Restoration Reporting System

Team:

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Faculty Sponsor:

- ❖ Dr. Heather Crawford hcrawford@fit.edu

Client:

- ❖ Sunsation nmarcoux@live.com

Goals and Motivations:

The client currently uses Excel spreadsheets to store and maintain data of damage on houses for insurance purposes. However, this method is exhausting, time consuming and prone to errors. Creating a mobile application in order to intuitively enter, store, maintain and analyze data provided will satisfy the customer's needs. Using such an application, the data can be accessed instantly from almost anywhere once they have a computer, tablet or phone. The client also expressed that they have compatibility issues with the different versions of Excel where formatting and macro problems become apparent. In spite of that, this application will provide consistency for such reports. Not only will the application be able to carry out necessary functions but it will also be easy to use through its intuitive UI.

Approach:

Considering that the client wants a more efficient means of documenting their reports, a mobile application is suggested. Their current method for logging the reports is by using Microsoft Excel. Some concerns about this current method was expressed by the client which we believe the mobile will alleviate; such as being able to access reports quickly and easily.

This mobile application will eliminate the stress of constantly having to save and update information manually. The client will now be able to use the UI to enter data more intuitively where it will be sent to the database for storage. It can then be accessed from the database once there is a connection i.e. internet. The processed information can then be used for analysis; including graphical representations.

Sometimes it is not always possible to connect to the internet. Hence, there is an offline feature which will allow the client to save data as normal but in this case it will be saved to the device's physical storage and then later be sent to the database when an internet connection is established.

In order to create this app, the use of Android Studio, Ionic Framework and PhoneGap are being considered. It is one of our desire to make the app work across various platforms; android and ios to be specific.

Features:

Search and filter with ease:
Search and filter through previously stored data (reports) in our database using date, name of their customer or other desired query. This kind of feature is very tedious using Microsoft Excel.

Offline:
In the event that there is no internet connection, the data entered will be stored on the device's physical storage until a connection is established; when it will then be sent to the database.

Retrieves and stores data instantly and conveniently:
Application retrieves latest version of records stored. Application also updates offline copy periodically for situations where internet is unavailable. Open the app, search for a report by date, name, etc, or update a previously stored report, or even quickly enter data for a new report where it will generate a sleek report at the end.

You do not always have to be on the computer. If you are always on the go or just prefer using your phone or tablet, then you can use this application to complete your report conveniently.

A mobile or pc based recording and reporting method (application) would help provide consistent project drying logs.

Notifications can be enabled to alert user when data is synced or updated.

Novel Features:
- ❖ Mobile App optimized for the latest version of Android: Android 6 Marshmallow. - I would go with Android 2.1 (API Level 7) or higher, maybe 3 for the lowest, because syncing data is provided from 2.1. The operating systems for mobile devices are rapidly changing, thus keeping up with the latest versions while not neglecting the previous versions will be more
- ❖ Ability to include images of damages in the report. The client did not have such feature when using Microsoft Excel.
- ❖ The client conveyed that, "A functional application to build a client database and record the progress of a restoration project could have a broad appeal in the industry" which derives that this kind of application is not common in such an industry.
- ❖ Having an offline and online feature, instead of just offline using Microsoft Excel. The online feature will make information available anywhere on the go.

Technical Challenges:

- ❖ We plan to incorporate a database into our project which is not something our group is too familiar with.
- ❖ Most of the members in our group do not have expertise in mobile application development.
- ❖ In the event we make this application web based, we will need assistance with API's to communicate with the application and server.
- ❖ Making the app as secure as possible so that no confidential information is revealed.
- ❖ Because multiple employees will use app on different devices, app needs to be incorporated that all information goes to the common base that can be accessible to all employees in the company.
- ❖ Using cache memory efficiently for accessing recent data and retrieving data from database due lack of experience with database

Milestones:

- ❖ Milestone 1 (Oct 3): itemized tasks:
  - ➢ Investigate Mobile Development IDEs, Libraries and Frameworks, Various Databases and designing UI mockup.
  - ➢ Setup development environment.
  - ➢ Create Requirement Document
  - ➢ Create Design Document
  - ➢ Create Test Plan

- ❖ Milestone 2 (Oct 31): itemized tasks:
  - ➢ Begin designing user interface
  - ➢ Setup tables in database
  - ➢ Implement various calls to the database (GET, DELETE, etc)

- ❖ Milestone 3 (Nov 28): itemized tasks:
  - ➢ Syncing when WiFi or data is available

- ❖ Task matrix for Milestone 1 (teams with more than one person)

Task	Francis	Mike	Milica	Ramon
Investigate/Select Tools	25%	25%	25%	25%
"hello world" examples/demos	25%	25%	25%	25%
Requirement Document	25%	25%	25%	25%
Design Document	25%	25%	25%	25%
Test Plan	25%	25%	25%	25%

Approval from Faculty Sponsor:
- ❖ "I have discussed with the team and approve this project plan. I will evaluate the progress and assign a grade for each of the three milestones."
- ❖ Signature: _____ Date: _____