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# Introduction

The company DuelSys inc. is looking for a software solution, developed according to their requirements, which will allow their clientele to manage sport tournaments without any difficulties. Their purpose is not only simplification of the sport association staff, but the sport enthusiasts as well. They want to make viewing and getting information about a certain corporation’s sport events, as well as registering for them, as simple as possible for everyone, interested in participating.

# Functional and non-functional requirements

## Functional requirements

* Management of sport tournaments (CRUD operations)
* Registration of players
* Generating a tournament schedule
* Registration of the game results
* Displaying tournament information and results
* Supporting multiple tournament systems
* Handling of ties

## Non-functional requirements

* Performance
* Authorisation and authentication
* Scalability
* Extendibility
* Data security

# Use cases

## UC-01: Creating a tournament

**Pre-condition:** Actor needs to be in the desktop application

**Actor:** Sport association staff

**Main success scenario:**

1. System requires information for the tournament (pg. 19)
2. Actor fills up the information and confirms
3. System confirms the creation of the tournament was successful

**Extensions:**

2a: Invalid tournament data (pg. 18)

.1: System displays invalid data message

.2a: Return to MSS step 3

.2b: End of use case

## UC- 02: Editing a tournament

**Pre-condition:** Actor needs to be in the desktop application and edit a valid tournament (pg. 20)

**Actor:** Sport association staff

**Main success scenario:**

1. Actor selects a valid for editing tournament, which information they want to edit
2. System displays the current details
3. Actor fills up the new information and confirms
4. System confirms the creation of the tournament was successful

**Extensions:**

3a: Invalid tournament information (pg.18)

.1: System displays invalid data message

.2a: Return to MSS step 3

.2b: End of use case

## UC-03: Canceling a tournament

**Pre-condition:** Actor needs to be in the desktop application and choose a valid tournament (pg. 20)

**Actor:** Sport association staff

**Main success scenario:**

1. Actor selects the tournament they want to cancel
2. System asks for confirmation
3. Actor confirms
4. System sets the status of the tournament to canceled

**Extensions:**

3a: Actor declines

.1: End of use case

## UC-04: Deleting a tournament

**Pre-condition:** Actor needs to be in the desktop application and choose a valid tournament (pg. 20)

**Actor:** Sport association staff

**Main success scenario:**

1. Actor selects the tournament they want to delete
2. Actor confirms
3. System deletes the tournament

## UC-05: Closing a tournament for registration

**Pre-condition:** Actor needs to be in the desktop application and choose a valid tournament (pg. 21)

**Actor:** Sport association staff

**Main success scenario:**

1. Actor selects the tournament they want to close for registration
2. Actor confirms
3. System sets the status to “closed” and enables generating of a schedule

**Extensions:**

3a: The minimum number of players is not reached

.1: System sets the status of the tournament to “canceled”

.2: End of use case

## UC-06: Generating a schedule

**Pre-condition:** The tournament should be closed for registering

**Actor:** Sport association staff

**Main success scenario:**

1. Actor selects a tournament they want to generate a schedule for
2. The system displays information about the status of the tournament
3. Actor confirms the selection for generating a schedule
4. The schedule gets generated depending on the tournament system

## UC-07: Registering the result of matches

**Pre-condition:** Actor needs to be in the desktop application and to register the result for a valid tournament (pg. 20)

**Actor:** Sport association staff

**Main success scenario:**

1. Actor selects the current tournament, round, and match
2. Systems requires input for the result of the game between the opponents
3. Actor fills up the information and confirms
4. Systems saves the result

**Extensions:**

3a: Invalid match information (pg. 18)

.1: System displays invalid data message

.2a: Return to MSS step 3

.2b: End of use case

## UC-08: Filtering tournaments according to their status

**Pre-condition:** The actor needs to be in the desktop application

**Actor:** Sport association staff

**Main success scenario:**

1. Actor selects tournament with which status they want to view
2. System displays the filtered results

**Extensions:**

2a: There are no result matching the filter

.1: End of use case

## UC-09: Filtering tournaments

**Pre-condition:** The actor needs to be in the desktop application

**Actor:** Sport association staff

**Main success scenario:**

1. Actor inputs id or partial name of the tournament they are looking for
2. System displays results

**Extensions:**

2a: There are no result

.1: End of use case

## UC-10: Creating an account

**Pre-condition:** Actor needs to be in the web application

**Actor:** Regular user

**Main success scenario:**

1. Actor goes to the log in page and selects the option to create an account
2. Systems requires personal information (pg. 19)
3. Actor fills up the required information and confirms
4. Systems displays confirmation message

**Extensions:**

3a: Invalid data (pg. 18)

.1: Systems sends warning message

.2a: End of use case

.2b: Return to MSS step 3

## UC-11: Logging in

**Pre-condition:** Actor needs to be in the web application

**Actor:** Regular user

**Main success scenario:**

1. Actor selects the tab for logging in
2. System requires credentials (email and password)
3. Actor fills up the required information and confirms
4. System returns to the home page

**Extensions:**

3a: Wrong credentials

.1: System displays warning message

.2a: Return to MSS step 3

.2b: End of use case

## UC-12: Registering for a tournament

**Pre-condition:** Actor needs to be logged in the web application and registering for a prior(valid) tournament (pg. 20)

**Actor:** Regular user (participant in the tournaments/player)

**Main success scenario:**

1. Actor retrieves list of available tournaments and chooses the one they want to participate in
2. Systems displays information about the tournament
3. Actor selects the option for registering
4. System displays confirmation message and register the actor for the tournament

## UC-13: Changing personal information

**Pre-condition:** Actor needs to be logged in the web application

**Actor:** Regular user

**Main success scenario:**

1. Actor selects the dab with their information
2. System redisplays the current information
3. Actor fills up the edited information and confirms
4. System updates the information

**Extensions:**

3a: Invalid information

.1: System displays warning message

.2a: Return to MSS step 3

.2b: End of use case

# Invalid information

## Tournament information

* Invalid date
* Start date: Less than two weeks from the current date
* End date: Prior to the selected start date
* Invalid number of players:
* Minimum number of players: Less than 2
* Maximum number of players: Less than 2

## Match information

* Invalid result
* Both players have less than 21 points
* Both players have over 20 or less than 29 points and the winner leads with less or more than 2 points
* One or more players have more than 30 points
* Both players have the same result

## User information

* Invalid personal information
* Email: Invalid email, used email, no input
* Phone number: Used phone number, no input

# Required information

## User information

* Personal information
* First name
* Family name
* Phone number
* Account information
* Email
* Password

## Tournament information

* Tournament details:
* Title
* Description
* Start date
* End date
* Minimum number of participants
* Maximum number of participants
* Location
* Tournament system

# Valid data

## Valid tournament for player registration

* Maximum number of players not reached
* Less than a week from its start date

## Valid tournament for keeping track of the player results

* A tournament with the current date as start date or an already past date (which has already started)
* A tournament with reached minimum number of players

## Valid tournament for editing

* A tournament that has not been cancelled or finished
* A tournament open for registering
* All the information can be edited
* A tournament that is closed for registering
* Only location and date can be edited
* A tournament that already has scheduled games
* Only location can be edited

## Valid tournament for cancelling

* A tournament that has not already been cancelled
* A tournament that is not already finished

## Valid tournament for deleting

* A tournament with status “open”
* A tournament that has no registered users

## Valid tournament for closing

* A tournament with status “open”