STACKS ON STACKS

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Introduction

System Overview

The ArivlApp is a seamless access system. The ArivlApp gives access to authorized users at registered boom gate(s). At each boom gate, there is an Arivl box which facilitates the communication between the ArivlApp and the boom gate. A user needs to be registered in order to gain access to certain gates. The user logs in using their phone number and password only once. The user needs to enable their Bluetooth in order to ensure that the boom gate opens when in close proximity.
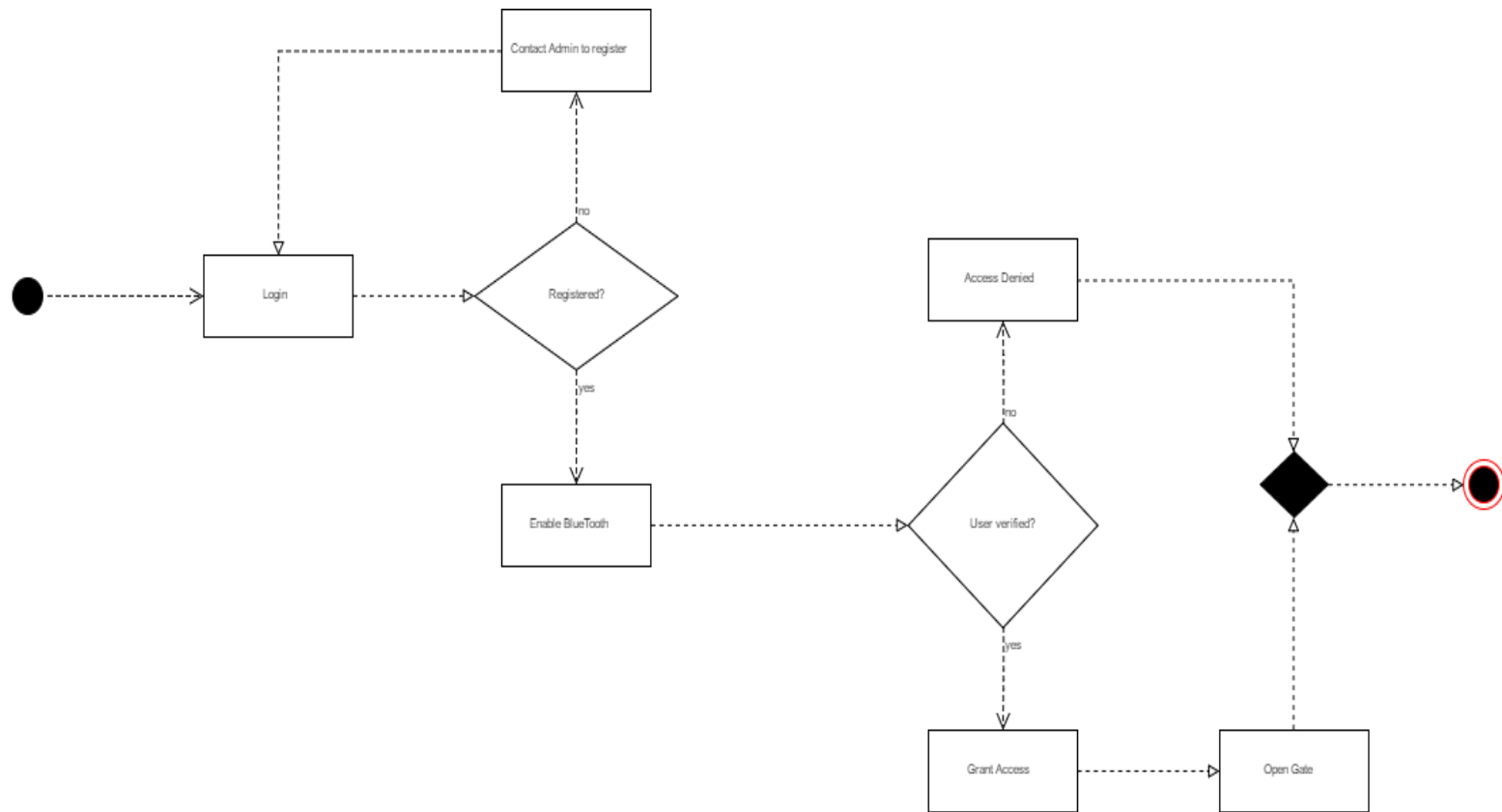
Figure 1: Activity Diagram

System Configuration

In order to make use of the ArivlApp, ensure that you have the following hardware/software:

- A smart phone with Bluetooth technology
- Android API Level 18
- ArivlApp
- Arivl Box

Installation

The installation file for the mobile application can be obtained from the following link: (url to git apk). Once the installation file has been downloaded successfully, navigate to the Downloads folder on your mobile device, locate the installation file named Arivl.apk and proceed to install the application. If the installation was downloaded on another device, simply copy the file over to the device you intend to use, navigate to the installation file and proceed to install the application.

Getting started

Once all of the necessary software has been obtained and the phone has Android API Level 18, start the Arivl App application on the mobile device. You will be presented with a splash screen that welcomes you to the app and a short tutorial about the app. The user has to register with the residential administration. The residential administrator is in charge of the addition and removal of new users. The residential administrator grants access to the system users.

Once you have successfully registered with the system administrator, the login screen will prompt you to enter your phone number and password in order to login. You only need to log in once.
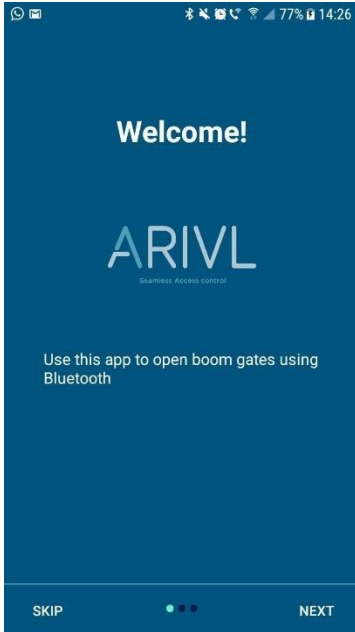
Usage
Interactions
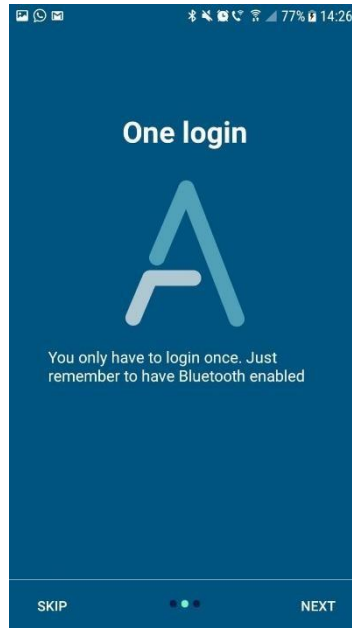
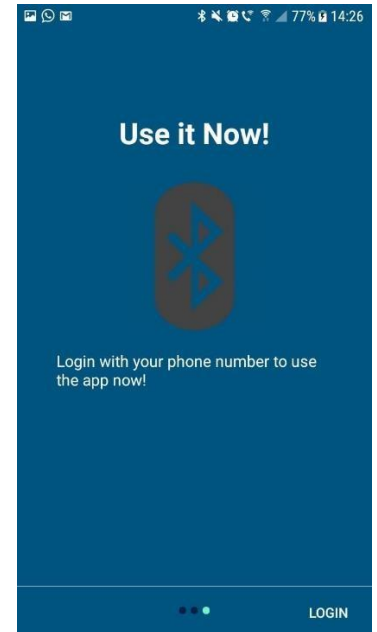*Figure 2: Welcome Splash screen* *Figure 3: Single Sign-in Splash screen* *Figure 4: Splash screen*

The user will be welcomed by three splash screens after they have successfully downloaded the app onto their mobile device.

Figure 2 welcomes the user and a brief description on what the app the app can be used for.

Figure 3 tells the user that they are only required to login once with the Arivl App.

Figure 4 tells the user that their phone will be used to log in to the app.

In order for new users to use the Arivl App, their data needs to be captured by the residential administrator. The residential administrator has admin rights to add, update and delete users on the system. The administrator is in charge of granting different types of access.

After the user's data has been captured, they will be able to login and use the Arivl App to gain access into residential areas.
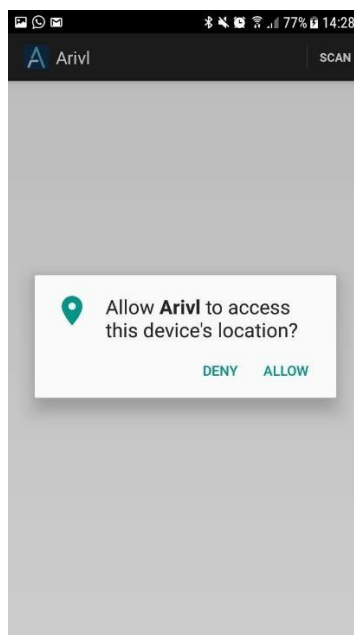
Figure 5: Login screen

Figure 6: Access user's location

Figure 7: Home page

Figure 5 is the login screen. The user will be prompted to enter their phone number and password in order to be able to use the Arivl App.

Figure 6 shows that the user has successfully logged in, therefore Arivl App will prompt the user to access the devices current location. This is done so that the user can see which Arivl Boxes are close by.

Figure 7 is the home page. After having logged onto the Arivl app and the devices location has been captured, the user can search for gates and connect to gates that they have access to.
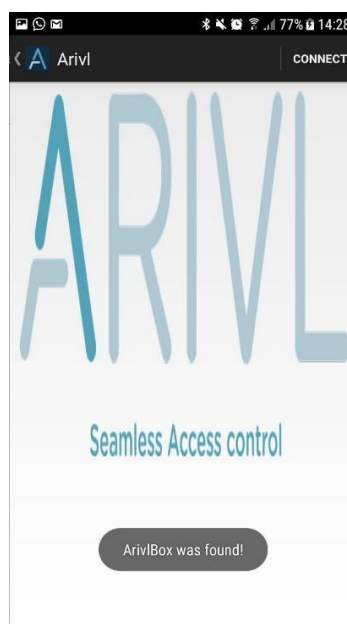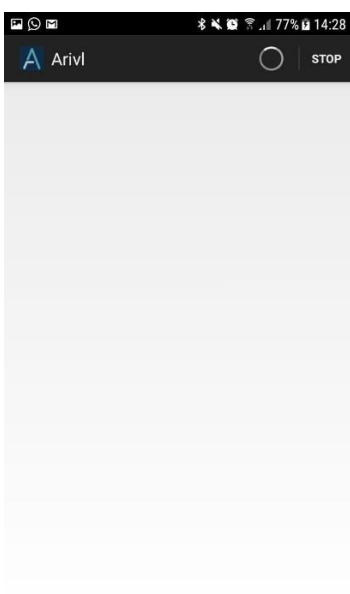
Figure 8 is what the screen will look like when the app is searching for Arivl Boxes that the user is next to. The user can stop the search at any moment to start again.

Figure 9 shows a toast when there have been Arivl Boxes that have been found. The user can attempt to connect to the box. Once connected, the user can gain access to the residential area.

Trouble Shoot

In the case where the Arivl App is unable to grant access to the user the user should try taking one of the following steps

- User should go closer to the gate as the user may not be in close proximity
- Enable the Bluetooth on the device
- User should contact the residential administration.