System Requirements Specifications

For "HaaS" – internet sharing application

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2 INTRODUCTION

This is a system requirements specification which mentions the functional and non-functional requirements

3 PROJECT DESCRIPTION

Our application is about internet connection sharing, it allows you to share your internet connection with others and get benefit by earning coins that can be used to get connections when you are out of internet connection, which utilizes the unused quota and helps you to be connected all the time.

4 PROJECT SCOPE

- Users must have accounts that identify their different devices
- Users can connect to app's networks by Coins that can be collected by sharing their network through the app
- There are 2 kinds of coins
    - Golden Coins: collected by sharing mobile internet
    - Silver Coins: collected by sharing computer/ laptop internet
- Users will have local list of friends
- Users can transfer coins to registered users (by their email)
- The application can lend users limited coins when they run out of it.
- Each new registered user will have initial demo coins that can't be transferred
- Users can define amount of shared megabytes and set timers to their shared network
- The application will divide the bandwidth equally among the connected users and limit the number of users according to the sharer bandwidth.

We found that these points are **out of our scope** for now:

- The application doesn't have a service provider concept, that means no service provider to provide added services that user can do by collecting coins and no provider to buy coins from.
- Users who are out of coins, don't have friends to transfer coins to them, and who don't have internet connection to share will not be able to use the system.
- Users that share their network and have many points, other than using them through the system (use, transfer, or lend), they can't do anything with them (for example sell them).

5 FUNCTION REQUIREMENTS

5.1 HOST APP REQUIREMENTS

This section will cover the requirements of the host user of our application. User can host networks by using the PC application or the mobile application

5.1.1 Host PC

The requirements is based on these modules

5.1.1.1 Managing sessions

This module is responsible for any functionality related to the sessions

- Host users can set timers to their shared network.
- Host users can limit the megabytes for downloads from their network.
- The Application determines the number of users able to connect to the network depending on its specifications.
- The application divides the bandwidth according to number of connected users.

5.1.2 Host Mobile

5.1.2.1 Managing sessions

This module is responsible for any functionality related to the sessions

- Host users can set timers to their shared network.
- Host users can limit the megabytes for downloads from their network.
- The Application determines the number of users able to connect to the network depending on the speed of it.
- The application divides the bandwidth according to number of connected users.

5.2 GUEST SIDE REQUIREMENTS

5.2.1 Guest PC

5.2.1.1 Managing accounts

This module is responsible for any functionality related to the accounts in the pc guest side

- Registering by mobile number.
- Linking devices to accounts automatically when detected.
- Linking coins to accounts.
- Retrieving passwords.
- Viewing profile.
- Viewing my local friend list (client side only).

5.2.1.2 *Managing Coins*

This module is responsible for any functionality related to the coins

- Viewing my coins and their types (golden/silver).
- Handling coins transferred between registered users.

5.2.2 Guest Mobile

5.2.2.1 *Managing accounts*

This module is responsible for any functionality related to the accounts in the mobile guest side

- Registering by mobile number.
- Linking devices to accounts automatically when detected.
- Linking coins to accounts.
- Retrieving passwords.
- Viewing profile.
- Viewing my local friend list (client side only).

5.2.2.2 *Managing Coins*

This module is responsible for any functionality related to the coins

- Viewing my coins and their types (golden/silver).
- Handling coins transferred between registered users.

5.3 SERVER SIDE REQUIREMENTS

- Storing the application data into Database.

5.3.1 Managing accounts

This module is responsible for any functionality related to the accounts in the mobile guest side

- Registering by mobile number.
- Linking devices to accounts automatically when detected.
- Linking coins to accounts.
- Retrieving passwords.
- Viewing profile.
- Viewing my local friend list (client side only).

5.3.2 Managing coins

This module is responsible for any functionality related to the coins in the server

- Depending on the connection type the server decides suitable coins that can be spent.
- Differentiate between gained and demo coins to limit transferring the demo ones.

6 NONFUNCTIONAL REQUIREMENTS

- The application must prevents the unauthorized users to connect the shared networks.
- The application must have good performance especially in the mobile side.

7 FUTURE WORK – PHASE 2

- Users can have friends saved on the server side.
- Users can show, add, delete and edit their friend lists.
- Users can share internet with their friends for free.
- Users can lend their friends coins when needed.
- User can be weighted while connecting to the network to get higher bandwidth than the other connected users.