



Requirements and Analysis Document for Qwalk

Version 1

1 Introduction

Everyone can enjoy a quiz walk! It's a good game for people to get to know each other, get some exercise and have fun together. Though, there are some things that can make a quiz walk not as fun as it might be. Papers could get unreadable because of rain or difficulty mounting the questions where you'd want them to be. That is why we're making the mobile app Qwalk, an application that allows you to create a digital quiz. In the app you can place the questions on a map and share it with others who can go look for the questions with the mobile gps. Some advantages the app has over regular paper-quizzes are:

- No paper-questions to get lost or destroyed.
- It doesn't leave any trash in the nature.
- There's less risk of quiz-takers straying off the track.
- You can move or change the questions without leaving the house.

The application is aimed to be used mostly for social gatherings, but may also be used for example for educational purposes. It is meant to be used by people of various ages in the range 10-70.

- The target group of the application is big gatherings of people in various ages and gender.
- We expect the application to be used for social or educational purposes.
- The application takes form on a map where the users can orient themselves with a GPS-technique, kind of like google maps. You can create a quiz and place the questions anywhere you want on the map. The contestants can follow the map to the quiz marks, when close enough to a question's position they can view the question and answer it on the device screen.

<Bakgrund som förklarar varför detta program behövs (förutom att det är obligatorisk att vi gör detta). Vilket problem åtgärdar det? Vad ska det göra? Vem kommer dra nytta av detta och vem kommer använda detta? I vilken situation kommer det användas? Definiera programmet/applikationen. Beskriv generella egenskaper.>

1.2 Definitions, acronyms and abbreviations

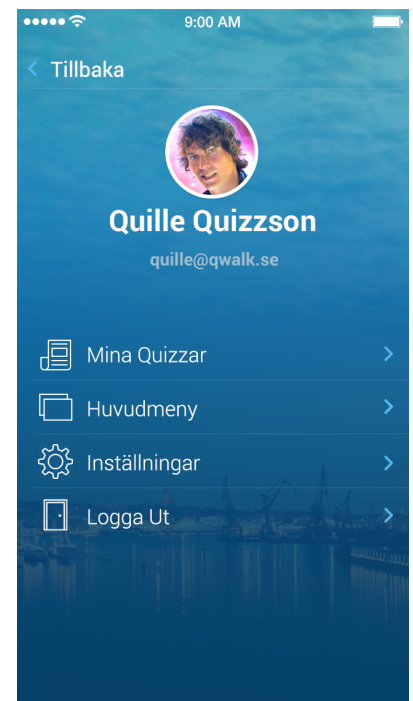
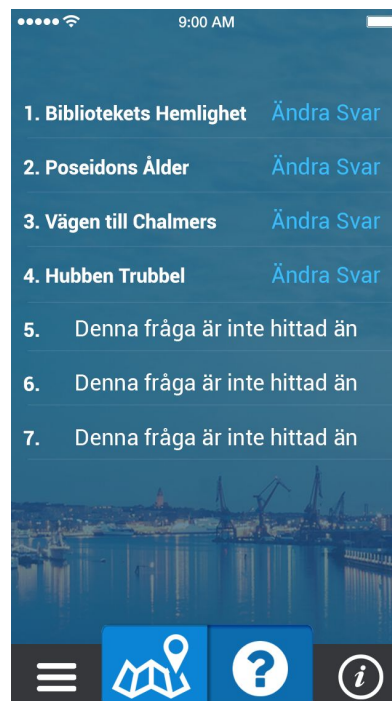
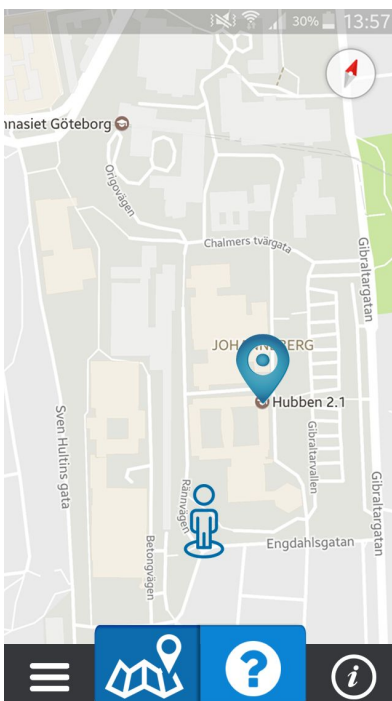
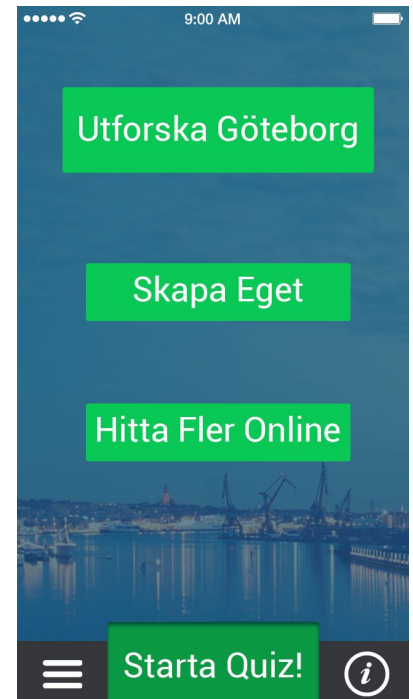
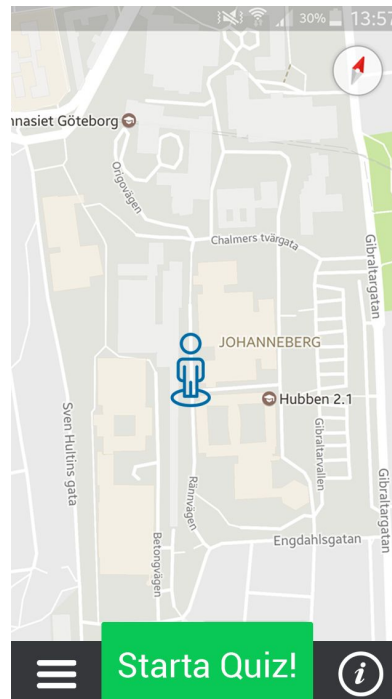
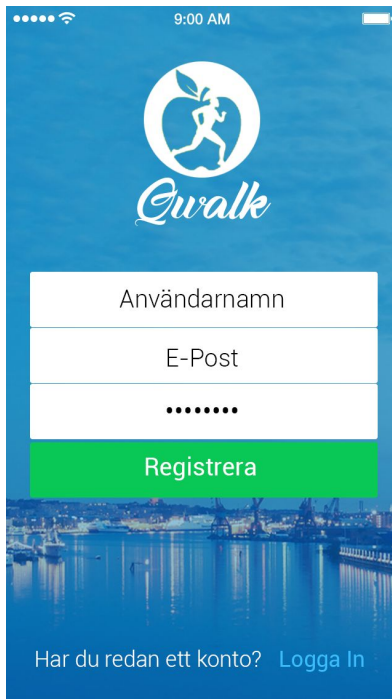
<Skapa en ordlista för att undvika förvirring.>

Qwalk - is the actual application but also a quiz walk



2 Requirements

2.1 User Interface





2.2 Functional Requirements

- Start the application. UC: 1
- Take an existing quiz walk.
- Create a new quiz and place the questions on the map.
- Share quizzes with others so that you can take them together.
- Navigate to menu/home screen
- Create a user account. UC: 1

2.3 Non-Functional Requirements

- Testable
- Simple
- Free from clutter

3 Use Cases

<UML use case- diagram>

3.1 Use case listing

Use Case 1: Start

Summary: Starts the application, prepares player for playing or creating Qwalks.

Priority: Medium to high

Extends: None

Includes: Home Page

Participators: Actual player

Normal Flow

User has already signed in during a previous session.

	User	System
1	Starts the application Qwalk.	
2		See UC 2: Home Page

Alternative flow 1 - Sign In

User is not signed in and has an account.

	User	System
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1	Starts the application Qwalk.	
2		Shows fields for entering email/username, password, as well as a register button and a button for “Spela som gäst”.
3	Types in email and password, clicks on “Logga in”.	
4		See <i>UC 2: Home Page</i>

Alternative flow 2 - Register

User is not signed in and does not have an account.

	User	System
1	Starts the application Qwalk.	
2		Shows fields for entering email/username, password, as well as a register button and a button for “Spela som gäst”.
3	Clicks on “Registrera”.	
4		Shows text fields for email, username, password, an icon for adding a profile image and a button “Registrera”.
5	Types in user information and clicks “Registrera”.	
6		See <i>UC 2: Home Page</i>

Alternative flow 3 - Play as Guest

User is not signed in and does not want to create an account, plays as guest.

	User	System
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1	Starts the application Qwalk.	
2		Shows fields for entering email/username, password, as well as a register button and a button for “Spela som gäst”.
3	Clicks on “Spela som gäst”.	
4		See <i>UC 2: Home Page</i>



Use Case 2: Home Page

Summary: The main screen where the user navigates to everywhere else.

Priority: Medium to high

Extends: UC 1: Start

Includes: UC 3: Play Qwalk, UC 4: Create/Edit Qwalk, UC Y: Share Qwalk

Participants: Actual player

Normal Flow - Start a Qwalk

	User	System
1		Shows a scrollable screen with lists of featured Qwalks and a button for creating new Qwalks.
2	Selects a Qwalk	
3		Shows a detailed view of the selected Qwalk, with title, description and image. Also shows buttons for playing qwalk, sharing qwalk and if allowed, editing qwalk.
4	Presses Play Qwalk	
5		See <i>UC 3: Play Qwalk</i>

Alternative flow 1 - Edit a Qwalk

	User	System
1		Shows a scrollable screen with lists of featured Qwalks and a button for creating new Qwalks.
2	Selects a Qwalk	
3		Shows a detailed view of the selected Qwalk, with title, description and image. Also shows buttons for playing qwalk, sharing qwalk and if allowed, editing qwalk.



4	Presses Edit Qwalk	
5		See <i>UC 4: Create/Edit Qwalk</i>

Alternative flow 2 - Share a Qwalk

	User	System
1		Shows a scrollable screen with lists of featured Qwalks and a button for creating new Qwalks.
2	Selects a Qwalk	
3		Shows a detailed view of the selected Qwalk, with title, description and image. Also shows buttons for playing qwalk, sharing qwalk and if allowed, editing qwalk.
4	Presses Share Qwalk	
5		See <i>UC 5: Share Qwalk</i>

Alternative flow 3 - Create a Qwalk

	User	System
1		Shows a scrollable screen with lists of featured Qwalks and a button for creating new Qwalks.
2	Presses New Qwalk	
3		See <i>UC 4: Create/Edit Qwalk</i>



Use Case 3: Play Qwalk

Summary: The player has chosen a qwalk to play and wants to start the quiz walk.

Priority: High

Extends: UC 2: Home Page

Includes: UC 2: Home Page

Participators: Actual player

	User	System
1		Changes to the map view and zooms in on the users current physical location where an avatar marks the current position.
2		An arrow points from the avatar in direction to the next question. The distance to the question and the number of the question is shown next to the arrow/in the frame.
3	Walks in the direction of the arrow.	
4		The current position of the avatar on the map updates.
5	Is closing in on a question.	
6		Shows a “pin” on the map symbolising a question.
7	Is located within the area for the question.	
8		The question “pin” that symbolises the question becomes bigger/changes appearance and becomes clickable.
9	Clicks on the “pin”	
10		Current question shows in a dialog in full screen.
11	Clicks on an answer.	
12		Chosen answer is marked with a different color.



13	Clicks on “Svara”/”Spara svar”.	
14	Iterate from step 2 until all questions are answered.	Iterate from step 2 until all questions are answered.
15	Clicks on “Frågehistorik”.	
16		Shows all the current questions and how the user answered.
17	Clicks on “Lämna in quiz”.	
18		Shows a view with total score and buttons with different options, e.g. “Visa facit” and “Se statistik för detta quiz”.
19	Clicks on “Stäng”.	
20		See UC 2: Home Page



Use Case 4: Create/Edit Qwalk

Summary: Create or edit new quiz.

Priority: High

Extends: UC 2: Home Page

Includes: UC 5: Share Qwalk

Participants: Actual Player

	User	System
1		Shows page for “Skapa nytt quiz/qwalk”. There are fields for: <ul style="list-style-type: none">- Title- Description- Image- New question- Set positions- Share- ...
2	Fills in title, description, adds an image. Clicks on “+Ny fråga”.	
3		Shows form for “Skapa ny fråga”. The title in the form is “Fråga x”, where x is the number of the question. There is an icon for adding an image under the title. There is a text field for filling in the question and text fields for filling in the answer options. A button for “Nästa” and “Föregående” is shown in the lower corners and a button for “Klar med frågorna” between them.
4	Fills in question, answer options and adds an image. Clicks on “Nästa”.	
5		Iterate from step 3 until “Klar



		med frågorna” is clicked.
6	Clicks on “Klar med frågorna”.	
7		Go back to page for creating the quiz/qwalk.
8	Clicks on “Placera ut frågorna”.	
9		A map is shown in full screen and focuses on the current position. A button “Klar med placering” is shown on the screen.
10		A pin is located in the lower right corner next to the number of the question that the user is placing and the text “Välj placering på frågan”.
11	Clicks on preferred position for the question on the map.	
12		The pin “falls down” on chosen position on the map. Iterate from step 10 until all questions are placed.
13	Clicks on “Klar med placering”.	
14		Go back to the form for creating the quiz/qwalk.
15	Clicks on “Dela med vänner”.	
16		See <i>UC 5: Share Qwalk</i>
17	Clicks on “Skapa quiz”	
18		Shows lists over all quizzes with the recently created quiz at the top of the list under “Egna quiz/qwalks”.



Use Case 5: Share Qwalk

Summary: Share Qwalks to enable other users to play the Qwalk.

Priority: Low

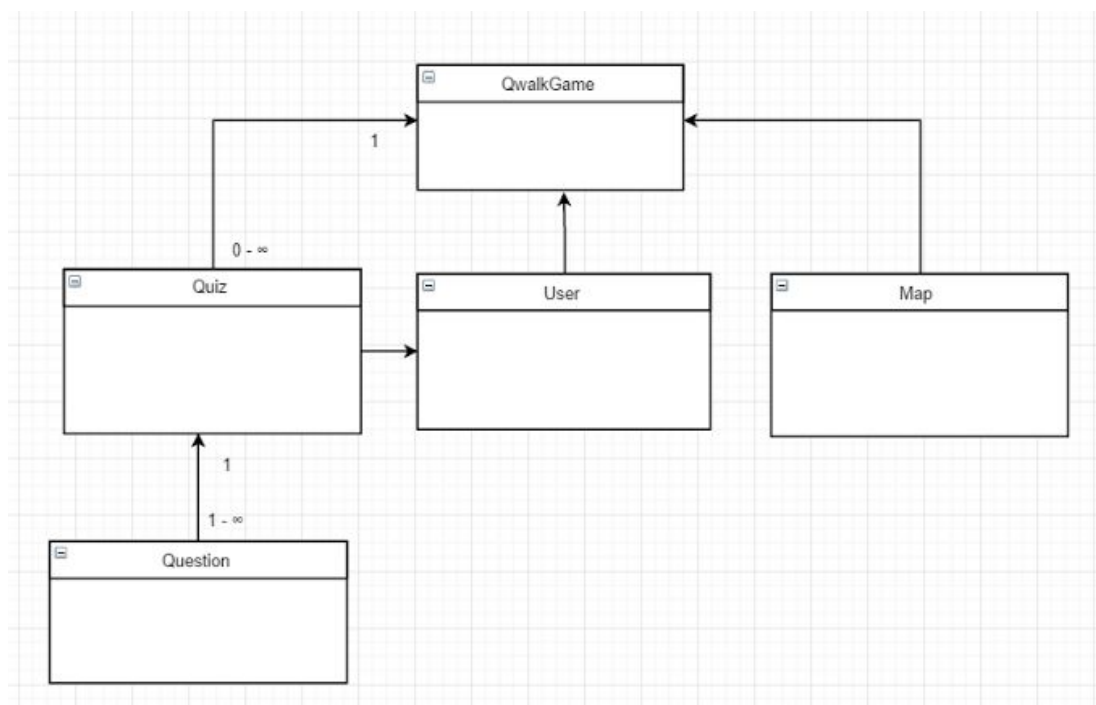
Extends: UC 2: Home page, UC 4: Create/Edit Qwalk

Includes: None

Participants: Actual player

	User	System
1		New page with title "Share with friends". Shows a search field.
2	Types in username to find that user's quizzes.	
3		Shows lists of searchresult.
4	Clicks on preferred user.	
5		Shows a list of that user's quizzes.
	...	

4 Domain Model





4.1 Class Responsibilities

QwalkGame is responsible for the game flow.

Quiz has question objects, a title, a description, a picture

Question has a question, alternatives, the right answer, a position...

User is responsible for username, email address, password. Can check if equal to another user.

Map has user position, current question, functionality for checking if the user position is close to the question.

5 References