Karting report

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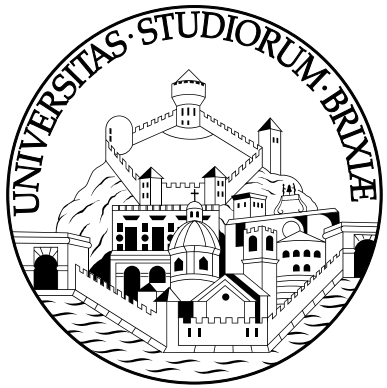
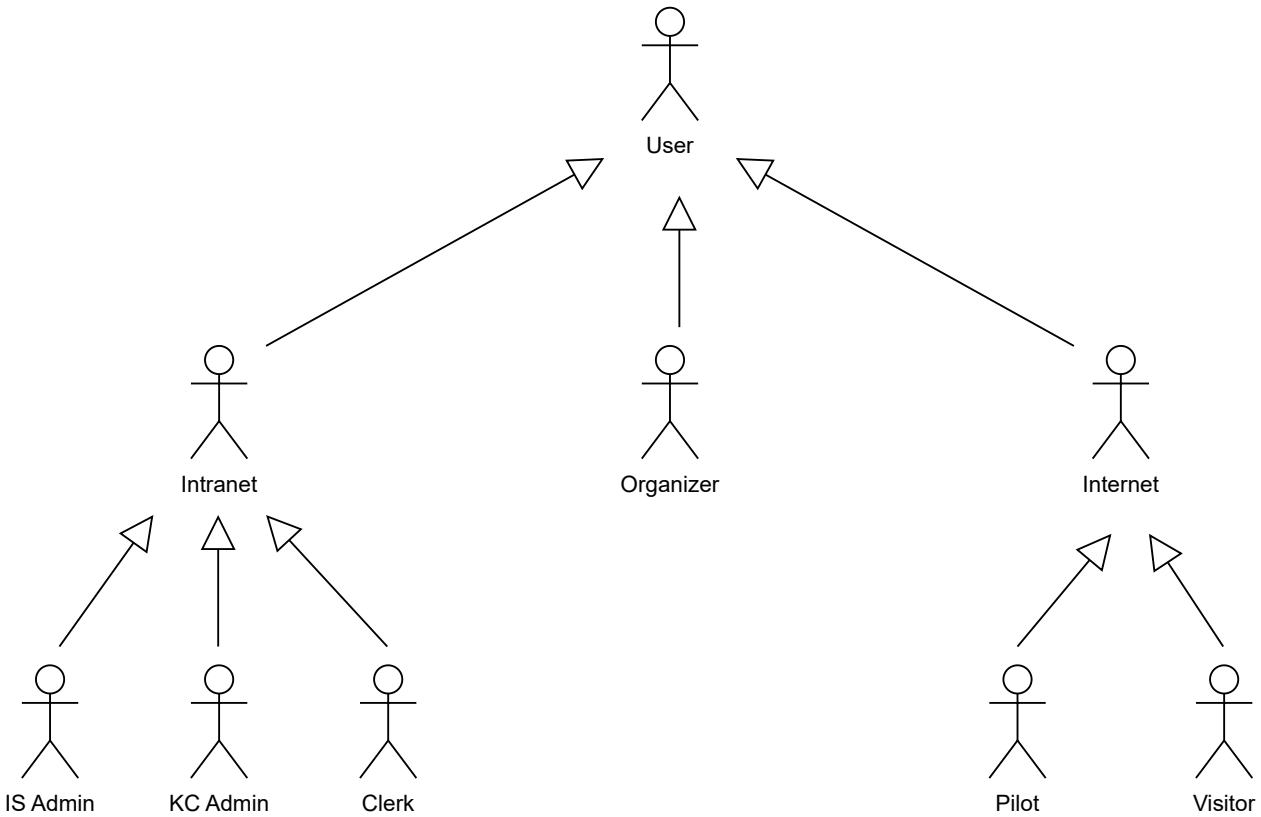
February 2, 2024



User groups


User
Intranet
Organizer
Internet
IS Admin
KC Admin
Clerk
Pilot
Visitor

Specification sheet

Group name	**User**
Description	Empty
Profile data Supergroup	None None
Subgroups	None
Use cases	- Explore karting centers by city - Explore karting centers by number of races - Explore karting centers by number of pilots - Explore karting centers by number of events - Explore karting centers by average review score - View all karting centers hosting upcoming events - Read details on karting center - Read reviews on karting center - Explore tracks in a karting center - Explore events by karting center - Explore tracks by asphalt type - Explore tracks by difficulty - Explore tracks by length - Explore tracks by city - Explore tracks by number of races - Explore tracks by number of pilots - Explore tracks by number of events - Explore tracks by average review score

Use cases	- Read details on track - Read reviews on track - Explore events by track - Explore leaderboards - Explore races from track - Explore lap-times of a race - Explore pilots from track - Read details on pilot - Explore events from pilot - Explore races from pilot - Explore events by city - Explore events by average review score - Explore events by price - Explore events by category - Explore events by popularity - Explore upcoming events - Explore controversial events - Read details on event - Explore karting centers by event - Explore tracks by event - Explore pilots from event - Explore races from event - Read reviews on event
Read	Karting center, Track (and Popular track) and implicitly Timetable, Race, Pilot, Event (and its subentities), Review on karting center, Review on track, Review on event, Leaderboard, Lap-time, City, Go-kart model, Track asphalt type, Track length range, Review score range, N. pilots range, N. races range, N. events range, Price range, Event category.
Write	None

Specification sheet

Group name	**Intranet**
Description	Empty
Profile data Supergroup	None User
Subgroups	Information System Administrator, Karting center administrator, Clerk
Use cases	- Login/Logout - Read my details
Read	Everything the generic user can read
Write	None

Specification sheet

Group name	**Information System Administrator**
Description	Empty
Profile data Supergroup	Username, Password, Email, Name, Surname, Address Intranet
Subgroups	None
Use cases	- Explore karting center administrators - Read details on karting center administrator - U.D. karting center administrator - Create karting center administrator - Explore karting centers - Read details on karting center - U.D. karting center - Create karting center - Explore organizers - Read details on organizer - U.D. organizer - Create organizer - C.R.U.D. cities - C.R.U.D. go-kart models - C.R.U.D. track asphalt types - C.R.U.D. track difficulies - C.R.U.D. track length ranges - C.R.U.D. review score ranges - C.R.U.D. n. pilots ranges - C.R.U.D. n. races ranges - C.R.U.D. n. events ranges - C.R.U.D. price ranges - C.R.U.D. event categories

Read	Everything
Write	Karting center, Karting center administrator, Organizer, City, Go-kart model, Track asphalt type, Track length range, Review score range, N. pilots range, N. races range, N. events range, Price range, Event category, everything that every karting center administrator can write (thus, also everything that every clerk can write) and everything that every organizer can write.

Specification sheet

Group name	**Karting center administrator**
Description	Empty
Profile data Supergroup	Username, Password, Email, Name, Surname, Address Intranet
Subgroups	None
Use cases	- Explore my karting centers - Explore pilots by karting center - Explore pilots - Read details on pilot - U.D. pilot - Create pilot - Explore clerks by karting center - Explore clerks - Read details on clerk - U.D. clerk - Create clerk - Explore tracks (related to my karting centers) - Explore tracks by karting center - Read details on track - U.D. track - Create track - Explore races (related to my karting centers) - Read details on race - U.D. race - Create race - Explore go-karts dedicated to tracks of my karting centers - U.D. go-kart dedicated to track - Create go-kart

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Read	Clerks (related to my karting centers), go-karts (related to my karting centers), everything that every clerk of my karting centers can read, everything that the generic user can read.
Write	Karting center (only mine, only to update, not to create nor delete), Clerk (only mine), Track (only mine), Race (only for my karting centers) and implicitly Reservation, Go-kart (only for my karting centers), everything that every clerk of my karting centers can write.

Specification sheet

Group name	**Clerk**
Description	Empty
Profile data Supergroup	Username, Password, Email, Name, Surname, Address Intranet
Subgroups	None
Use cases	- Explore reservations (related to my karting center) - Confirm reservation - Explore reviews on my karting center - Read review on my karting center - Delete review - Explore reviews on the tracks of my karting center - Read review on track - Delete review on track - Explore reviews on events (that involved my karting center) - Read review on event - Delete review on event
Read	Reservation (only for my karting centers), everything that the generic user can read.
Write	Review on Karting center (only mine, only deleting), Review on Track (only of mine karting center, only deleting), Review on Event (only involving my karting center, only deleting), Reservation (only for my karting centers, only to confirm). Indirectly: Karting center, Track, Event (when deleting a review, implicitly some of their attributes are alterated, e.g. *avgReviewScore*, *nReviews*).

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Specification sheet

Group name	**Organizer**
Description	Empty
Profile data	Username, Password, Email, Name, Surname, Address
Supergroup	User
Subgroups	None
Use cases	- Explore my events - Read details on my event - U.D. events - Create event - Explore not yet confirmed applications - Confirm application - Explore races of the event - Read details on race - U.D. race - Create race
Read	Application (only to my events), everything that the generic user can read.
Write	Event (C.R.U.D. only mine), Race (C.R.U.D. only for my events) and implicitly Reservation, Application (only to my events, only to confirm). Indirectly: Karting center, Track, Pilot (when organizing events, implicitly some of their attributes are alterated, e.g. *nRaces*, *nEvents*).

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Specification sheet

Group name	**Internet**
Description	Empty
Profile data Supergroup	None User
Subgroups	Pilot, Visitor
Use cases	None
Read	Everything the generic user can read
Write	None

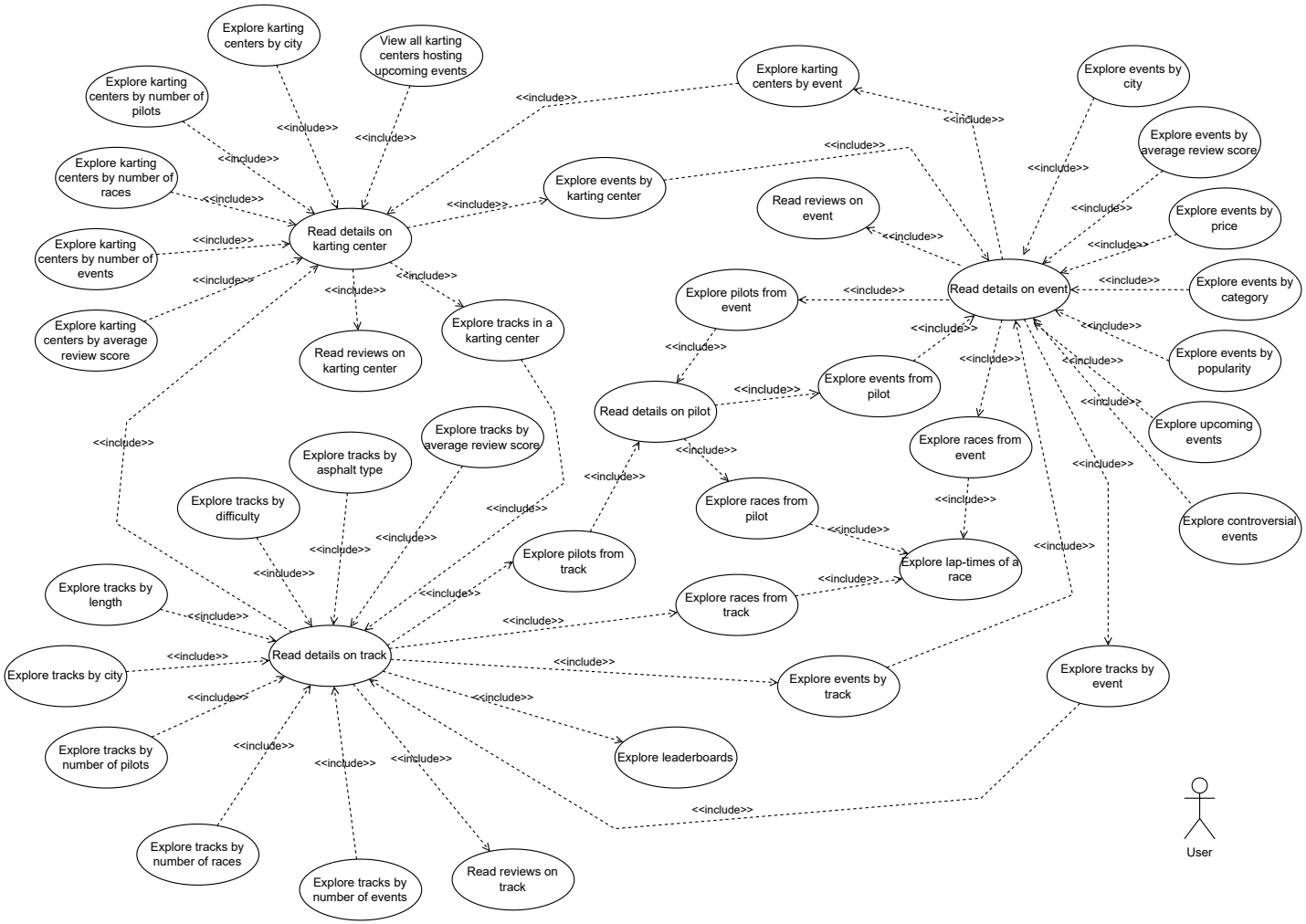
Specification sheet

Group name	**Pilot**
Description	Empty
Profile data Supergroup	Username, Password, Email, Name, Surname, Address Internet
Subgroups	None
Use cases	- Login/Logout - Read my details - Explore not yet confirmed reservations - C.U.D. races and reservations - Explore confirmed reservations - Explore my past races - Read details on race - Create review of karting center - Create review of track - Explore upcoming events applied to but not confirmed yet - Explore upcoming events not applied to - Explore my past events - Apply to an event - Read details on event - Create review of event
Read Write	Reservation (only mine), everything that the generic user can read, Race (those that still have to take place, created by me) and implicitly Review, Application (only mine). Race (only mine) and implicitly Reservation, Review on karting center, Review on track, Review on event, Application (only mine). Indirectly: Karting center, Track, Event (when participating to a race or writing a review, implicitly some of their attributes are alterated, e.g. *nPilots*, *nRaces*, *avgReviewScore*).

Specification sheet

Group name	**Visitor**
Description	Empty
Profile data Supergroup	None Internet
Subgroups	None
Use cases	- Register
Read	Everything the generic user can read
Write	None

User


Explore karting centers by city
View all karting centers hosting upcoming events
Explore karting centers by number of pilots
Explore karting centers by event
Explore events by city
Explore karting centers by number of races
Explore events by karting center
Explore events by average review score
Read reviews on event
Explore events by price
Explore karting centers by number of events
Read details on karting center
Explore events by category
Explore karting centers by average review score
Explore pilots from event
Read details on event
Explore tracks in a karting center
Read reviews on karting center
Explore events by popularity
Read details on pilot
Explore events from pilot
Explore tracks by average review score
Explore upcoming events
Explore tracks by asphalt type
Explore races from event
Explore tracks by difficulty
Explore races from pilot
Explore controversial events
Explore pilots from track
Explore lap-times of a race
Explore tracks by length
Explore races from track
Read details on track
Explore tracks by city
Explore events by track
Explore tracks by event
Explore tracks by number of pilots
Explore leaderboards
Explore tracks by number of races
Explore tracks by number of events
Read reviews on track
User
<<include>>

Specification sheet

Title	**Explore karting centers by city**
Goal	The user explores karting centers selecting one city at a time.
Precondition	The user is in the area (of the public view) dedicated to karting centers.
Postcondition	The user obtains the list of karting centers from which he can move on.
Workflow	- The user moves to the area dedicated to karting centers. - The user selects a city.

Specification sheet

Title	**Explore karting centers by number of races**
Goal	The user explores karting centers selecting one range of number of races (that were hosted on any of the tracks of the karting center) at a time.
Precondition	The user is in the area (of the public view) dedicated to karting centers.
Postcondition	The user obtains the list of karting centers from which he can move on.
Workflow	- The user moves to the area dedicated to karting centers. - The user selects a range of number of races.

Specification sheet

Title	**Explore karting centers by number of pilots**
Goal	The user explores karting centers selecting one range of number of pilots (who had a race on any of the tracks of the karting center) at a time.
Precondition	The user is in the area (of the public view) dedicated to karting centers.
Postcondition	The user obtains the list of karting centers from which he can move on.
Workflow	- The user moves to the area dedicated to karting centers. - The user selects a range of number of pilots.

Specification sheet

Title	**Explore karting centers by number of events**
Goal	The user explores karting centers selecting one range of number of events (that had at least one race hosted on any of the tracks of the karting center) at a time.
Precondition	The user is in the area (of the public view) dedicated to karting centers.
Postcondition	The user obtains the list of karting centers from which he can move on.
Workflow	- The user moves to the area dedicated to karting centers. - The user selects a range of number of events.

Specification sheet

Title	**Explore karting centers by average review score**
Goal	The user explores karting centers selecting one range of average review scores (given to the karting center by all the pilots that had at least one race on one of the tracks of the karting center) at a time.
Precondition	The user is in the area (of the public view) dedicated to karting centers.
Postcondition	The user obtains the list of karting centers from which he can move on.
Workflow	- The user moves to the area dedicated to karting centers. - The user selects a range of scores (the ranges are the same for karting centes, tracks and events).

Specification sheet

Title	**View all karting centers hosting upcoming events**
Goal	The user scrolls through the list of karting centers that are going to host an upcoming event.
Precondition	The user already has this information in the homepage.
Postcondition	The user obtains the list of karting centers from which he can move on.
Workflow	- The user reaches the homepage.

Specification sheet

Title	**Read details on karting center**
Goal	The user chooses one karting center to focus on and reads its details.
Precondition	The user chose a karting center from a list of karting centers (obtained from any of the previous use cases).
Postcondition	The user obtains the details on the karting center and can move on to other related informations (e.g. tracks, reviews)
Workflow	- The user chooses one karting center from a list.

Specification sheet

Title	**Read reviews on karting center**
Goal	The user chooses one karting center to focus on and scrolls the reviews it received (from pilots that had at least one race on one track of the karting center).
Precondition	The user chose a karting center from a list of karting centers (obtained from any of the previous use cases).
Postcondition	The user obtains the reviews on the karting center in the area dedicated to reviews.
Workflow	- The user moves from the page dedicated to the details of the karting center to the page dedicated to reviews through a click.

Specification sheet

Title	**Explore tracks in a karting center**
Goal	The user chooses one karting center to focus on and explores the tracks it offers.
Precondition	The user chose a karting center from a list of karting centers (obtained from any of the previous use cases).
Postcondition	The user obtains the tracks offered by the karting center in the area dedicated to tracks.
Workflow	- The user moves from the page dedicated to the details of the karting center to the page dedicated to tracks through a click.

Specification sheet

Title	**Explore events by karting center**
Goal	The user chooses one karting center to focus on and explores the events that had at least one of their races hosted by a track of the karting center.
Precondition	The user chose a karting center from a list of karting centers (obtained from any of the previous use cases).
Postcondition	The user obtains the events in the area dedicated to events.
Workflow	- The user moves from the page dedicated to the details of the karting center to the page dedicated to events through a click.

Specification sheet

Title	**Explore tracks by asphalt type**
Goal	The user explores tracks selecting one asphalt type at a time.
Precondition	The user is in the area (of the public view) dedicated to tracks.
Postcondition	The user obtains the list of tracks from which he can move on.
Workflow	- The user moves to the area dedicated to tracks. - The user selects an asphalt type.

Specification sheet

Title	**Explore tracks by difficulty**
Goal	The user explores tracks selecting one difficulty at a time.
Precondition	The user is in the area (of the public view) dedicated to tracks.
Postcondition	The user obtains the list of tracks from which he can move on.
Workflow	- The user moves to the area dedicated to tracks. - The user selects a difficulty.

Specification sheet

Title	**Explore tracks by length**
Goal	The user explores tracks selecting one range of lengths at a time.
Precondition	The user is in the area (of the public view) dedicated to tracks.
Postcondition	The user obtains the list of tracks from which he can move on.
Workflow	- The user moves to the area dedicated to tracks. - The user selects a range of lengths.

Specification sheet

Title	**Explore tracks by city**
Goal	The user explores tracks selecting one city at a time.
Precondition	The user is in the area (of the public view) dedicated to tracks.
Postcondition	The user obtains the list of tracks from which he can move on.
Workflow	- The user moves to the area dedicated to tracks. - The user selects a city.

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Specification sheet

Title	**Explore tracks by number of races**
Goal	The user explores tracks selecting one range of number of races (that took place on the track) at a time.
Precondition	The user is in the area (of the public view) dedicated to tracks.
Postcondition	The user obtains the list of tracks from which he can move on.
Workflow	- The user moves to the area dedicated to tracks. - The user selects a range of number of races.

Specification sheet

Title	**Explore tracks by number of pilots**
Goal	The user explores tracks selecting one range of number of pilots (who had a race on the track) at a time.
Precondition	The user is in the area (of the public view) dedicated to tracks.
Postcondition	The user obtains the list of tracks from which he can move on.
Workflow	- The user moves to the area dedicated to tracks. - The user selects a range of number of pilots.

Specification sheet

Title	**Explore tracks by number of events**
Goal	The user explores tracks selecting one range of number of events (that had at least one race hosted on the track) at a time.
Precondition	The user is in the area (of the public view) dedicated to tracks.
Postcondition	The user obtains the list of tracks from which he can move on.
Workflow	- The user moves to the area dedicated to tracks. - The user selects a range of number of events.

Specification sheet

Title	**Explore tracks by average review score**
Goal	The user explores tracks selecting one range of average review scores (given to the track by all the pilots that had at least one race on the track) at a time.
Precondition	The user is in the area (of the public view) dedicated to tracks.
Postcondition	The user obtains the list of tracks from which he can move on.
Workflow	- The user moves to the area dedicated to tracks. - The user selects a range of scores (the ranges are the same for karting centes, tracks and events).

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Specification sheet

Title	**Read details on track**
Goal	The user chooses one track to focus on and reads its details.
Precondition	The user chose a track from a list of tracks (obtained from any of the previous use cases).
Postcondition	The user obtains the details on the track and can move on to other related informations (e.g. pilots, leaderboards, races, reviews)
Workflow	- The user chooses one karting center from a list.

Specification sheet

Title	**Read reviews on track**
Goal	The user chooses one track to focus on and scrolls the reviews it received (from pilots that had at least one race on it).
Precondition	The user chose a track from a list of tracks (obtained from any of the previous use cases).
Postcondition	The user obtains the reviews on the tracks in the area dedicated to reviews.
Workflow	- The user moves from the area dedicated to the details of the track to the area dedicated to reviews through a click.

Specification sheet

Title	**Explore events by track**
Goal	The user chooses one track to focus on and explores the events that had at least one of their races hosted by the track.
Precondition	The user chose a track from a list of tracks (obtained from any of the previous use cases).
Postcondition	The user obtains the events in the area dedicated to events.
Workflow	- The user moves from the area dedicated to the details of the track to the area dedicated to events through a click.

Specification sheet

Title	**Explore leaderboards**
Goal	The user chooses one track to focus on and explores the leaderboards associated to the track (leaderboards are filtering on the whole record of laptimes obtained by pilots in a race, a leaderboard can focus on the last month, the last year, sex, weight...)
Precondition	The user chose a track from a list of tracks (obtained from any of the previous use cases).
Postcondition	The user obtains the list of leaderboards in the area dedicated to leaderboards.
Workflow	- The user moves from the area dedicated to the details of the track to the area dedicated to leaderboards through a click.

Specification sheet

Title	**Explore races from track**
Goal	The user chooses one track to focus on and explores the races that took place on the track.
Precondition	The user chose a track from a list of tracks (obtained from any of the previous use cases).
Postcondition	The user obtains the list of races in the area dedicated to races.
Workflow	- The user moves from the area dedicated to the details of the track to the area dedicated to races through a click.

Specification sheet

Title	**Explore lap-times of a race**
Goal	The user chooses one race to focus on and reads all the lap-times made by all the pilots that participated to the race.
Precondition	The user chose a race from a list of races (obtained from a track, an event or a pilot).
Postcondition	The user obtains the list of lap-times in the area dedicated to lap-times.
Workflow	- The user moves from the area dedicated to the details of the race to the area dedicated to lap-times through a click.

Specification sheet

Title	**Explore pilots from track**
Goal	The user chooses one track to focus on and explores the pilots that had at least one race on the track.
Precondition	The user chose a track from a list of tracks (obtained from any of the previous use cases).
Postcondition	The user obtains the list of pilots in the area dedicated to pilots.
Workflow	- The user moves from the area dedicated to the details of the track to the area dedicated to pilots through a click.

Specification sheet

Title	**Read details on pilot**
Goal	The user chooses one pilot to focus on and reads its details.
Precondition	The user chose a pilot from a list of pilots (obtained from a track, a race, an event).
Postcondition	The user obtains the details on the pilot and can move on to other related informations (e.g. races, events).
Workflow	- The user chooses one pilot from a list.

Specification sheet

Title	**Explore events from pilot**
Goal	The user chooses one pilot to focus on and explores the events that the pilot attended.
Precondition	The user chose a pilot from a list of pilots (obtained from a track, a race, an event).
Postcondition	The user obtains a list of events in the area dedicated to events.
Workflow	- The user moves from the area dedicated to the details of the pilot to the area dedicated to events through a click.

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Specification sheet

Title	**Explore races from pilot**
Goal	The user chooses one pilot to focus on and explores the races that the pilot had.
Precondition	The user chose a pilot from a list of pilots (obtained from a track, a race, an event).
Postcondition	The user obtains a list of races in the area dedicated to races.
Workflow	- The user moves from the area dedicated to the details of the pilot to the area dedicated to races through a click.

Specification sheet

Title	**Explore events by city**
Goal	The user explres events selecting one city at a time.
Precondition	The user is in the area (of the public view) dedicated to events.
Postcondition	The user obtains the list of events from which he can move on.
Workflow	- The user moves to the area dedicated to events. - The user selects a city.

Specification sheet

Title	**Explore events by average review score**
Goal	The user explores events selecting one range of average review scores (given to the event by all the pilots that partcipated to it) at a time.
Precondition	The user is in the area (of the public view) dedicated to events.
Postcondition	The user obtains the list of events from which he can move on.
Workflow	- The user moves to the area dedicated to events. - The user selects a range of scores (the ranges are the same for karting centes, tracks and events).

Specification sheet

Title	**Explore events by price**
Goal	The user explores events selecting one range of prices at a time.
Precondition	The user is in the area (of the public view) dedicated to events.
Postcondition	The user obtains the list of events from which he can move on.
Workflow	- The user moves to the area dedicated to events. - The user selects a range of prices.

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Specification sheet

Title	**Explore events by category**
Goal	The user explores events selecting one category at a time.
Precondition	The user is in the area (of the public view) dedicated to events.
Postcondition	The user obtains the list of events from which he can move on.
Workflow	- The user moves to the area dedicated to events. - The user selects a category.

Specification sheet

Title	**Explore events by popularity**
Goal	The user explores only the events considered popular (those that have at least N participants and at least M reviews)
Precondition	The user is in the area (of the public view) dedicated to events.
Postcondition	The user obtains the list of events from which he can move on.
Workflow	- The user moves to the area dedicated to events. - The user chooses an event from the list of popular events already provided in the area dedicated to events.

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Specification sheet

Title	**Explore upcoming events**
Goal	The user explores only the upcoming events (those whose first race still has to take place).
Precondition	The user is in the area (of the public view) dedicated to events or in the homepage (which already shows the list of upcoming events, the list of tracks that will be involved and the list of karting centers that will be involved).
Postcondition	The user obtains the list of events from which he can move on.
Workflow	- A: the user chooses an event from the list of upcoming events already provided in the homepage. - B.1: the user moves to the area dedicated to events. - B.2: the user chooses an event from the list of upcoming events already provided in the area dedicated to events.

Specification sheet

Title	**Explore controversial events**
Goal	The user explores only the controversial events (those that have at least N reviews under 25% of the maximum score and at least M reviews over 75% of the maximum score).
Precondition	The user is in the area (of the public view) dedicated to events.
Postcondition	The user obtains the list of events from which he can move on.
Workflow	- The user moves to the area dedicated to events. - The user chooses an event from the list of controversial events already provided in the area dedicated to events.

Specification sheet

Title	**Read details on event**
Goal	The user chooses one event to focus on and reads its details.
Precondition	The user chose an event from a list of events (obtained from any of the previous use cases).
Postcondition	The user obtains the details on the event and can move on to other related informations (e.g. races, pilots)
Workflow	- The user chooses one event from a list.

Specification sheet

Title	**Explore karting centers by event**
Goal	The user chooses one event to focus on and explores the karting centers that hosted at least one race of the event.
Precondition	The user chose an event from a list of events (obtained from any of the previous use cases).
Postcondition	The user obtains the list of karting centers in the area dedicated to karting centers.
Workflow	- The user moves from the area dedicated to the details of the event to the area dedicated to karting centers through a click.

Specification sheet

Title	**Explore tracks by event**
Goal	The user chooses one event to focus on and explores the tracks that hosted at least one race of the event.
Precondition	The user chose an event from a list of events (obtained from any of the previous use cases).
Postcondition	The user obtains the list of tracks in the area dedicated to tracks.
Workflow	- The user moves from the area dedicated to the details of the event to the area dedicated to tracks through a click.

Specification sheet

Title	**Explore pilots from event**
Goal	The user chooses one event to focus on and explores the pilots that participated to the event.
Precondition	The user chose an event from a list of events (obtained from any of the previous use cases).
Postcondition	The user obtains a list of pilots in the area dedicated to pilots.
Workflow	- The user moves from the area dedicated to the details of the event to the area dedicated to pilots through a click.

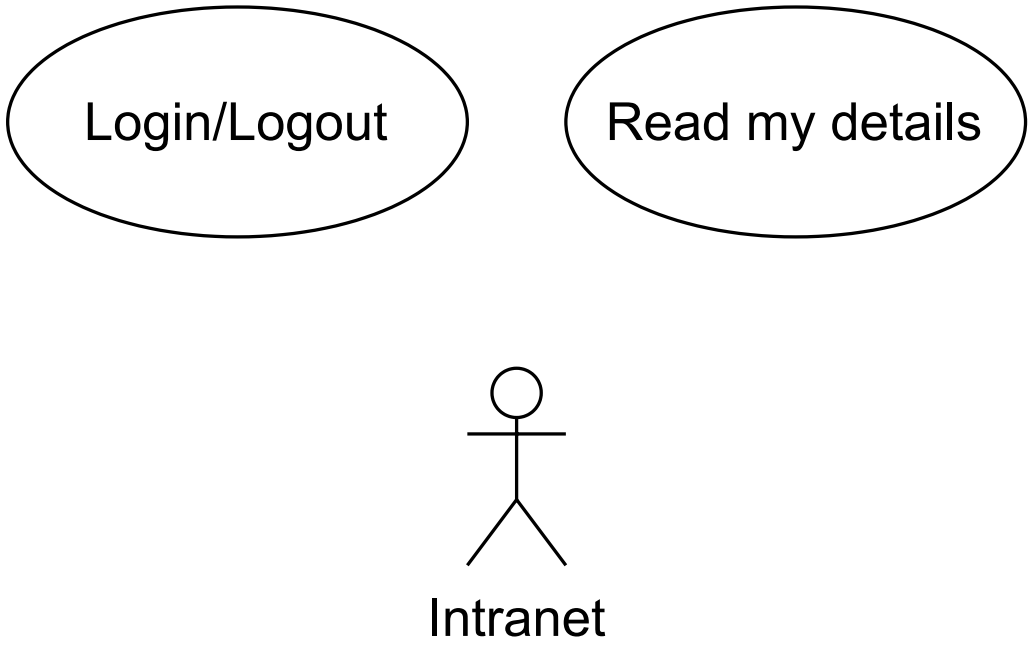
Specification sheet

Title	**Explore races from event**
Goal	The user chooses one event to focus on and explores the races that the event organized.
Precondition	The user chose an event from a list of events (obtained from any of the previous use cases).
Postcondition	The user obtains a list of races in the area dedicated to races.
Workflow	- The user moves from the area dedicated to the details of the event to the area dedicated to races through a click.

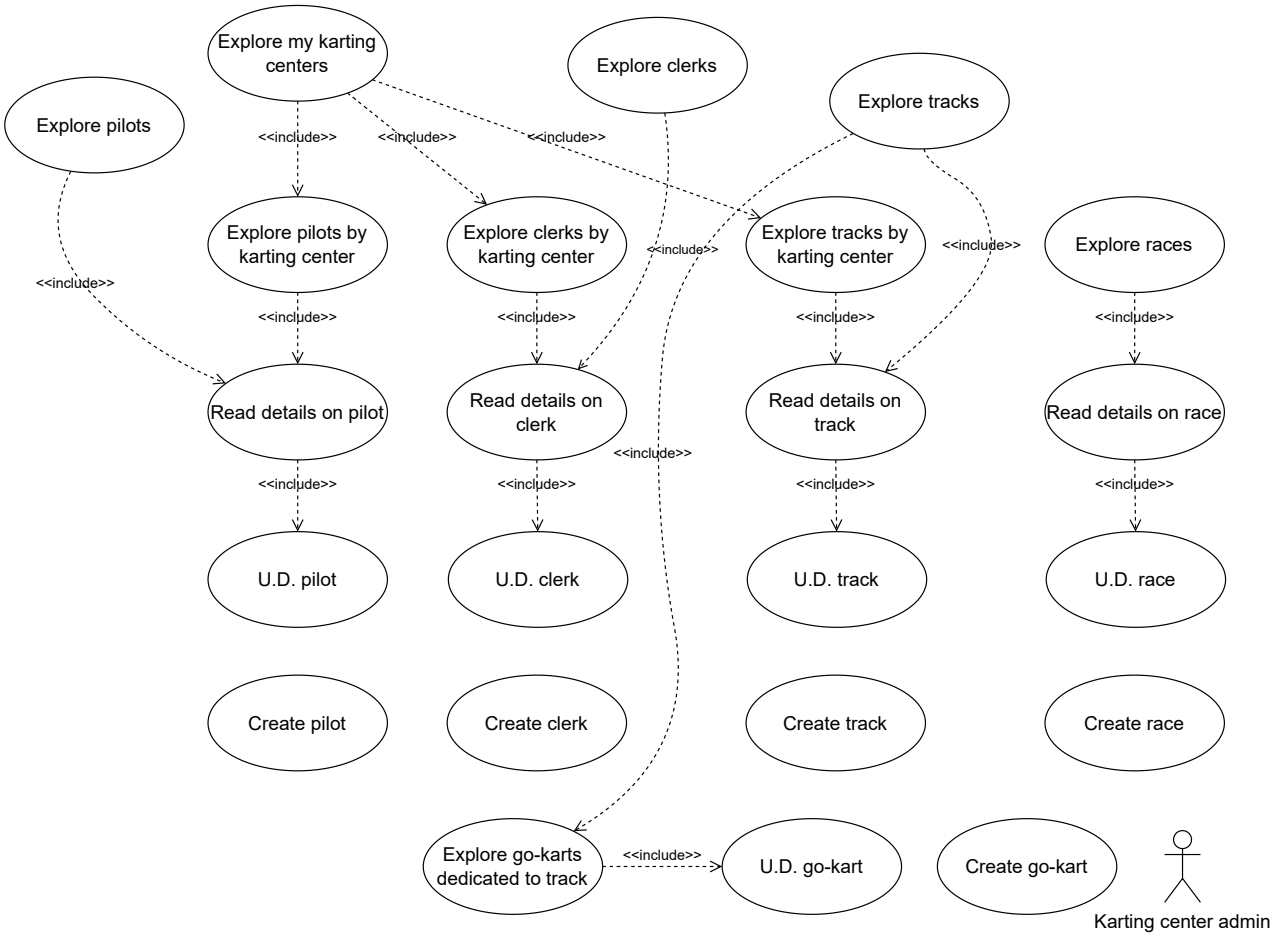
Specification sheet

Title	**Read reviews on event**
Goal	The user chooses one event to focus on and scrolls the reviews it received (from pilots that participated to the event).
Precondition	The user chose an event from a list of events (obtained from any of the previous use cases).
Postcondition	The user obtains the reviews on the event in the area dedicated to reviews.
Workflow	- The user moves from the area dedicated to the details of the event to the area dedicated to reviews through a click.

Intranet



Karting center administrator



Specification sheet

Title	**Explore my karting centers**
Goal	The user explores the karting centers he manages.
Precondition	The user logged in and manages at least one karting center.
Postcondition	The user obtains the list of karting centers he manages.
Workflow	- A: the user already has a list of karting centers he manages in the homepage. - B: the user moves to the area dedicated to karting centers and the list is already provided.

Specification sheet

Title	**Explore pilots by karting center**
Goal	The user explores the pilots that participated in at least one race on a track of a karting center the user manages.
Precondition	The user logged in, manages at least one karting center and at least one pilot had a race on a track of the karting center.
Postcondition	The user obtains the list of pilots in the area dedicated to pilots.
Workflow	- The user chooses the option to explore pilots of a karting center from the list (provided in the homepage) of karting centers he manages.

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Specification sheet

Title	**Explore pilots**
Goal	The user explores all the pilots that were registered in any karting center by any karting center administrator.
Precondition	The user logged in.
Postcondition	The user obtains the list of pilots in the area dedicated to pilots.
Workflow	- The user moves to the area dedicated to pilots (the list is already provided).

Specification sheet

Title	**Read details on pilot**
Goal	The user chooses one pilot to focus on and reads its details.
Precondition	The user chose a pilot from a list of pilots (obtained from the homepage, from the area dedicated to pilots or from the area dedicated to races).
Postcondition	The user obtains the details on the pilot (in the area dedicated to pilots).
Workflow	- The user chooses one pilot from a list (from the homepage, the area dedicated to pilots or the area dedicated to races).

Specification sheet

Title	**U.D. pilots**
Goal	The user updates or deletes a pilot.
Precondition	The user logged in.
Postcondition	The chosen pilot is updated or deleted.
Workflow	- The user moves to the area dedicated to pilots. - The user chooses the option to update or delete a pilot from the list of all pilots (provided in the area dedicated to pilots).

Specification sheet

Title	**Create pilots**
Goal	The user creates a new pilot.
Precondition	The user logged in.
Postcondition	The pilot is created.
Workflow	- The user moves to the area dedicated to pilots. - The user chooses the option to create a new pilot.

Specification sheet

Title	**Explore clerks by karting center**
Goal	The user explores the clerks that work in a karting center the user manages.
Precondition	The user logged in, manages at least one karting center and at least one clerk works in the karting center.
Postcondition	The user obtains the list of clerks in the area dedicated to clerks.
Workflow	- The user chooses the option to explore clerks of a karting center (among the list of karting centers displayed in the homepage) he manages.

Title	**Explore tracks by karting center**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Explore clerks by karting center**. The user explores the tracks that are part of a karting center the user manages. It is of course possible for a karting center administrator to explore all the tracks of all the karting centers the same way is is for a visitor, but the site view dedicated to the karting center administrator focuses on showing him custom informations. This is not true for the access of the karting center administrator to clerks, he cannot even read informations about clerks from other karting centers, not in his dedicated site view, neither in the visitor's site view.

Specification sheet

Title	**Explore clerks**
Goal	The user explores all the clerks that were registered in any karting center the user manages.
Precondition	The user logged in, manages at least one karting center and at least one clerk works in the karting center.
Postcondition	The user obtains the list of clerks in the area dedicated to clerks.
Workflow	- The user moves to the area dedicated to clerks (the list is already provided). Note: a karting center admin can see all the pilots (also from other karting centers) in the area dedicated to pilots but can only see the clerks of the karting centers he manages in the area dedicated to clerks.

Title	**Explore tracks**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Explore clerks**.

Title	**Explore races**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Explore clerks**. The user explores all the races that were hosted on any of the tracks in any of the karting centers he manages.

Specification sheet

Title	**Read details on clerk**
Goal	The user chooses one clerk to focus on and reads its details.
Precondition	The user chose a clerk from a list of clerks (obtained from the homepage, from the area dedicated to clerks.)
Postcondition	The user obtains the details on the clerk (in the area dedicated to clerks).
Workflow	- The user chooses one clerk from a list (from the homepage or the area dedicated to clerks).

Title	**Read details on track**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Read details on clerk**.

Title	**Read details on race**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Read details on clerk**.

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Specification sheet

Title	**U.D. clerks**
Goal	The user updates or deletes a clerk.
Precondition	The user logged in.
Postcondition	The chosen clerk is updated or deleted.
Workflow	- The user moves to the area dedicated to clerks. - The user chooses the option to update or delete a clerk from the list of all clerks (provided in the area dedicated to clerks). The user can only update or delete clerks that work for a karting center he manages.

Title	**U.D. tracks**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **U.D. clerks**. The user can update or delete only tracks of karting centers he manages.

Title	**U.D. races**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **U.D. races**. The user can udpdate or delete races that took place or are going to take place on a track of a karting center he manages; when he does, the list of reservations on the same track associated to the race being updated/deleted is shown.

Specification sheet

Title	**Create clerks**
Goal	The user creates a new clerk.
Precondition	The user logged in.
Postcondition	The clerk is created.
Workflow	- The user moves to the area dedicated to clerks. - The user chooses the option to create a new clerk tht will be visible only to him.

Title	**Create tracks**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Create clerks**. The track created will be visible to everybody.

Title	**Create races**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Create clerks**. When the race is created, an associated reservation (weak entity) is created as well and all the clerks working for the karting center that hosts the new race will be able to confirm it. The reservation stores the information of the pilot or the organizer that created the race, in this case a fictitious organizer that is created apriori is used.

Specification sheet

Title	**Explore go-karts dedicated to track (TODO)**
Goal	The user explores the go-karts that are dedicated to a track.
Precondition	The user logged in, manages at least one karting center that has at least one track that has at least one go-kart dedicated to it.
Postcondition	The user obtains the list of go-karts in the area dedicated to go-karts.
Workflow	- A: the user chooses a track from the list of tracks (provided in the homepage) of the karting centers he manages. - B: the user moves to the area dedicated to tracks and chooses a track from the list of tracks (provided in the area dedicated to tracks) of the karting centers he manages. - The user chooses the option to explore go-karts dedicated to the track.

Specification sheet

Title	**U.D. go-karts (TODO)**
Goal	The user updates or deletes a go-kart.
Precondition	The user logged in and manages at least one karting center that has at least one track that has at least one go-kart dedicated to it.
Postcondition	The chosen go-kart is updated or deleted.
Workflow	- A: the user chooses a track from the list of tracks (provided in the homepage) of the karting centers he manages. - B: the user moves to the area dedicated to tracks and chooses a track from the list of tracks (provided in the area dedicated to tracks) of the karting centers he manages. - The user chooses the option to update or delete a go-kart from the list of go-karts provided in the same page with the details on the track.

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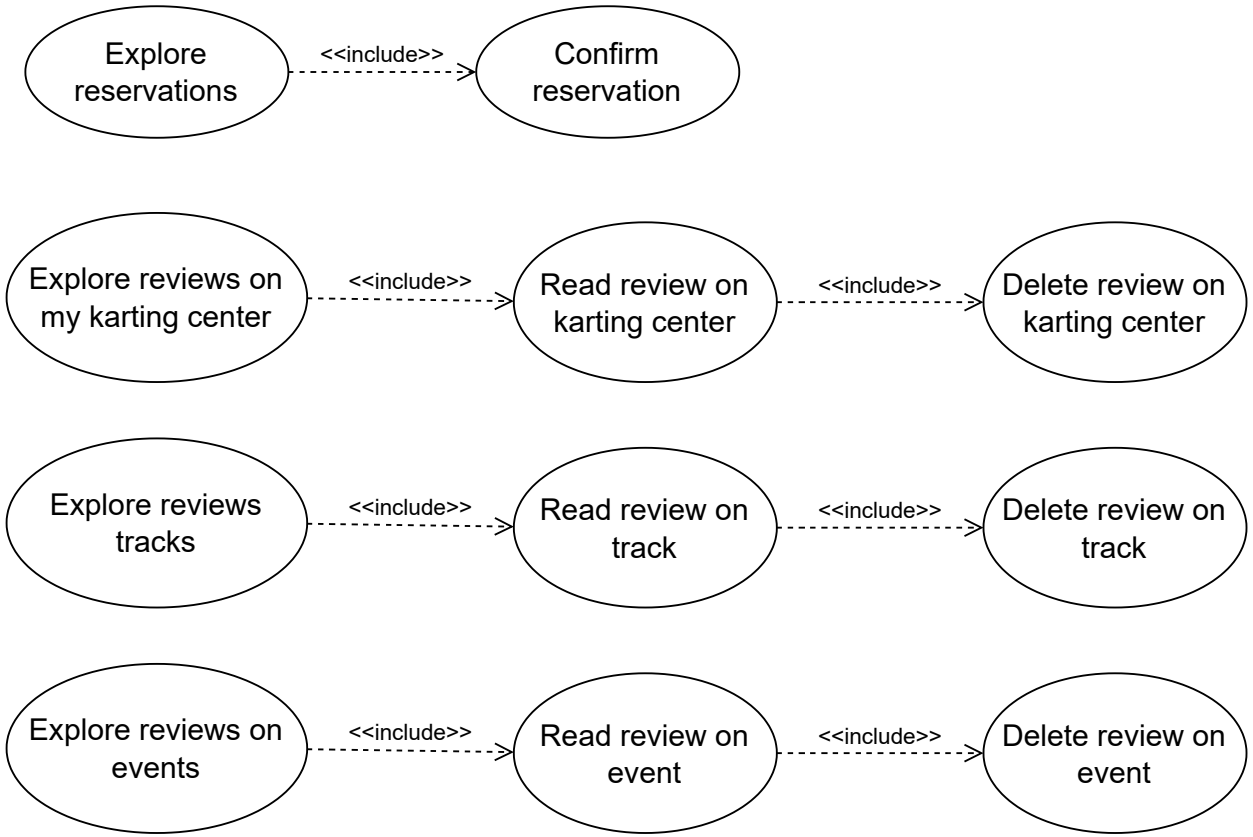
Specification sheet

Title	**Create go-karts (TODO)**
Goal	The user creates a new go-kart.
Precondition	The user logged in and manages at least one karting center that has at least one track.
Postcondition	The go-kart is created.
Workflow	- A: the user chooses a track from the list of tracks (provided in the homepage) of the karting centers he manages. - B: the user moves to the area dedicated to tracks and chooses a track from the list of tracks (provided in the area dedicated to tracks) of the karting centers he manages. - The user chooses the option to create a new go-kart dedicated to the track from the same page with the details on the track.

Clerk


Explore reservations
<<include>>
Confirm reservation
Explore reviews on my karting center
<<include>>
Read review on karting center
<<include>>
Delete review on karting center
Explore reviews tracks
<<include>>
Read review on track
<<include>>
Delete review on track
Explore reviews on events
<<include>>
Read review on event
<<include>>
Delete review on event
Clerk

Specification sheet

Title	**Explore reservations**
Goal	The user explores the reservations asked by pilots on any track of the karting center the user works for (a clerk can work on one karting center at a time.)
Precondition	The user logged in and works for a karting center that received at least a request for reservation on a track.
Postcondition	The user obtains the list of reservations in the area dedicated to reservations.
Workflow	- The user moves to the area dedicated to reservations (a list of the reservations grouped by track is provided).

Specification sheet

Title	**Confirm reservation**
Goal	The user confirms a reservation.
Precondition	The user logged in and works for a karting center that received at least a request for reservation on a track.
Postcondition	The reservation is confirmed (it now has both a pilot/organizer and a clerk associated to it).
Workflow	- The user moves to the area dedicated to reservations. - The user chooses the option to confirm a reservation from the list of reservations.

Specification sheet

Title	**Explore reviews on my karting center**
Goal	The user explores the reviews that were written on the karting center the user works for.
Precondition	The user logged in and works for a karting center that received at least one review.
Postcondition	The user obtains the list of reviews on the karting centers.
Workflow	- The user already has a list of reviews on the karting center he works for in the homepage.

Title	**Explore reviews on tracks**
Goal	The user explores the reviews that were written on tracks of the karting center the user works for.
Precondition	The user logged in and works for a karting center that received at least one review on a specific track.
Postcondition	The user obtains the list of reviews on the tracks.
Workflow	- The user already has a list of reviews on the karting center he works for in the homepage.

Title	**Explore reviews on events**
Goal	The user explores the reviews that were written on events that hosted at least one race on a track of the karting center the user works for.
Precondition	The user logged in and works for a karting center that hosted at least one race of an event that received at least one review.
Postcondition	The user obtains the list of reviews on the events.
Workflow	- The user already has a list of reviews on the karting center he works for in the homepage.

Specification sheet

Title	**Read review on karting center**
Goal	The user chooses one review to focus on and reads its details.
Precondition	The user logged in and chose a review from the list of reviews on the karting center.
Postcondition	The user obtains reads the review and can decide to delete it.
Workflow	- The user chooses one review from the list of reviews on the karting center (from the homepage).

Title	**Read review on track**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Read review on karting center**.

Title	**Read review on event**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Read review on karting center**.

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Specification sheet

Title	**Delete review on karting center**
Goal	The user deletes a review on the karting center.
Precondition	The user logged in and chose a review from the list of reviews on the karting center.
Postcondition	The user deletes the review.
Workflow	- The user chooses one review from the list of reviews on the karting center (from the homepage). - The user chooses the option to delete the review.

Title	**Delete review on track**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Delete review on karting center**.

Title	**Delete review on event**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Delete review on karting center**.

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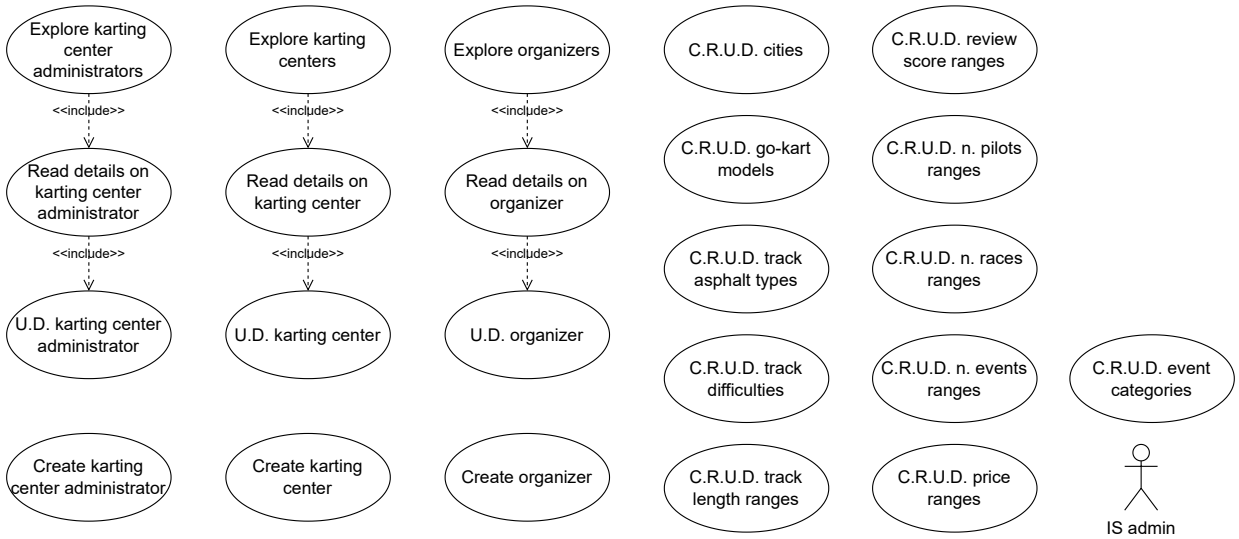
Information system administrator



Specification sheet

Title	**Explore karting center administrators**
Goal	The user explores the karting center administrators
Precondition	The user logged in and has already created at least a karting center administrator.
Postcondition	The user obtains the list of karting center administrators.
Workflow	- The user moves to the area dedicated to karting center administrators.

Title	**Explore karting centers**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Explore karting center administrators**.

Title	**Explore organizers**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Explore karting center administrators**.

Specification sheet

Title	**Read details on karting center administrator**
Goal	The user chooses one karting center administrator to focus on and reads its details.
Precondition	The user logged in and has already created at least a karting center administrator.
Postcondition	The user obtains the details on the karting center administrator.
Workflow	- The user moves to the area dedicated to karting center administrators. - The user chooses one karting center administrator from the list of karting center administrators.

Title	**Read details on karting center**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Read details on karting center administrator**.

Title	**Read details on organizer**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Read details on karting center administrator**.

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Specification sheet

Title	**U.D. karting center administrator**
Goal	The user updates or deletes a karting center administrator.
Precondition	The user logged in and has already created at least a karting center administrator.
Postcondition	The chosen karting center administrator is updated or deleted.
Workflow	- The user moves to the area dedicated to karting center administrators. - The user chooses one karting center administrator from the list of karting center administrators. - The user chooses the option to update or delete the karting center administrator.

Title	**U.D. karting center**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **U.D. karting center administrator**.

Title	**U.D. organizer**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **U.D. karting center administrator**.

Specification sheet

Title	**Create karting center administrator**
Goal	The user creates a new karting center administrator.
Precondition	The user logged in.
Postcondition	The karting center administrator is created.
Workflow	- The user moves to the area dedicated to karting center administrators. - The user chooses the option to create a new karting center administrator.

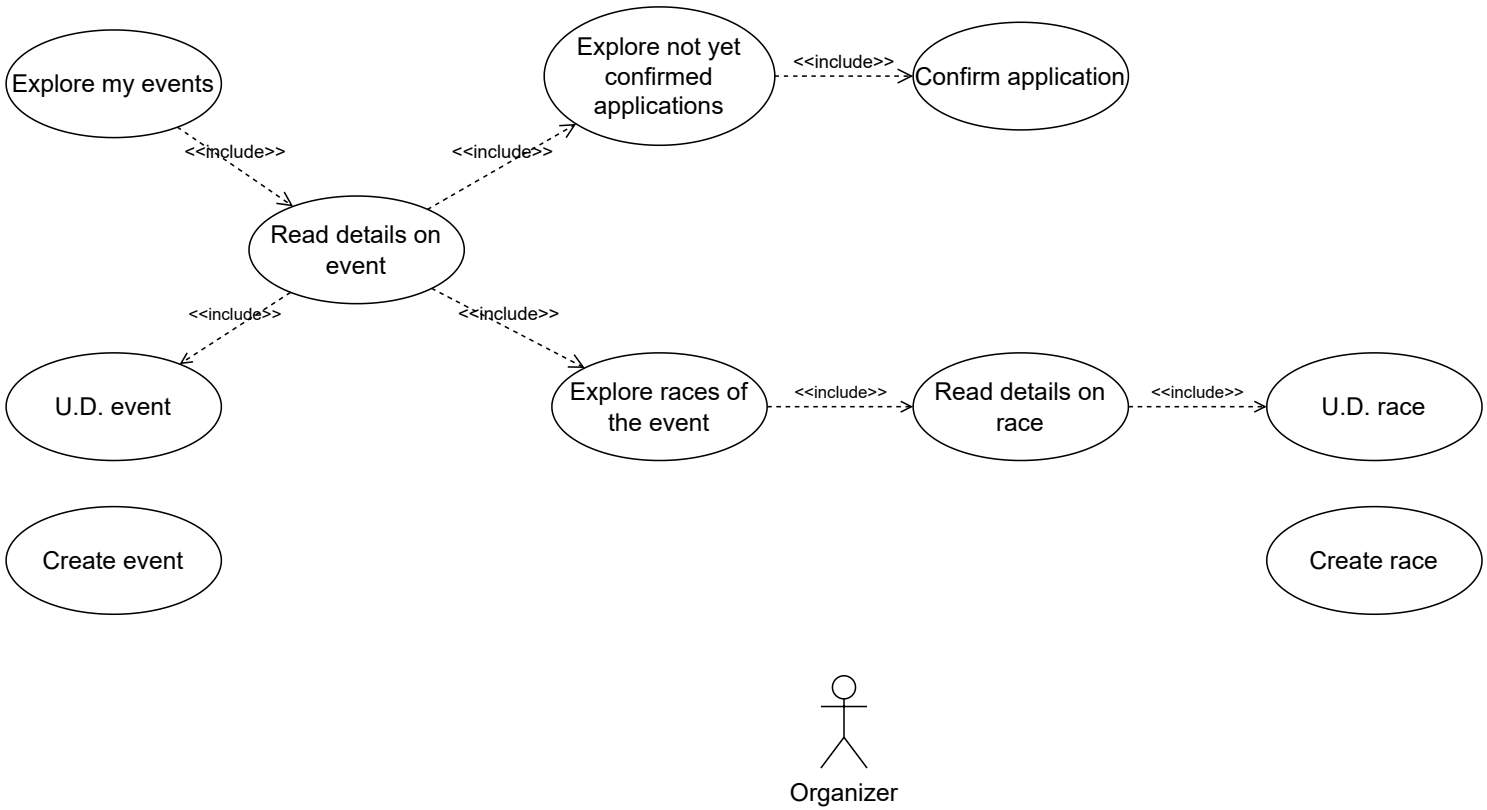
Title	**Create karting center**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Create karting center administrator**.

Title	**Create organizer**
Goal, Precondition, Postcondition, Workflow	Similar to the use case **Create karting center administrator**.

The information system administrator is responsible for the management of all those entities useful to the visitors to navigate the site. He has the possibility to create, update and delete the following entities:

- City
- Go-kart model
- Track asphalt type
- Track difficulty
- Track length range
- Review score range
- Number of pilots range
- Number of races range
- Number of events range
- Price range
- Event category

Organizer


Explore my events
Explore not yet confirmed applications
<<include>>
Confirm application
<<include>>
<<include>>
Read details on event
<<include>>
<<include>>
U.D. event
Explore races of the event
<<include>>
Read details on race
<<include>>
U.D. race
Create event
Create race
Organizer

Specification sheet

Title	**Explore my events**
Goal	The user explores the events he created.
Precondition	The user logged in and created at least one event.
Postcondition	The user obtains the list of events he created.
Workflow	- A: the user already has a list of events he created and the applications received for each event in the homepage. - B: the user moves to the area dedicated to events and the list is already provided.

Specification sheet

Title	**Read details on my event**
Goal	The user chooses one event to focus on and reads its details.
Precondition	The user logged in.
Postcondition	The user obtains the details on the event and can move on to other related informations (e.g. applications).
Workflow	- A: the user chooses one event from the list of events he created in the homepage. - B.1: the user moves to the area dedicated to events. - B.2: the user chooses one event from the list of events he created in the area dedicated to events.

Specification sheet

Title	**U.D. events**
Goal	The user updates or deletes an event he created.
Precondition	The user logged in and he created at least one event.
Postcondition	The event is updated or deleted, the modifications might affect the races created for the track and the participations of the pilots to the races of the event but the applications made by pilots are not affected.
Workflow	- A: the user chooses one event from the list of events he created in the homepage. - B.1: the user moves to the area dedicated to events. - B.2: the user chooses one event from the list of events he created in the area dedicated to events. - The user chooses the option to update or delete the event.

Specification sheet

Title	**Create event**
Goal	The user creates a new event.
Precondition	The user logged in and created at least one race.
Postcondition	The event is created and pilots can apply to it.
Workflow	- The user moves to the area dedicated to events. - The user chooses the option to create a new event (he will need to choose among races he created to fill the event).

Specification sheet

Title	**Explore not yet confirmed applications**
Goal	The user explores the applications received for his events that he did not confirm yet.
Precondition	The user logged in, created at least one event and at least one pilot applied to it.
Postcondition	The user obtains the list of applications that he did not confirm yet.
Workflow	- A: the user chooses one event from the list of events he created in the homepage. - B.1: the user moves to the area dedicated to events. - B.2: the user chooses one event from the list of events he created in the area dedicated to events. (- The list of applications not yet confirmed is already provided.)

Specification sheet

Title	**Confirm application**
Goal	The user confirms an application received for one of his events.
Precondition	The user logged in, created at least one event and at least one pilot applied to it.
Postcondition	The application is confirmed and the pilot is automatically inserted as a participant to all of the races of the event (this might change, e.g. in case the organizer decides to organize races in a tournament fashion, but the application will not be affected).
Workflow	- A: the user chooses one event from the list of events he created in the homepage. - B.1: the user moves to the area dedicated to events. - B.2: the user chooses one event from the list of events he created in the area dedicated to events. - The user chooses the option to accept an application from the list of applications not yet confirmed.

Specification sheet

Title	**Explore races of the event**
Precondition	The user logged in, created at least one event and the event has at least one race.
Postcondition	The user obtains the list of races of a specific event.
Workflow	- A: the user chooses one event from the list of events he created in the homepage. - B.1: the user moves to the area dedicated to events. - B.2: the user chooses one event from the list of events he created in the area dedicated to events. (- The list of races of the chosen event is already provided.)

Specification sheet

Title	**Read details on race**
Precondition	The user logged in, created at least one event and the event has at least one race.
Postcondition	The user obtains the details on the race and can move on (e.g. updating or deleting it.)
Workflow	- A: the user chooses one event from the list of events he created in the homepage. - B.1: the user moves to the area dedicated to events. - B.2: the user chooses one event from the list of events he created in the area dedicated to events. - The user chooses one race from the list of races of the chosen event.

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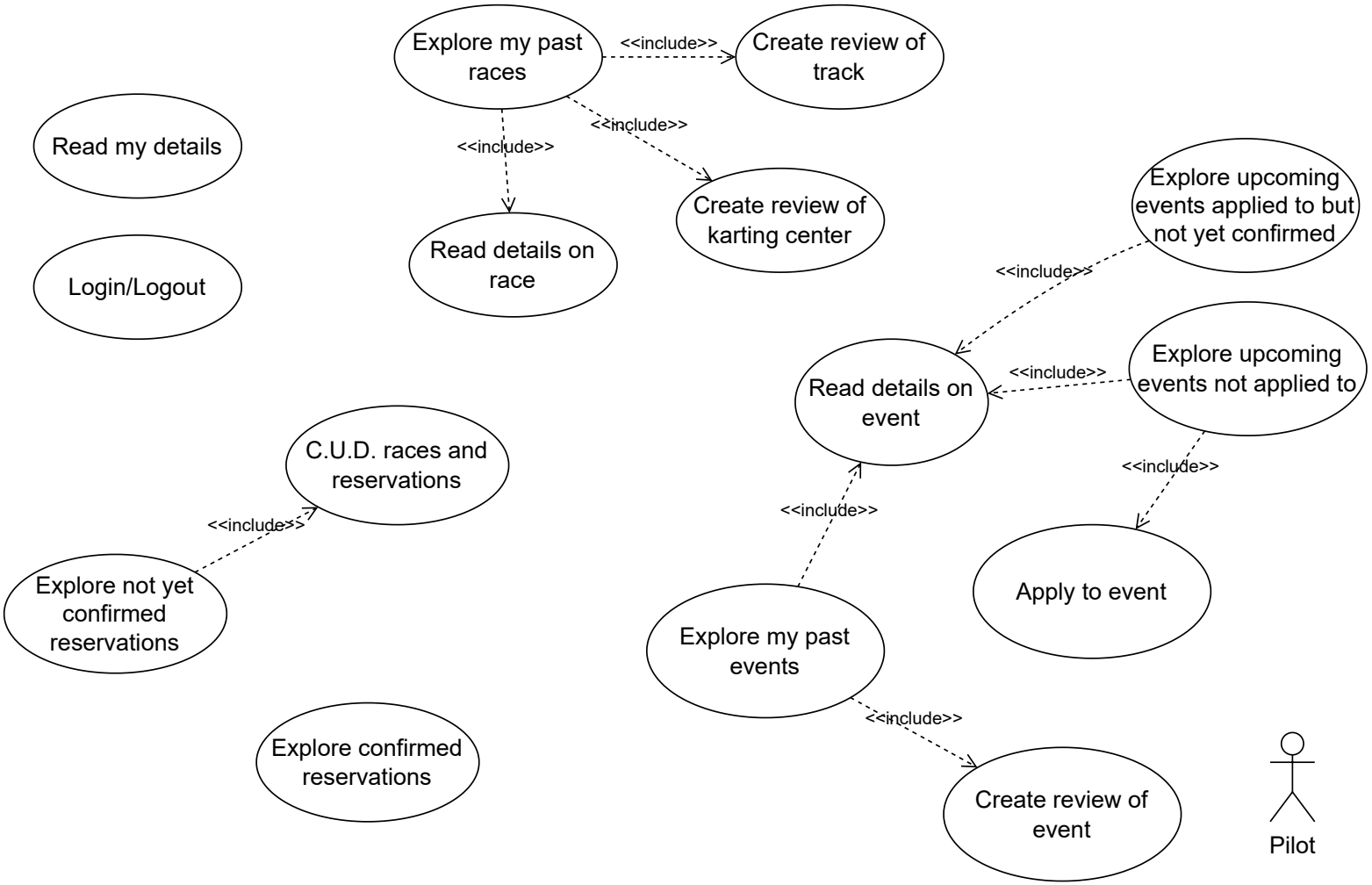
Specification sheet

Title	**U.D. race**
Precondition	The user logged in, created at least one event and the event has at least one race.
Postcondition	The race gets updated or deleted, this affects the relations with the pilots (*participation*) but not the application of the pilots to the event.
Workflow	- A: the user chooses one event from the list of events he created in the homepage. - B.1: the user moves to the area dedicated to events. - B.2: the user chooses one event from the list of events he created in the area dedicated to events. - The user chooses one race from the list of races of the chosen event. - The user chooses the option to update or delete the race.

Specification sheet

Title	**Create race**
Precondition	The user logged in.
Postcondition	A new race is available to the user to be added to an event.
Workflow	- The user moves to the area dedicated to events. - The user chooses the option to create a new race.

Pilot


Explore my past races
<<include>>
Create review of track
<<include>>
<<include>>
Read my details
Read details on race
Create review of karting center
Login/Logout
Explore upcoming events applied to but not yet confirmed
<<include>>
Read details on event
<<include>>
Explore upcoming events not applied to
C.U.D. races and reservations
<<include>>
<<include>>
<<include>>
Explore not yet confirmed reservations
Apply to event
Explore my past events
<<include>>
Explore confirmed reservations
Create review of event
Pilot

Specification sheet

Title	**Read my details**
Goal	The user reads its own personal informations, already available in the homepage.
Precondition	The user logged in.
Postcondition	The user obtains its personal informations.
Workflow	- The user logs in and reads the informations already present in the homepage.

Specification sheet

Title	**Explore not yet confirmed reservations**
Goal	The user explores the reservations he made that are not yet confirmed by any clerk
Precondition	The user logged in.
Postcondition	The user obtains the list of reservations that are not yet confirmed by any clerk.
Workflow	- The user moves to the area dedicated to reservations and the list is already provided.

Specification sheet

Title	**C.U.D. races and reservations**
Goal	The user asks for a reservation to have a race on a track of a karting center.
Precondition	The user logged in.
Postcondition	A race and its relative reservation (a weak entity of the race) are created, updated or deleted.
Workflow	- The user moves to the area dedicated to reservations. - A: the user selects a reservation from those not yet confirmed and updates it or deletes it. - B: the user creates a new reservation without the need to select one from those not yet confirmed. Note: the existence of the reservation is hidden to the user when he creates/updates/deletes the race, the reservation just takes some of the attributes of the race (Date, Start, End) and is shared with the clerks of the karting center, who can confirm it or not. The user can only see the reservations that are confirmed or not, he does not edit them directly but only through the actions on the race.

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Specification sheet

Title	**Explore confirmed reservations**
Goal	The user explores the reservations he made that are confirmed by a clerk
Precondition	The user logged in.
Postcondition	The user obtains the list of reservations that are confirmed by a clerk.
Workflow	- The user moves to the area dedicated to reservations and the list is already provided.

Specification sheet

Title	**Explore my past races**
Goal	The user explores the races he had in the past (not the races he booked through the previous use case).
Precondition	The user logged in.
Postcondition	The user obtains the list of past races.
Workflow	- The user moves to the area dedicated to races and the list is already provided.

Specification sheet

Title	**Read details on race**
Goal	The user chooses one race to focus on and reads its details.
Precondition	The user logged in.
Postcondition	The user obtains the details on the race and related informations such as the best lap-time of that race (it could be from the user himself or another pilot).
Workflow	- The user moves to the area dedicated to races. - The user chooses one race from the list of past races.

Specification sheet

Title	**Create review of karting center**
Goal	The user creates a review of a karting center.
Precondition	The user logged in and had at least one race that will allow him to write reviews for the track and the karting center that hosted that race.
Postcondition	The review is stored and a clerk of the karting center will be able to read it and remove it if it is considered inappropriate.
Workflow	- The user moves to the area dedicated to reviews. - From the list of past races, the user selects the option to write a review of the karting center that hosted the chosen race from the list. - The user chooses a score, writes the review and submits it.

Title	**Create review of track**
Goal, precondition, postcondition, workflow	Equivalent to the previous use case, but the review is of a track.

Specification sheet

Title	**Explore upcoming events applied to but not confirmed yet**
Goal	The user explores the events that he applied to and that have not been confirmed by an organizer yet.
Precondition	The user logged in.
Postcondition	The user obtains the list of events that he applied to and that have not been confirmed yet.
Workflow	- The user moves to the area dedicated to events and the list is already provided.

Specification sheet

Title	**Explore upcoming events not applied to**
Goal	The user explores the upcoming events that he did not apply to.
Precondition	The user logged in.
Postcondition	The user obtains the list of upcoming events that he did not apply to.
Workflow	- The user moves to the area dedicated to events and the list is already provided.

Specification sheet

Title	**Explore my past events**
Goal	The user explores the events that he attended in the past.
Precondition	The user logged in and attended at least one event in the past.
Postcondition	The user obtains the list of events that he attended in the past.
Workflow	- The user moves to the area dedicated to events. - The user selects the option to explore the events that he attended in the past.

Specification sheet

Title	**Apply to an event**
Goal	The user applies to an event.
Precondition	The user logged in and he has not already applied to the event.
Postcondition	The user applies to the event and the organizer will be able to see and confirm the application.
Workflow	- The user moves to the area dedicated to events. - The user selects one event from the list of upcoming events that he did not apply to. - The user applies to the event.

Specification sheet

Title	**Read details on event**
Goal	The user chooses one event to focus on and reads its details.
Precondition	The user logged in.
Postcondition	The user obtains the details on the event.
Workflow	- The user moves to the area dedicated to events. - A: the user chooses one event from the list of upcoming events (both applied to and not applied to). - B.1: the user chooses the option to explore the events that he attended in the past. - B.2: the user chooses one event from the list of past events.

Specification sheet

Title	**Create review of event**
Goal	The user creates a review of an event he has attended in the past.
Precondition	The user logged in and attended at least one event in the past.
Postcondition	The review is stored and the organizer of the event and the clerks of all the karting centers that hosted at least one race of the event will be able to read it, clerks will be able to remove it if it is considered inappropriate.
Workflow	- The user moves to the area dedicated to events. - The user chooses the option to explore the events that he attended in the past. - The user selects the option to write a review from one of the events in the list. - The user chooses a score, writes the review and submits it.

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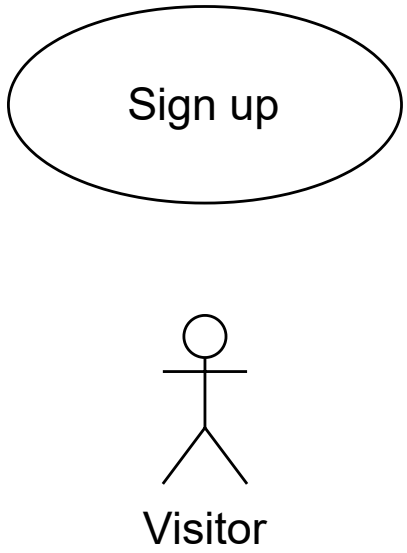
Visitor



Data dictionary

Name	**Karting center**
Synonym	Go-karting center
Description	Karting center
Example of instance	Name: Mantova Karting Center *City*: Mantova *nPilots*: 5937 *nRaces*: 12485 *nEvents*:74 *avgReviewScore*: 3.9
Properties	Name: the name of the karting center *City*: the city where the karting center is located *nPilots*: the number of pilots that have raced in the karting center *nRaces*: the number of races that took place in the karting center *nEvents*: the number of events that had at least one race hosted by the karting center *avgReviewScore*: the average score of the reviews of the karting center
Components	None

Relations	KartingCenter_City (N:1): the city where the karting center is located KartingCenter_KartingCenterAdmin (N:1): the karting center administrator of the karting center KartingCenter_Clerk (1:N): the clerks of the karting center KartingCenter_KartingCenterReview (1:N): the reviews of the karting center KartingCenter_Track (1:N): the tracks of the karting center *KartingCenter_NPilotsRange* (N:1) the range within the number of pilots that have raced in the karting center falls *KartingCenter_NRacesRange* (N:1) the range within the number of races that took place in the karting center falls *KartingCenter_NEventsRange* (N:1) the range within the number of events that took place in the karting center falls *KartingCenter_ReviewScoreRange* (N:1) the range within the average score of the reviews of the karting center falls *KartingCenter_Event* (N:N) the events the karting center hosted
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**City**
Synonym	None
Description	City
Example of instance	Name: Mantova
Properties	Name: the name of the city
Components	None
Relations	City_KartingCenter (1:N): the karting centers located in the city *City_Track* (1:N): the tracks (inside a karting center) located in the city *City_Event* (N:N): the events that had at least one race on a track of a karting center located in the city
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**Track**
Synonym	Circuit
Description	Track
Example of instance	Name: T1 Length: 700m *City*: Mantova *AsphaltType*: resin *nRentalGoKarts*: 23 *Difficulty*: Intermediate *nPilots*: 3873 *nRaces*: 7437 *nEvents*: 43 *avgReviewScore*: 4.2
Properties	Name: the name of the track Length: the length of the track *City*: the city where the karting center the track belongs to is located *AsphaltType*: the type of asphalt of the track *nRentalGoKarts*: the number of rental go-karts available in the track *Difficulty*: the difficulty of the track *nPilots*: the number of pilots that have raced on the track *nRaces*: the number of races that took place on the track *nEvents*: the number of events that had at least one race on the track *avgReviewScore*: the average score of the reviews of the track
Components	Timetable: the timetable of the track Leaderboard: a leaderboard of the track

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Relations	Track_KartingCenter (N:1): the karting center the track belongs to Track_TrackReview (1:N): the reviews of the track Track_Timetable (1:1): the timetable of the track Track_Leaderboard (1:N): the leaderboards of the track Track_Race (1:N): the races that took place on the track Track_GoKart (1:N): the go-karts dedicated to the track Track_GoKartModel (N:N): the go-kart models allowed on the track Track_TrackAshpalt (N:1): the asphalt of the track Track_TrackDifficulty (N:1): the difficulty of the track Track_Pilot (N:N): the pilots that have the track as one of their favourite *Track_City* (N:1): the city where the karting center the track belongs to is located *Track_TrackLengthRange* (N:1): the range within the length of the track falls *Track_NPilotsRange* (N:1): the range within the number of pilots that have raced on the track falls *Track_NRacesRange* (N:1): the range within the number of races that took place on the track falls *Track_NEventsRange* (N:1): the range within the number of events that took place on the track falls *Track_ReviewScoreRange* (N:1): the range within the average score of the reviews of the track falls
Superconcepts	None
Subconcepts	PopularTrack: a track that is recurrent in the list of favourite tracks of pilots

Data dictionary

Name	**Go-kart**
Synonym	Kart
Description	Go-kart
Example of instance	Name: T1.1 GoKartModel: Sodi RX7
Properties	Name: the name of the go-kart *GoKartModel*: the model of the go-kart
Components	None
Relations	GoKart_Track (N:1): the track the go-kart is dedicated to GoKart_GoKartModel (N:1): the model of the go-kart
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**Timetable**
Synonym	None
Description	Timetable
Example of instance	*TrackName*: T1
Properties	*TrackName*: the name of the track
Components	None
Relations	Timetable_Track (1:1): the track the timetable belongs to Timetable_Reservation (1:N): the reservations of the timetable
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**Leaderboard**
Synonym	Ranking
Description	Leaderboard
Example of instance	Title: Best of the week *TrackName*: T1
Properties	Title: the title of the leaderboard *TrackName*: the name of the track
Components	None
Relations	Leaderboard_Track (N:1): the track each leaderboard belongs to Leaderboard_LapTime (N:N): the lap times the leaderboard focuses on
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**Race**
Synonym	None
Description	Race
Example of instance	ID: 2036 Date: 2024-02-15 Start: 15:00 End: 15:09 ForEvent: false *GoKartingCenterName*: Mantova Karting Center *TrackName*: T1 *nParticipants*: 8 *fastestLapTime*: 00:00:48.595
Properties	ID Date Start End ForEvent: whether the race was created by an organizer for an event or not *GoKartingCenterName* *TrackName*: the name of the track that hosts the race *nParticipants* *fastestLapTime*
Components	Reservation

Relations	Race_Track (N:1): the track the race has been raced on Race_Reservation (1:1): the reservation that has been made for the race Race_Pilot (N:N): the pilots that participated in the race Race_LapTime (1:N): every lap-time of every pilot that participated in the race Race_Event (N:1): the event the race is part of *Race_Pilot* (1:N): the pilots who have this race as their last race *Race_Laptime* (1:1): the best lap-time of the race
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**Reservation**
Synonym	Booking
Description	Reservation
Example of instance	Date: 2024-02-15 Start: 15:00 End: 15:09 *ReservedByPilot*: denisfesta *ReservedByOrganizer*: None *ConfirmedByClerk*: Jessica
Properties	Date Start End *ReservedByPilot*: the pilot who made the reservation (this property is mutually exclusive with *ReservedByOrganizer*) *ReservedByOrganizer*: the organizer who made the reservation (this property is mutually exclusive with *ReservedByPilot*) *ConfirmedByClerk*: the clerk who confirmed the reservation
Components	None
Relations	Reservation_Timetable (N:1): the timetable where the reservation is stored Reservation_Pilot (N:1): the pilot who made the reservation Reservation_Organizer (N:1): the organizer who made the reservation Reservation_Clerk (N:1): the clerk who confirmed the reservation Reservation_Race (1:1): the race this reservation has been made for
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**Lap-time**
Synonym	Lap
Description	Lap-time
Example of instance	LapNumber: 7 LapTime: 00:00:48.595
Properties	LapNumber: the *LapNumber*-th lap LapTime: the time measured for the *LapNumber*-th lap for a particular pilot
Components	None
Relations	LapTime_Pilot (N:1): the pilot who made the lap-time LapTime_Race (N:1): the race where the lap-time has been made *LapTime_Race* (1:1): in case the lap-time is the best of a race *LapTime_Leaderboard* (N:N): the leaderboards where the lap-time is displayed
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**Application**
Synonym	Request
Description	Application
Example of instance	Confirmed: true *EventName*: Mantova Karting Cup 2024 *RequestFromPilot*: denisfesta
Properties	Confirmed: whether the application has been confirmed or not (the organizer who created the event is the only one who can accept an application) *EventName*: the name of the event the application has been made for *RequestFromPilot*: the pilot who made the application
Components	None
Relations	Application_Pilot (N:1): the pilot who made the application Application_Event (N:1): the event the application has been made for
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**Event**
Synonym	Tournament
Description	Event
Example of instance	Name: Mantova Karting Cup 2024 Price: 100 *FirstDate*: 2024-02-15 *OrganizerName*: WD40 *EventCategory*: Open *nParticipants*: 64 *nRaces*: 12 *nReviews*: 23 *avgReviewScore*: 4.5
Properties	Name: the name of the event Price: the price of the event *FirstDate*: the date of the first race of the event *OrganizerName*: the username of the organizer who created the event *EventCategory*: the category of the event (*open*, *intermediate*, *pro*) *nParticipants*: the number of pilots who applied for the event and whose application was confirmed *nRaces*: the number of races of the event *nReviews*: the number of written reviews about the event *avgReviewScore*: the average score of the reviews about the event
Components	None

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Relations	Event_Organizer (N:1): the organizer who created the event Event_Application (1:N): the applications received for the event Event_Race (1:N): the races of the event Event_EventCategory (N:1): the category of the event Event_EventReview (1:N): the reviews about the event *Event_ReviewScoreRange* (N:1): the range within the average score of the reviews about the event falls *Event_Pilot* (N:N): the pilots who applied for the event and whose application was confirmed *Event_PriceRange* (N:1): the range within the price of the event falls *Event_City* (N:N): the cities where the races of the event took place *Event_Track* (N:N): the tracks that hosted the races of the event *Event_KartingCenter* (N:N): the karting centers whose tracks hosted the races of the event
Superconcepts	None
Subconcepts	Controversial event, Popular evenet, Upcoming event

Data dictionary

Name	**Review**
Synonym	Opinion
Description	Review
Example of instance	TextReview: Fantastic track, with a lot of bumps and holes. Score: 4/5
Properties	TextReview: the text of the review Score: the score of the review
Components	None
Relations	None
Superconcepts	None
Subconcepts	KartingCenterReview, TrackReview, EventReview

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Data dictionary

Name	**KartingCenterReview**
Synonym	None
Description	Karting center review
Example of instance	TextReview (inherited from **Review**): Very rude and violent staff, but nice tracks! Score (inherited from **Review**): 4/5
Properties	None
Components	None
Relations	KartingCenterReview_KartingCenter (N:1): the karting center the review is about KartingCenterReview_Pilot (N:1): the pilot who wrote the review
Superconcepts	Review
Subconcepts	None

Data dictionary

Name	**TrackReview**
Synonym	None
Description	Track review
Example of instance	TextReview (inherited from **Review**): The track is very nice, but the asphalt is not in good conditions. Score (inherited from **Review**): 3/5
Properties	None
Components	None
Relations	TrackReview_Track (N:1): the track the review is about TrackReview_Pilot (N:1): the pilot who wrote the review
Superconcepts	Review
Subconcepts	None

Data dictionary

Name	**EventReview**
Synonym	None
Description	Event review
Example of instance	TextReview (inherited from **Review**): The event was a mess, delayed a couple of times and some pilots were not correctly registered. Score (inherited from **Review**): 2/5
Properties	None
Components	None
Relations	EventReview_Event (N:1): the event the review is about EventReview_Pilot (N:1): the pilot who wrote the review
Superconcepts	Review
Subconcepts	None

Data dictionary

Name	**User**
Synonym	None
Description	User
Example of instance	Username: denisfesta Password: 12345asdf! Email: d.festa004@studenti.unibs.it Name: Denis Surname: Festa Address: Via Trento 5, Rovato (BS)
Properties	Username: the username of the user Password: the password of the user Email: the email address of the user Name: the name of the user Surname: the surname of the user Address: the address of the user
Components	None
Relations	None
Superconcepts	None
Subconcepts	Admin, KartingCenterAdmin, Clerk, Organizer, Pilot

Data dictionary

Name	**Admin**
Synonym	Administrator
Description	The administrator does not have any relation with other entities of the information system but is needed to create karting center administrators, organizers and all the auxiliary objects useful for the visitor to explore easily.
Example of instance	Empty (all the properties are inherited from **User**)
Properties	None
Components	None
Relations	None
Superconcepts	User
Subconcepts	None

Data dictionary

Name	**KartingCenterAdmin**
Synonym	None
Description	Karting center administrator
Example of instance	Empty (all the properties are inherited from **User**)
Properties	None
Components	None
Relations	KartingCenterAdmin_KartingCenter (1:N): the karting centers the administrator is in charge of
Superconcepts	User
Subconcepts	None

Data dictionary

Name	**Clerk**
Synonym	None
Description	Clerk
Example of instance	Empty (all the properties are inherited from **User**)
Properties	None
Components	None
Relations	Clerk_KartingCenter (N:1): the karting center the clerk works for Clerk_Reservation (1:N): the reservations the clerk confirmed
Superconcepts	User
Subconcepts	None

Data dictionary

Name	**Organizer**
Synonym	None
Description	Organizer
Example of instance	Empty (all the properties are inherited from **User**)
Properties	None
Components	None
Relations	Organizer_Event (1:N): the events the organizer created Organizer_Reservation (1:N): the reservations the organizer requested
Superconcepts	User
Subconcepts	None

Data dictionary

Name	**Pilot**
Synonym	None
Description	Pilot
Example of instance	Username (inherited from **User**): denisfesta Password (inherited from **User**): 12345asdf! Email (inherited from **User**): d.festa004@studenti.unibs.it Name (inherited from **User**): Denis Surname (inherited from **User**): Festa Address (inherited from **User**): Via Trento 5, Rovato (BS) Age: 25 Weight: 70
Properties	Age: the age of the pilot Weight: the weight of the pilot
Components	None
Relations	Pilot_KartingCenterReview (1:N): the reviews the pilot wrote about karting centers Pilot_TrackReview (1:N): the reviews the pilot wrote about tracks Pilot_EventReview (1:N): the reviews the pilot wrote about events Pilot_Application (1:N): the applications the pilot made Pilot_Reservation (1:N): the reservations the pilot made Pilot_Track (N:N): the tracks the pilot has as favorite Pilot_Race (N:N): the races the pilot participated in Pilot_LapTime (1:N): the lap-times the pilot made *Pilot_Race* (N:1): the last race the pilot participated in *Pilot_Event* (N:N): the events the pilot was accepted to participate in
Superconcepts	User
Subconcepts	None

Data dictionary

Name	**ReviewScoreRange**
Synonym	None
Description	Review score range
Example of instance	LowerBoundIncluded: 1 UpperBoundExcluded: 3
Properties	LowerBoundIncluded: the lower bound of the range UpperBoundExcluded: the upper bound of the range
Components	None
Relations	ReviewScoreRange_KartingCenter (1:N): the karting centers whose average review score falls in the range ReviewScoreRange_Track (1:N): the tracks whose average review score falls in the range ReviewScoreRange_Event (1:N): the events whose average review score falls in the range
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**NPilotsRange**
Synonym	None
Description	A range of number of pilots
Example of instance	LowerBoundIncluded: 0 UpperBoundExcluded: 100
Properties	LowerBoundIncluded: the lower bound of the range UpperBoundExcluded: the upper bound of the range
Components	None
Relations	NPilotsRange_KartingCenter (1:N): the karting centers whose number of pilots falls in the range NPilotsRange_Track (1:N): the tracks whose number of pilots falls in the range
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**NRacesRange**
Synonym	None
Description	A range of number of races
Example of instance	LowerBoundIncluded: 10000 UpperBoundExcluded: 20000
Properties	LowerBoundIncluded: the lower bound of the range UpperBoundExcluded: the upper bound of the range
Components	None
Relations	NRacesRange_KartingCenter (1:N): the karting centers whose number of races (the sum of all the races on all the tracks of that karting center) falls in the range NRacesRange_Track (1:N): the tracks whose number of races that took place on them falls in the range
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**NEventsRange**
Synonym	None
Description	A range of number of events
Example of instance	LowerBoundIncluded: 0 UpperBoundExcluded: 10
Properties	LowerBoundIncluded: the lower bound of the range UpperBoundExcluded: the upper bound of the range
Components	None
Relations	NEventsRange_KartingCenter (1:N): the karting centers whose number of hosted events falls in the range NEventsRange_Track (1:N): the tracks whose number of events that took place on them falls in the range
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**GoKartModel**
Synonym	None
Description	Go-kart model
Example of instance	GoKartModel: Sodi RX7
Properties	GoKartModel: the name of the go-kart model
Components	None
Relations	GoKartModel_GoKart (1:N): the go-karts of that model GoKartModel_Track (N:N): the tracks where that model is available
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**TrackAsphalt**
Synonym	None
Description	Track asphalt
Example of instance	TrackAsphalt: Asphalt
Properties	TrackAsphalt: the name of the track asphalt
Components	None
Relations	TrackAsphalt_Track (1:N): the tracks with that asphalt
Superconcepts	None
Subconcepts	None

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Data dictionary

Name	**TrackDifficulty**
Synonym	None
Description	Track difficulty
Example of instance	TrackDifficulty: Intermediate
Properties	TrackDifficulty: the name of the track difficulty
Components	None
Relations	TrackDifficulty_Track (1:N): the tracks with that difficulty
Superconcepts	None
Subconcepts	None

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Data dictionary

Name	**TrackLengthRange**
Synonym	None
Description	Track length range
Example of instance	LowerBoundIncluded: 0 UpperBoundExcluded: 300
Properties	LowerBoundIncluded: the lower bound of the range UpperBoundExcluded: the upper bound of the range
Components	None
Relations	TrackLengthRange_Track (1:N): the tracks whose length falls in the range
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**PopularTrack**
Synonym	None
Description	A popular track is a track that has been selected as favorite by at least N pilots. This subclass of **Track** is to be considered as a **view** of the database that invites the visitor during its navigation and at the same time speeds up the execution of the query.
Example of instance	Empty (all the properties are inherited from **Track**)
Properties	None
Components	None
Relations	None
Superconcepts	Track
Subconcepts	None

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Data dictionary

Name	**ControversialEvent**
Synonym	None
Description	A controversial event is an event that has received at least N reviews with a score lower than 25% of the maximum score and at least N reviews with a score higher than 75% of the maximum score. This subclass of **Event** is to be considered as a **view** of the database.
Example of instance	Empty (all the properties are inherited from **Event**)
Properties	None
Components	None
Relations	None
Superconcepts	Event
Subconcepts	None

Data dictionary

Name	**PopularEvent**
Synonym	None
Description	A popular event is an event that already took place, to which at least N pilots participated and that received at least N reviews. This subclass of **Event** is to be considered as a **view** of the database.
Example of instance	Empty (all the properties are inherited from **Event**)
Properties	None
Components	None
Relations	None
Superconcepts	Event
Subconcepts	None

Data dictionary

Name	**UpcomingEvent**
Synonym	None
Description	An upcoming event is an event that has not yet taken place, its attribute *FirstDate* is in the future. This subclass of **Event** is to be considered as a **view** of the database.
Example of instance	Empty (all the properties are inherited from **Event**)
Properties	None
Components	None
Relations	None
Superconcepts	Event
Subconcepts	None

Data dictionary

Name	**PriceRange**
Synonym	None
Description	A range of price of the events
Example of instance	LowerBoundIncluded: 0 UpperBoundExcluded: 50
Properties	LowerBoundIncluded: the lower bound of the range UpperBoundExcluded: the upper bound of the range
Components	None
Relations	PriceRange_Event (1:N): the events whose price falls in the range
Superconcepts	None
Subconcepts	None

Data dictionary

Name	**EventCategory**
Synonym	None
Description	The event can be open to every pilot (entry level difficulty), intermediate (for those pilots that feel more competitive) and pro (only pilots that show up at a high rank in the leaderboards can participate).
Example of instance	EventCategory: Open
Properties	EventCategory: the name of the event category
Components	None
Relations	EventCategory_Event (1:N): the events from that category
Superconcepts	None
Subconcepts	None

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