

# Karting report

Denis Festa

January 29, 2024



# User groups

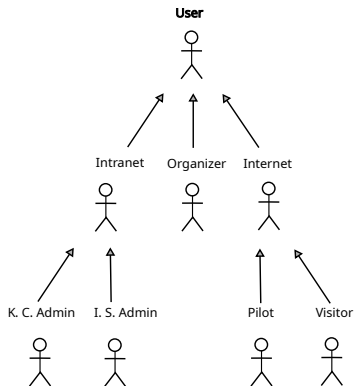
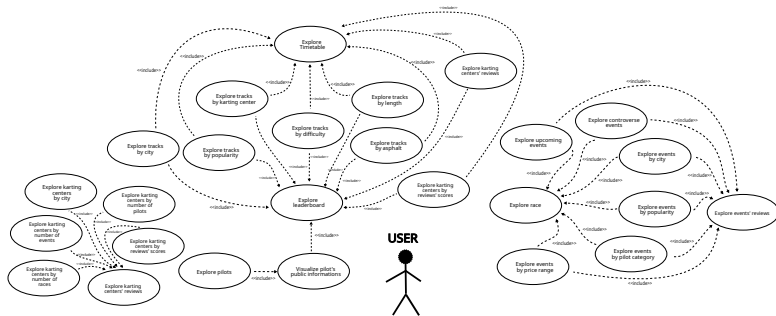
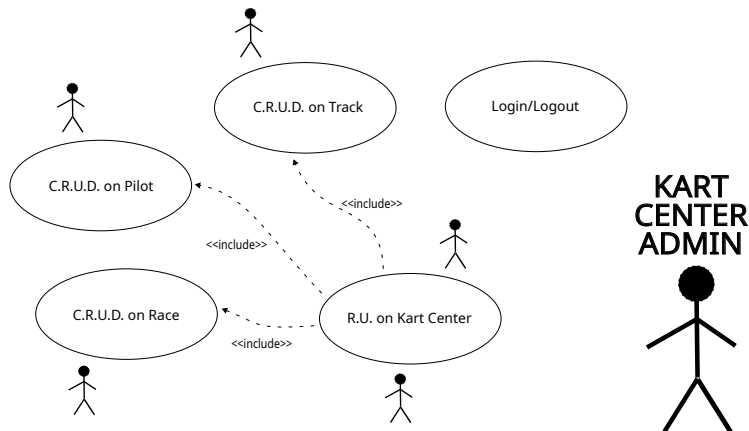
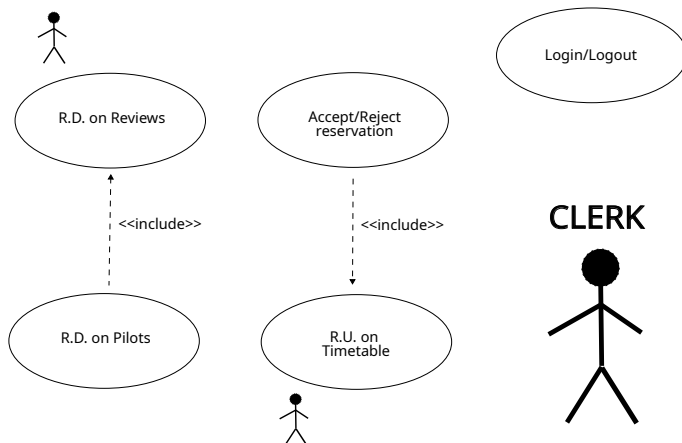


Figure: User groups

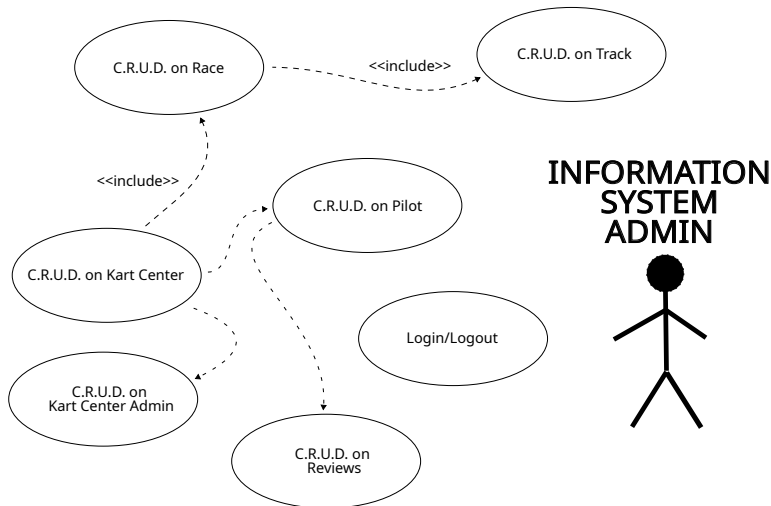


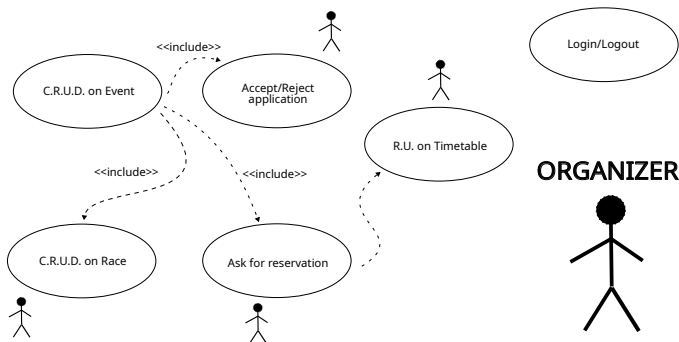
# Kart center administrator

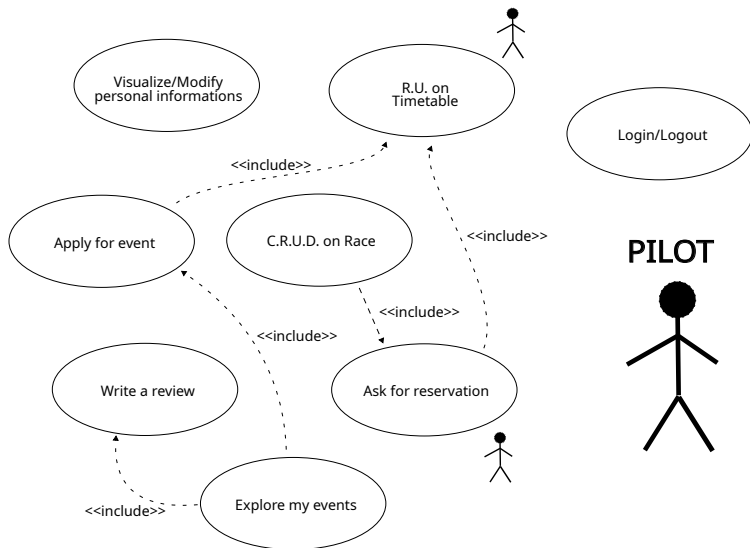




# Information system administrator



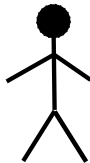








**VISITOR**



# Karting center administrator

Group name	<b>Karting center administrator</b>
Profile data	Name, Surname, e-mail address, password, address, phone number
Super group	Intranet
Sub group	None
Relevant use cases	CRUD on events, races, pilots, tracks, leaderboard, login, logout
Read	All
Write	All

Group name	<b>Pilot</b>
Profile data	Name, Surname, e-mail address, password, address, phone number
Super group	Internet
Sub group	None
Relevant use cases	Create a race, Apply for an event, login, logout
Read	All
Write	Race, Leaderboard

# Karting center

Name	<b>Karting center</b>
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	<p>KartingCenter.City (N:1): the city where the karting center is located</p> <p>KartingCenter.KartingCenterAdmin (N:1): the karting center administrator of the karting center</p> <p>KartingCenter.Clerk (1:N): the clerks of the karting center</p> <p>KartingCenter.KartingCenterReview (1:N): the reviews of the karting center</p> <p>KartingCenter.Track (1:N): the tracks of the karting center</p> <p><i>KartingCenter.NPilotsRange</i> (N:1) the range within the number of pilots that have raced in the karting center falls</p> <p><i>KartingCenter.NRacesRange</i> (N:1) the range within the number of races that took place in the karting center falls</p> <p><i>KartingCenter.NEventsRange</i> (N:1) the range within the number of events that took place in the karting center falls</p> <p><i>KartingCenter.KCReviewScoreRange</i> (N:1) the range within the average score of the reviews of the karting center falls</p> <p><i>KartingCenter.Event</i> (N:N) the events the karting center hosted</p>
Superconcepts	None
Subconcepts	None

Name	<b>City</b>
Synonym	None
Description	City
Example of instance	Name: Mantova
Properties	Name: the name of the city
Components	None
Relations	<i>City_KartingCenter</i> (1:N): the karting centers located in the city <i>City_Track</i> (1:N): the tracks (inside a karting center) located in the city <i>City_Event</i> (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

Name	<b>Track</b>
Synonym	Circuit
Description	Track
Example of instance	<p>Name: T1  Length: 700m  City: Mantova  <i>AsphaltType</i>: resin  <i>nRentalGoKarts</i>: 23  <i>Difficulty</i>: Intermediate  <i>nPilots</i>: 3873  <i>nRaces</i>: 7437  <i>nEvents</i>: 43  <i>avgReviewScore</i>: 4.2</p>
Properties	<p>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  <i>AsphaltType</i>: the type of asphalt of the track  <i>nRentalGoKarts</i>: the number of rental go-karts available in the track  <i>Difficulty</i>: the difficulty of the track  <i>nPilots</i>: the number of pilots that have raced on the track  <i>nRaces</i>: the number of races that took place on the track  <i>nEvents</i>: the number of events that had at least one race on the track  <i>avgReviewScore</i>: the average score of the reviews of the track</p>
Components	<p>Timetable: the timetable of the track  Leaderboard: a leaderboard of the track</p>

Relations	<p>Track.KartingCenter (N:1): the karting center the track belongs to</p> <p>Track.TrackReview (1:N): the reviews of the track</p> <p>Track.Timetable (1:1): the timetable of the track</p> <p>Track.Leaderboard (1:N): the leaderboards of the track</p> <p>Track.Race (1:N): the races that took place on the track</p> <p>Track.GoKart (1:N): the go-karts dedicated to the track</p> <p>Track.GoKartModel (N:N): the go-kart models allowed on the track</p> <p>Track.TrackAshpalt (N:1): the asphalt of the track</p> <p>Track.TrackDifficulty (N:1): the difficulty of the track</p> <p>Track.Pilot (N:N): the pilots that have the track as one of their favorite</p> <p>Track.City (N:1): the city where the karting center the track belongs to is located</p> <p>Track.TrackLengthRange (N:1): the range within the length of the track falls</p> <p>Track.NPilotsRange (N:1): the range within the number of pilots that have raced on the track falls</p> <p>Track.NRacesRange (N:1): the range within the number of races that took place on the track falls</p> <p>Track.NEventsRange (N:1): the range within the number of events that took place on the track falls</p> <p>Track.TrackReviewScoreRange (N:1): the range within the average score of the reviews of the track falls</p>
Superconcepts	None
Subconcepts	Popular track: a track that is recurrent in the list of favorite tracks of pilots



Name	<b>Go-kart</b>
Synonym	Kart
Description	Go-kart
Example of instance	Name: T1.1 GoKartModel: Sodi RX7
Properties	Name: the name of the go-kart <i>GoKartModel</i> : 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

# Timetable

Name	<b>Timetable</b>
Synonym	None
Description	Timetable
Example of instance	<i>TrackName</i> : T1
Properties	<i>TrackName</i> : 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

# Leaderboard

Name	<b>Leaderboard</b>
Synonym	Ranking
Description	Leaderboard
Example of instance	Title: Best of the week <i>TrackName</i> : T1
Properties	Title: the title of the leaderboard <i>TrackName</i> : the name of the track
Components	None
Relations	Leaderboard.Track (N:1): the track each leaderboard belongs to <i>Leaderboard.LapTime</i> (1:N): the lap times the leaderboard focuses on
Superconcepts	None
Subconcepts	None

# Race

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

Relations	<p>Race_Track (N:1): the track the race has been raced on</p> <p>Race.Reservation (1:1): the reservation that has been made for the race</p> <p>Race_Pilot (1:N): the pilots that participated in the race</p> <p>Race_Pilot (N:1): the pilot who has this race as his/her last race</p> <p>Race_LapTime (1:N): every lap-time of every pilot that participated in the race</p> <p>Race_Event (N:1): the event the race is part of</p>
Superconcepts	None
Subconcepts	None

# Reservation

Name	<b>Reservation</b>
Synonym	Booking
Description	Reservation
Example of instance	Date: 2024-02-15 Start: 15:00 End: 15:09 <i>ReservedByPilot</i> : Denis Festa <i>ReservedByOrganizer</i> : None <i>ConfirmedByClerk</i> : Jessica
Properties	Date Start End <i>ReservedByPilot</i> : the pilot who made the reservation (this property is mutually exclusive with <i>ReservedByOrganizer</i> ) <i>ReservedByOrganizer</i> : the organizer who made the reservation (this property is mutually exclusive with <i>ReservedByPilot</i> ) <i>ConfirmedByClerk</i> : 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 (N:1): the race this reservation has been made for
Superconcepts	None
Subconcepts	None

# Lap-time

Name	<b>Lap-time</b>
Synonym	Lap
Description	Lap-time
Example of instance	LapNumber: 7 LapTime: 00:00:48.595
Properties	LapNumber: the <i>LapNumber</i> -th lap LapTime: the time measured for the <i>LapNumber</i> -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 <i>LapTime.Leadersboard</i> (N:N): the leaderboards where the lap-time is displayed
Superconcepts	None
Subconcepts	None

# Application

Name	<b>Application</b>
Synonym	Request
Description	Application
Example of instance	Confirmed: true <i>EventName</i> : Mantova Karting Cup 2024 <i>RequestFromPilot</i> : Denis Festa
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) <i>EventName</i> : the name of the event the application has been made for <i>RequestFromPilot</i> : 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



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

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