Business Rules:**   * Staff will reality check field owner status to determine field owner’s account activation. * The field owner’s account will be effective as soon as the staff accepts. | | | |

* + - 1. **<Staff> Manage price of field**



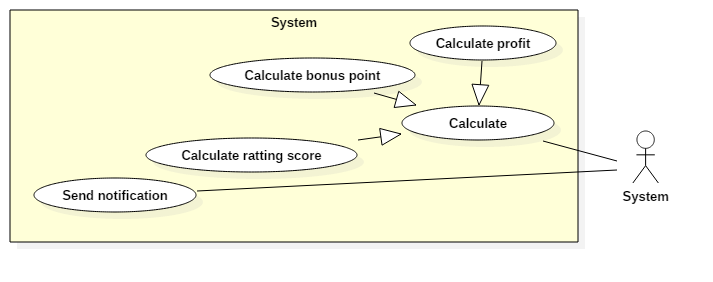
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| **USE CASE – UC028** | | | |
| **Use Case No.** | 028 | **Use Case Version** | 1.0 |
| **Use Case Name** | Manage price of field | | |
| **Author** | HuanPM | | |
| **Date** | 10/11/2017 | **Priority** | Normal |
| **Actor:**   * Staff   **Summary:**   * This use case allows Staff set standard price for all field owner.   **Goal:**   * Standard price is set by staff successful.   **Triggers:**   * Staff sends set standard price command.   **Preconditions:**   * Actor has accessed the system under Staff role.   **Post Conditions:**   * **Success:** Standard price is applied for system. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff calls function set standard price for field | System requires information:   * Rush hour * Maximum price * Minimum price | | 2 | Staff inputs information and send set standard price command. | System will receive information and display information.  Standard price information is saved.  [Exception 1]  [Exception 2] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Staff inputs wrong data type. | System shows error message “Kiểu dữ liệu bạn nhập không đúng”. | | 2 | Staff inputs standard price is not suitable. | System shows error message: “Mức giá mà bạn nhập không phù hợp: |   **Relationships:** N/A  **Business Rules:**   * Standard price includes maximum price and minimum price in rush hour; maximum price and minimum price in normal hour. * Rush hour is set to default is 17:00. * This function supports staff to avoid devaluation on the system. * The price that the staff sets must match the actual market situation. * This function is limited in number of executions. Not all staffs can perform this function. | | | |

* + - 1. **<Staff> Change user’s balances**

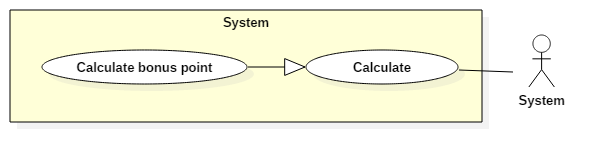


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| **USE CASE – UC029** | | | |
| **Use Case No.** | 029 | **Use Case Version** | 1.0 |
| **Use Case Name** | Change user’s balances | | |
| **Author** | HieuPT | | |
| **Date** | 20/11/2017 | **Priority** | Normal |
| **Actor:**   * Staff   **Summary:**   * This use case allows Staff decreases or increases money from user’s wallet.   **Goal:**   * Staff deposits/ withdraws from user’s wallet successful.   **Triggers:**   * Staff sends deposit/ withdraw money from user’s wallet command.   **Preconditions:**   * Actor has accessed the system under Staff role.   **Post Conditions:**   * **Success:** Balances of user’s wallet is changed and system display current balances. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff sends deposit/ withdraw money for user command. | System requires amount of money to deposit or withdraw. | | 2 | Staff inputs amount of money and submit change money command. | System displays current balances of user after change.  Balances of user’s wallet is changed.  [Exception 1] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | Step | Cause | System Response | | 1 | User’s balance is not enough to withdraw | System show error message: “Số dư không đủ để thực hiện rút”. |   **Relationships:** N/A  **Business Rules:**   * This function supports staff when staff conducts transactions with users at the company office. * Money in system can be converted into cash and vice versa. * This process must be performed in the presence of the user. | | | |

#### System Use Case

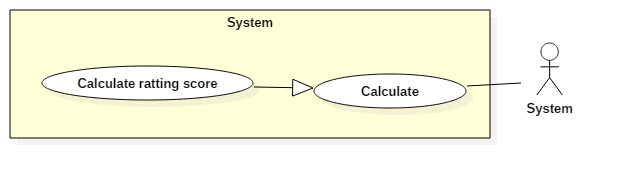


* + - 1. **<System> Calculate bonus point**



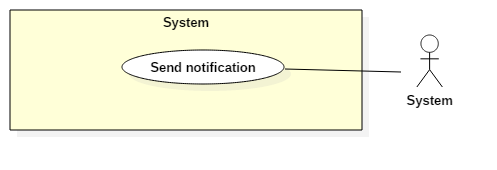
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| **USE CASE – UC030** | | | |
| **Use Case No.** | 030 | **Use Case Version** | 1.0 |
| **Use Case Name** | Calculate bonus point | | |
| **Author** | QuyMM | | |
| **Date** | 10/11/2017 | **Priority** | Normal |
| **Actor:**   * System   **Summary:**   * System runs under this function to calculate bonus points for user.   **Goal:**   * Bonus point of user is calculated.   **Triggers:**   * Rating is send to system enough for calculating.   **Preconditions:**   * System operates stably and receives full rating from user.   **Post Conditions:**   * **Success:** Bonus point of user is updated. * **Fail:** Bonus point of user isn’t updated.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | System receives full rating from user about tour match. | System will calculate and update correctly bonus points of user. |   **Alternative Scenario:** N/A  **Exceptions:** N/A  **Relationships:** N/A  **Business Rules:**   * If user rates for field after finished match, user will be received 2 bonus points. * If user rates for opponent after finished match, system will check accuracy of rating from user. If user’s rating and opponent’s rating reflect exactly result of a tour match, user and opponent will receive 10 bonus points. * If user and opponent record exactly goals difference, user and opponent will receive 3 bonus points. | | | |

* + - 1. **<System> Calculate rating score**



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| **USE CASE – UC031** | | | |
| **Use Case No.** | 031 | **Use Case Version** | 1.0 |
| **Use Case Name** | Calculate rating score | | |
| **Author** | QuyMM | | |
| **Date** | 10/11/2017 | **Priority** | Normal |
| **Actor:**   * System   **Summary:**   * System runs under this function to calculate rating score for user.   **Goal:**   * Rating score of user is calculated.   **Triggers:**   * Rating is send to system enough for calculating.   **Preconditions:**   * System operates stably and receives full rating from user.   **Post Conditions:**   * **Success:** Rating score of user is updated. * **Fail:** Rating scoreof user isn’t updated.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | System receives full rating from user about tour match. | System will calculate and update correctly rating score of user. |   **Alternative Scenario:** N/A  **Exceptions:** N/A  **Relationships:** N/A  **Business Rules:**   * If user’s rating and opponent’s rating reflect exactly result of a tour match, system will calculate based on the criteria:   + If match is over and there is a winner, the winner’s rating score = current rating score + 30 scores + goals difference + rating level values. The loser’s rating score = current rating score – goals difference + rating level values.  + If match has a draw result, two user’s rating score = current rating score + 10 scores + rating level values.   * Rating level values:   = 0: amateur level  = 2: normal level  = 4: professional level | | | |

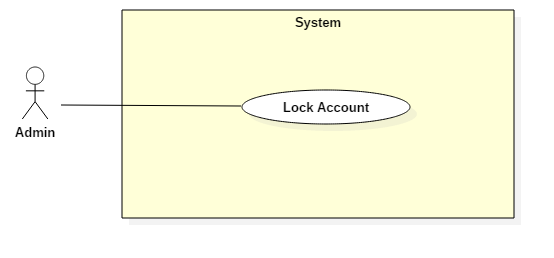
* + - 1. **<System> Send notification**



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| **USE CASE – UC032** | | | |
| **Use Case No.** | 032 | **Use Case Version** | 1.0 |
| **Use Case Name** | Send notifications | | |
| **Author** | HuanPM | | |
| **Date** | 10/11/2017 | **Priority** | Normal |
| **Actor:**   * System   **Summary:**   * System runs under this function to send notifications to user and field owner.   **Goal:**   * User and field owner are received notifications.   **Triggers:**   * User reserves a tour match. * User’s matching request is matched. * Field owner has reservation request.   **Preconditions:**   * System operates stably and user and field owner perform function successful.   **Post Conditions:**   * **Success:** User and field owner are received notifications. * **Fail:** User and field owner are not received notification.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | System receives changed data when user or field owner perform functions that have notification to another people in system. | System will send notification to field owner and user. |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | System connects to notification system fail. | System does not notify to field owner and user. |   **Relationships:** N/A  **Business Rules:**   * When field owner has reservation request, field owner will receive notifications about matches. The notification contains information about user reserved field. * When user’s matching request is matched, system will notify to user about opponent. * When user reserves a tour match, system will notify to opponent about match’s information. | | | |

#### Admin

* + - 1. **<User> Lock Account**



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| --- | --- | --- | --- |
| **USE CASE – UC033** | | | |
| **Use Case No.** | 033 | **Use Case Version** | 1.0 |
| **Use Case Name** | Lock Account | | |
| **Author** | HuanPM | | |
| **Date** | 2/12/2017 | **Priority** | Normal |
| **Actor:**   * Admin   **Summary:**   * This use case allows Actor to get Actor’s history.   **Goal:**   * System gets history list and display it to Actor.   **Triggers:**   * Actor sends get history command.   **Preconditions:**   * Actor has accessed the system under User role.   **Post Conditions:**   * **Success:** History list is displayed. * **Fail:** Show error messages.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends lock account command. | System requests confirmation from Actor. | | 2 | Actor confirms request. | System checks account information.  [Exception 1]  System displays message “Đã khóa tài khoản thành công”. |   **Exceptions 1:**   |  |  |  | | --- | --- | --- | | Step | Cause | System Response | | 1 | Account does not exist. | System shows error message “Tài khoản không tồn tại”. |   **Relationships:** N/A  **Business Rules:**   * Admin perform lock account based on requested by staff. | | | |

#### Authenticated User Use Case



##### <Authenticated user> Sign out



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| --- | --- | --- | --- |
| **USE CASE – UC034** | | | |
| **Use Case No.** | 034 | **Use Case Version** | 1.0 |
| **Use Case Name** | Sign out | | |
| **Author** | HieuPT | | |
| **Date** | 10/10/2017 | **Priority** | Normal |
| **Actor:**   * Authenticated user.   **Summary:**   * This use case allows Authenticated user signs out the system.   **Goal:**   * Authenticated user signs out the system successfully, the session is killed.   **Triggers:**   * Authenticated User send request to sign out.   **Preconditions:**   * Actors has accessed the system.   **Post Conditions:**   * **Success:** Authenticated user logouts successfully. * **Fail:** N/A   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Actor sends command to Sign out. | System clears session state if any, takes user out of the system.  System displays sign in view. |   **Exceptions:** N/A  **Relationships:** N/A  **Business Rules:**   * After sign out, role “Authenticated User” will become “Guest”. | | | |

## Software System Attribute

### Usability

* Admin. field owner and staff should need less than 0.5 day of training to use the system.
* Mobile and web application use Vietnamese including all dialogs and messages.
* Players who have played football can understand and perform functions immediately without the training process.

### Availability

* System is divided into modules, if a function is down, it will not influence others. Security
* The system can be adapted for a huge number of request.

### Security

* All input data should be validated before saving to database.
* Roles permission should be specified clearly and user should be authenticated and authorized when accessing to the system.

### Maintainability

* System is divided into modules.
* When a module of a function is down, it is easy to take it down to fix without impact other functions.

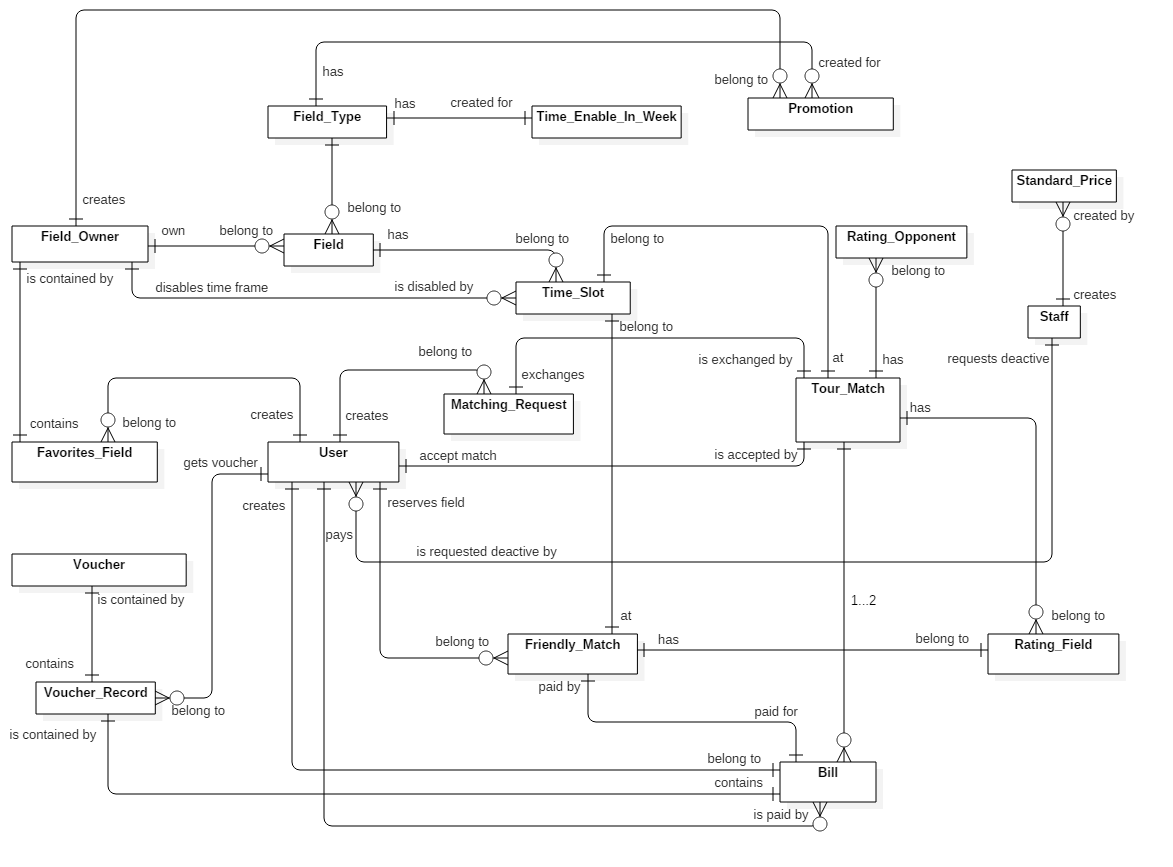
### Portability

* Web application can run on Chrome browser version 58 later.
* User can use the mobile application on devices running Android 6 or later.

### Performance

* System converts and returns results in 1 seconds or less depend on information of driver inputted.

## Conceptual Diagram



**Data Dictionary**

|  |  |
| --- | --- |
| **Entity Data dictionary: describe content of all entities** | |
| **Entity Name** | **Description** |
| Staff | Contain the staff information |
| Standard Price | Contain standard price for field in system |
| Field Owner | Contain the field owner information |
| Field | Contain the field information |
| Field Type | Contain the field type information |
| Time Enable In Week | Contain field’s active time information of field owner |
| Promotion | Contain promotion information |
| User | Contain the user information |
| Time Slot | Contain time slot information (start time, end time, price…) |
| Matching Request | Contain matching request information of user |
| Friendly Match | Contain information about match that reserved by a team |
| Tour Match | Contain information about match that reserved by 2 team |
| Voucher | Contain information about voucher of system |
| Voucher Record | Contain information about voucher get by user |
| Bill | Contain information about reservation field fees |
| Rating Field | Contain information about rating field |
| Rating Opponent | Contain information about rating opponent |