
GitHub Username: klinsmangoncalves

YouDo - Cleaning

Description

Briefing: In Brazil, due the high unemployment rate, lots of new small companies have been created. The number of people working in companies as Uber, UberEats have highly increased. Another field which is increasing is related to cleaning services. Currently, a company (e.g., school, store, office) contracts the cleaning service company and then some employees are sent to clean each department. But it hard to manage which departments have already been cleaned. RIght now, another manager is sent and write each task executed in each department in a paper sheet and after put all of this in a excel sheet. For the manager would help a lot if he could know which tasks have been executed in each department without need to go there.
This app is a perfect way of check in real time the progress of yours cleaning tasks employees. In each department we add a QR Code, when the professional responsible for cleaning arrives, he points his camera for the QR Code and the app send this info in real time.

Intended User

Professional responsible for cleaning services.

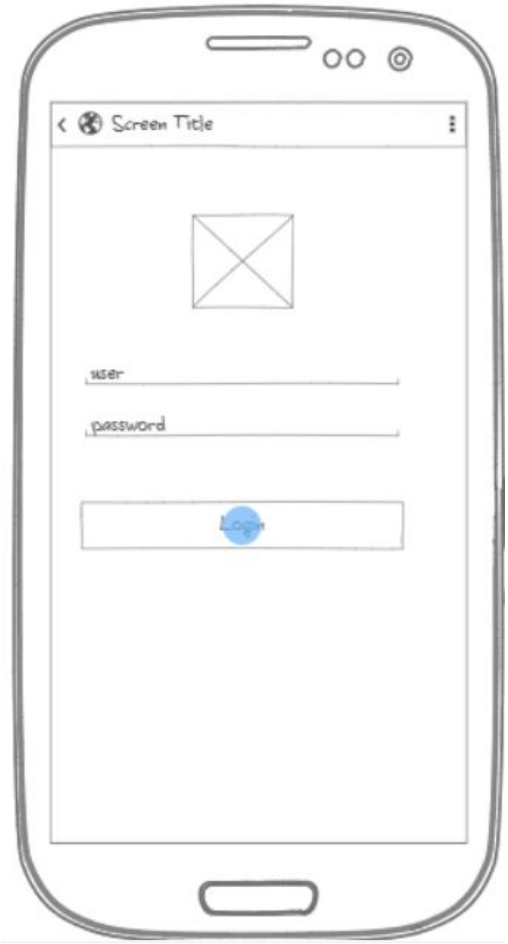
Features

Some of the main features are:

- Recognize the department using the QR Code
- Log the working time for each professional
- Send the cleaning status in real time
- Allows check all tasks realized and the time taken for them
- Check when the professional arrives on the cleaning store

User Interface Mocks

Screen 1



Login, in the first time the data will be saved in shared preferences so that will not be required anymore. When login navigate to SCREEN 2 if there is no a current cleaning in progress. If there is current cleaning it goes to SCREEN 4.

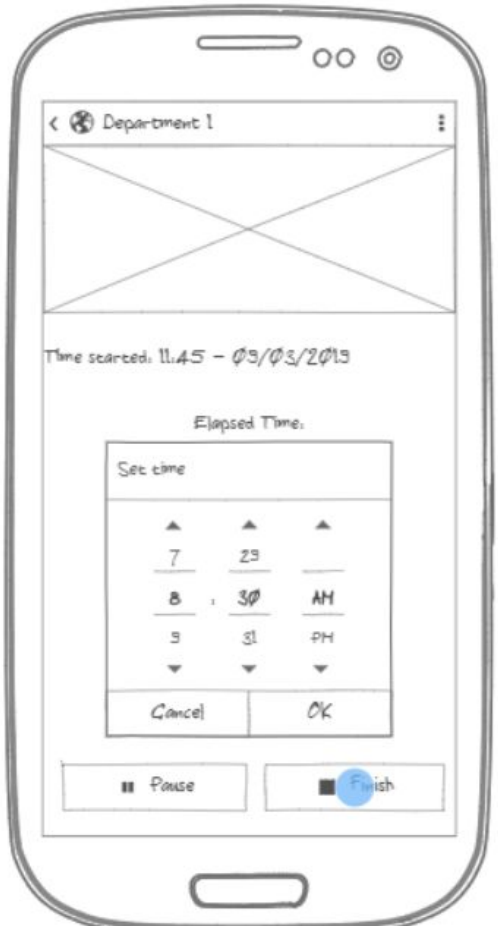
Screen 2

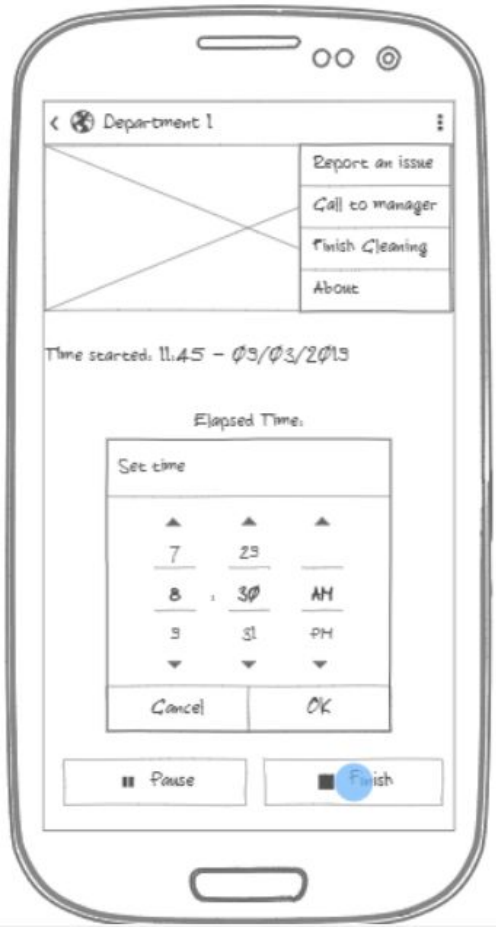
This page show all departments cleaned by the current user in this day. To start clean a new department the user just need to click in start a new cleaning. When click in the button the user goes to SCREEN 3.

Screen 3

When the user points to a QR Code the cleaning time is started and it is sent to fire base. For simplicity purpose in this version we will assume that only one task is performed in each department. After the reading it goes to SCREEN 4.

Screen 4


Department 1
Time started: 11:45 - 09/03/2013
Elapsed Time:
Set time
7
8
9
29
30
31
AM
PM
Cancel
OK
Pause
Finish


Department 1
Report an issue
Call to manager
Finish Cleaning
About
Time started: 11:45 - 09/03/2013
Elapsed Time:
Set time
7
8
9
29
30
31
AM
PM
Cancel
OK
Pause
Finish

When there is some cleaning in progress the user just can see the page. When he clicks in pause the cleaning time is paused. When click in finish the cleaning in finished and sent to firebase.
In menu option the user can report an issue in department. Or even call to his manager, by clicking in this option.

Screen 5

Using the widget the user can start a cleaning by tapping on the QR Code icon. Also, the user can stop the cleaning by clicking in finish. When the user finish it send a message through firebase and the manager already know that the department is cleaned.

Key Considerations

The app will be developed in which programming language?

App is written solely in the Java Programming Language

How will your app handle data persistence?

Firebase Realtime Database

Describe any edge or corner cases in the UX.

When the user has some cleaning in progress only the SCREEN 4 is displayed.
When click in call an intent is sent to Telephony,

Describe any libraries you'll be using and share your reasoning for including them.

Firebase libraries to send message in real time.
om.google.firebase:firebase-core:16.0.8
'com.google.firebase:firebase-database:16.0.4'
'com.google.firebase:firebase-messaging:17.3.4'

Picasso to handle the loading and caching of images.
'com.squareup.picasso:picasso:2.5.2'

Zxing for QR Code reading.
'Me.dm7.barcodescanner:zxing:1.9.8'

QRGen for testing QR Code purposes
'com.github.kenglxn.QRGen:android:2.3.0'

Gradle build tool
'com.android.tools.build:gradle:3.5.1'

Describe how you will implement Google Play Services or other external services.

Using the Firebase (libs specifieds above) and location service. The libraries used specific to play services are:
'com.google.android.gms:play-services:11.6.0'

‘com.google.android.gms:play-services-maps:11.6.0'

Next Steps: Required Tasks

This is the section where you can take the main features of your app (declared above) and break them down into tangible technical tasks that you can complete one at a time until you have a finished app.

Task 1: Project Setup

The app will be developed using Java 8 programming language and using Android Studio 3.5+ as IDE. The dependencies will be set in gradle, so, it will be downloaded automatically once we have network connection.
To use real time database we need to configure the firebase first. After that we need get the libraries that should be used in the project. And just after we need to create the UIs.

Some of the subtasks are:

- Create a project in firebase;
- Configure the firebase realtime database in the project
- Add the QR Code library and the Picasso lib
- Set the Utils to store local data
- Created UI

Task 2: Implement UI for Each Activity and Fragment

Login Activity:

- Add the fields and buttons
- Add the local storage used Shared Preferences to store the login

QR Code reading Activity:

- Handle the QR Code reading
- Get the info using the QR Code id
- Send the started time to firebase
- Handle the time elapsed since the cleaning starts

Main Activity:

- Add a RecycleView to show all the departments during this day
- Retrieve the departments from firebase
- Add the action button to start a new cleaning given the QR code read

Cleaning Status:

- Show time elapsed since the cleaning starts
- Handle pause and finish cleaning
- Sends the time taken when finish cleaning to firebase
- Implement the call to manager option
- Send and message to the administrator when some error happens during the cleaning

Task 3: Create the firebase project

Create the firebase project in Google Platform.

Firebase project subtasks:

- Create the project
- Get the json config
- Add the support to firebase in the project
- Implement the retrieve in real time from firebase
- Implement the write in firebase when some action (start/finish) is performed

Task 4: Internationalization

All the string should be added in the string.xml for each language. For this initial version, it will be available in English (default) and also portuguese.

Subtasks:

- Create the string.xml default in English
- Create the string.xml pt_BR in Portuguese

Task 5: Handle Accessibility

To make the app more accessible we want to add features to allow most of type of user and devices access our app. In order to do this we will work on the following subtasks:

- Add content descriptor for all images
- Create an specific view for tablets
- Adjust the size according to device size
- Support RTL layout
- The app should handle change screen orientation

Task 6: Implement widget

To make the app easier to use an widget is provided to allow start a new cleaning and also stop a new cleaning.

- Create start new cleaning layout
- Create finish cleaning layout
- Handle the click and send data in background using firebase

---

Submission Instructions

- After you've completed all the sections, download this document as a PDF [File → Download as PDF]
    - Make sure the PDF is named "**Capstone_Stage1.pdf**"
- Submit the PDF as a zip or in a GitHub project repo using the project submission portal

If using GitHub:

- Create a new GitHub repo for the capstone. Name it "**Capstone Project**"
- Add this document to your repo. Make sure it's named "**Capstone_Stage1.pdf**"