Ain Shams University
Faculty of Engineering
Computer and Systems Engineering Department
Graduation Project - 4th Year CSE – 2015/2016

RFID Based Smart Application

Supervisor
Dr. Bassem Amin

Progress Report

Version 1.0

12/18/2015

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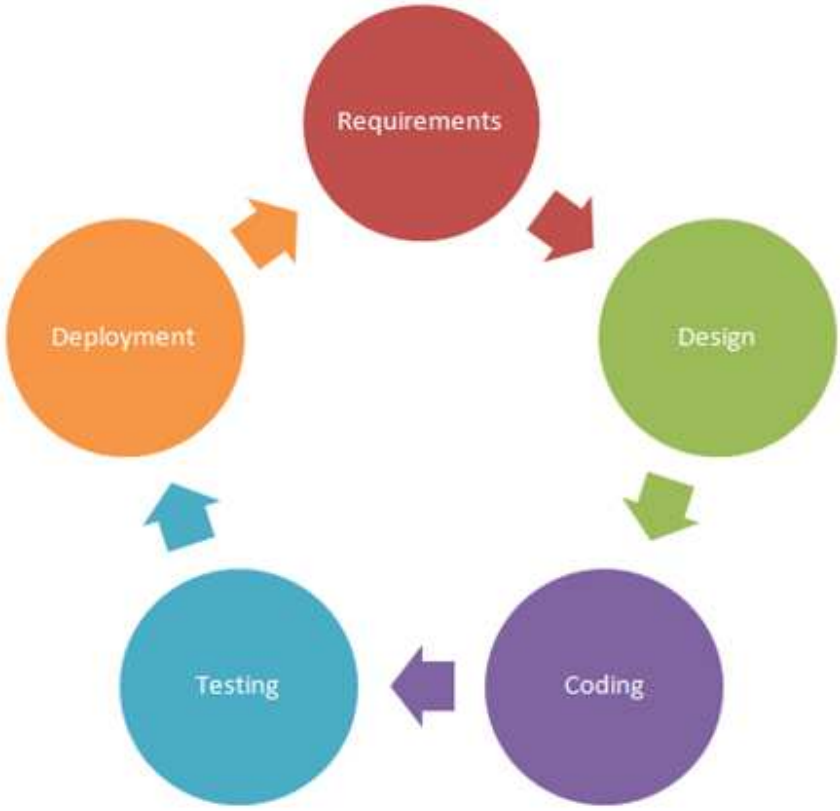
Progress Summary:

Our project is divided into five milestones as follows:



Project Status:

1. **Requirements Phase: Done.**
2. **Design Phase: Doing.**
   a. Software Initial Features Forms: Done.
   b. Class Diagrams and ERD: To Do.
3. **Coding: To Do.**
4. **Testing: To Do.**
5. **Deployment: To Do.**

Progress in Details:

1. Dummy Application:

Before starting the graduation project (RFID based smart application), our team has implemented a dummy application to get hands on developing web and mobile applications.

Askify – The Dummy Application – is a software enables the student of faculty of engineering, Ain Shams University to ask any questions related to the college. From the other side a representor of the college logs-in to the application and answers their questions.

This application has been deployed and can be accessed through this URL: http://askify-app.herokuapp.com/public/

- **Technical Skills Gained From This Application:**

1. Web Design Skills: HTML, CSS, Javascript, JQuery, Bootstrap, etc.
2. Web Development Skills: PHP using Laravel 4.2 Framework, AJAX.
3. Android Development.
4. Database: MySQL.

- **Other Skills Gained From This Application:**

1. Software Development Methodology.
2. Version Control System (Git).
3. Project Management Skills.
4. Communication Skills.

2. RFID Based Smart Application:

1. Requirements:

1. Project Overview:

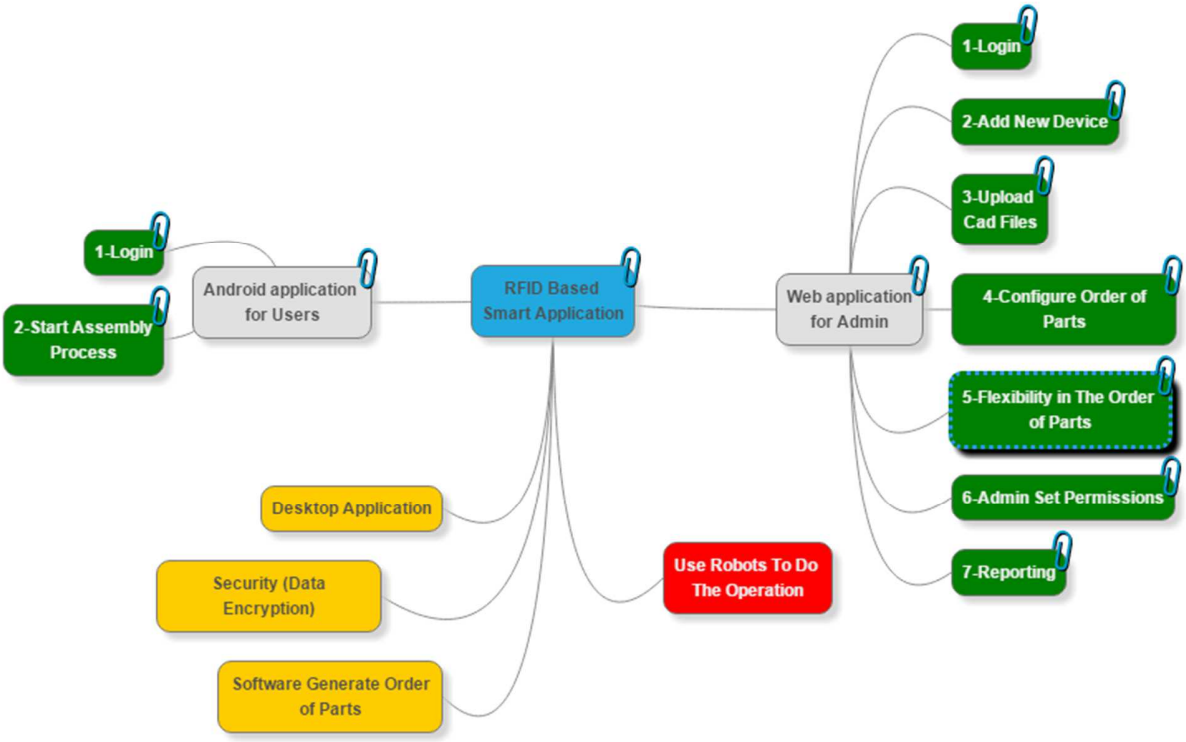
Radio Frequency Identification (RFID) is a communication technology using radio signals of different frequencies for identifying a specific target in real-time without any direct contact or line-of-sight within harsh environments.

RFID has many applications in different fields that enables companies to do many things. Our project focuses in a specific application which is **Assembly Tracking.**

Assembly tracking is one of the applications that uses RFID technology that helps workers and engineers in the assembling process. This application minimize the mistakes that can happen during assembling process and enhance the productivity of the companies. In future we can integrate this application with robots to get full automation assembly process without human intervention.

Our team has delivered a presentation explaining RFID technology and its applications, specifically in the construction field.

2. Use Cases:



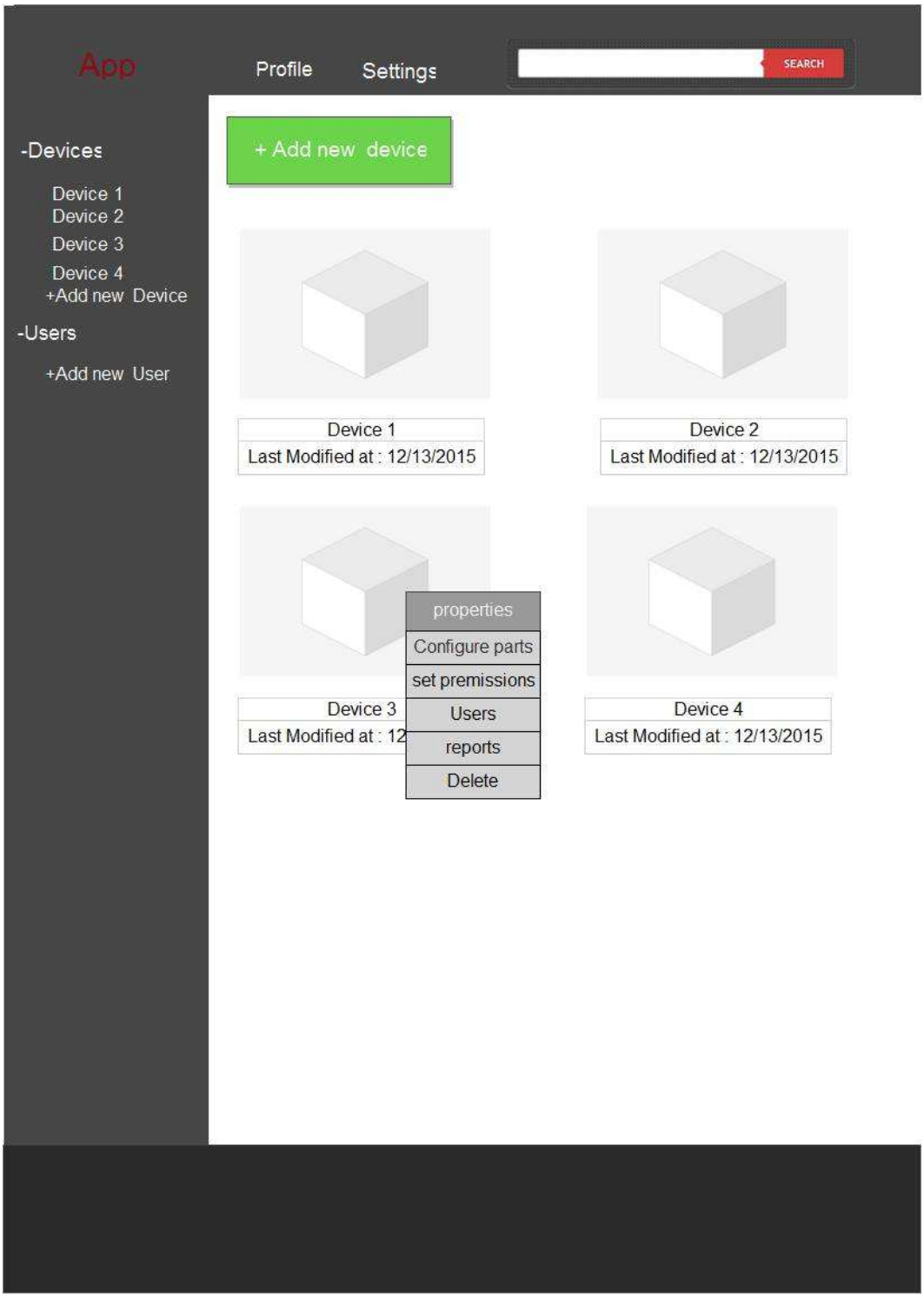
3. User Scenarios:

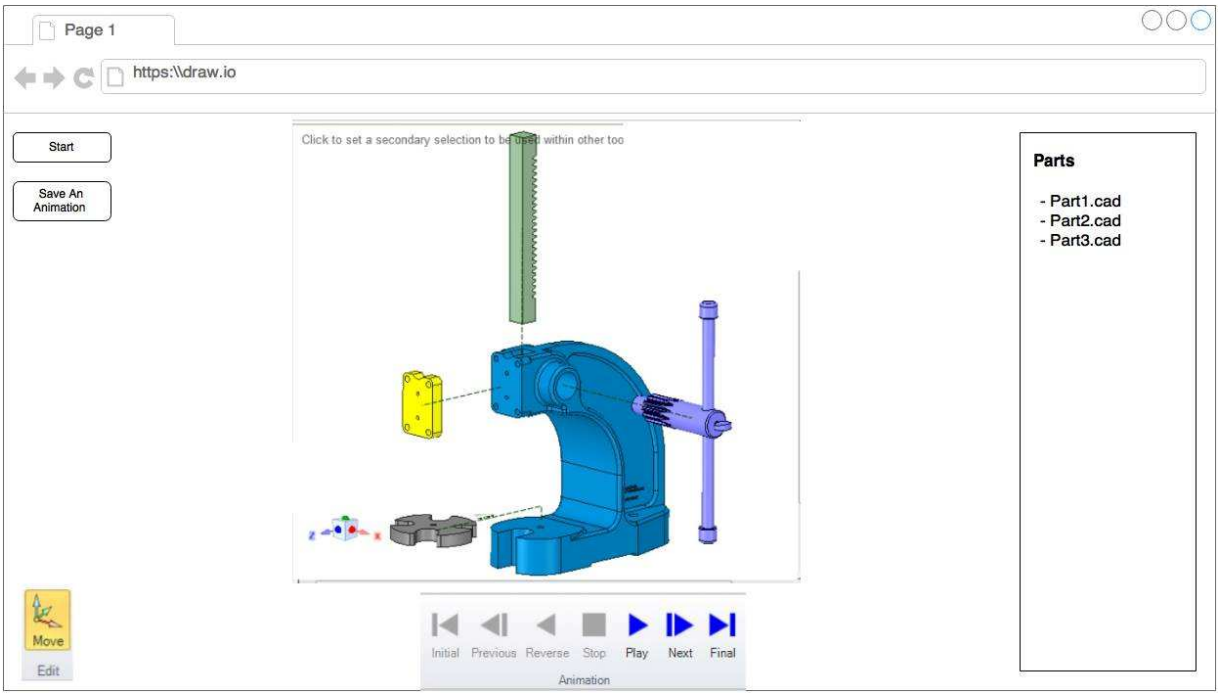
- Admin logs-in to the web application.
- Admin adds new device to his account.
- Admin writes the device name and its description.
- Admin starts to upload cad files of the parts of his new device.
- Admin sets the order of the parts.
- Admin creates animation showing how the parts should be assembled.
- Admin generate many sequences for the order of the parts.
- Admin set permissions for using that device (choose the users who can assemble this device).
- Admin can view report of each device (who uses that device, how much time they took to assemble it every time, etc...).

- User logs-in to the mobile application.
- User chooses the device that he needs to assemble.
- User starts assembling as follows:
    - The mobile application tells the user which part should be used.
    - The mobile application shows the user animation how this part is assembled.
    - The user puts the part near the reader, the reader sends the tag ID to the server and then the mobile application determines whether that part is the correct one or no.
    - If that part is correct the user continues the operation, if not, then the mobile application tells him it's wrong and waits until he chooses the right one.

2. Design:

1. Initial Software Features Design:

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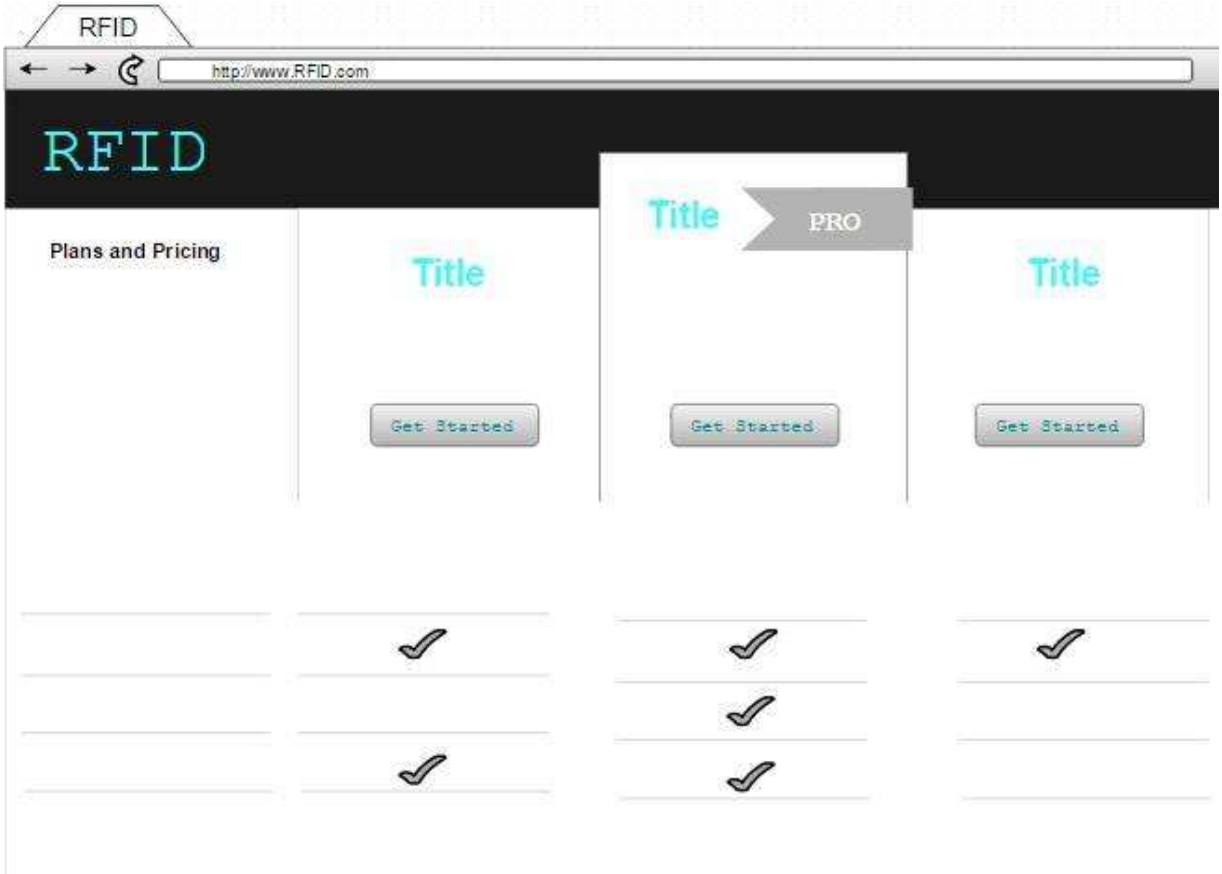
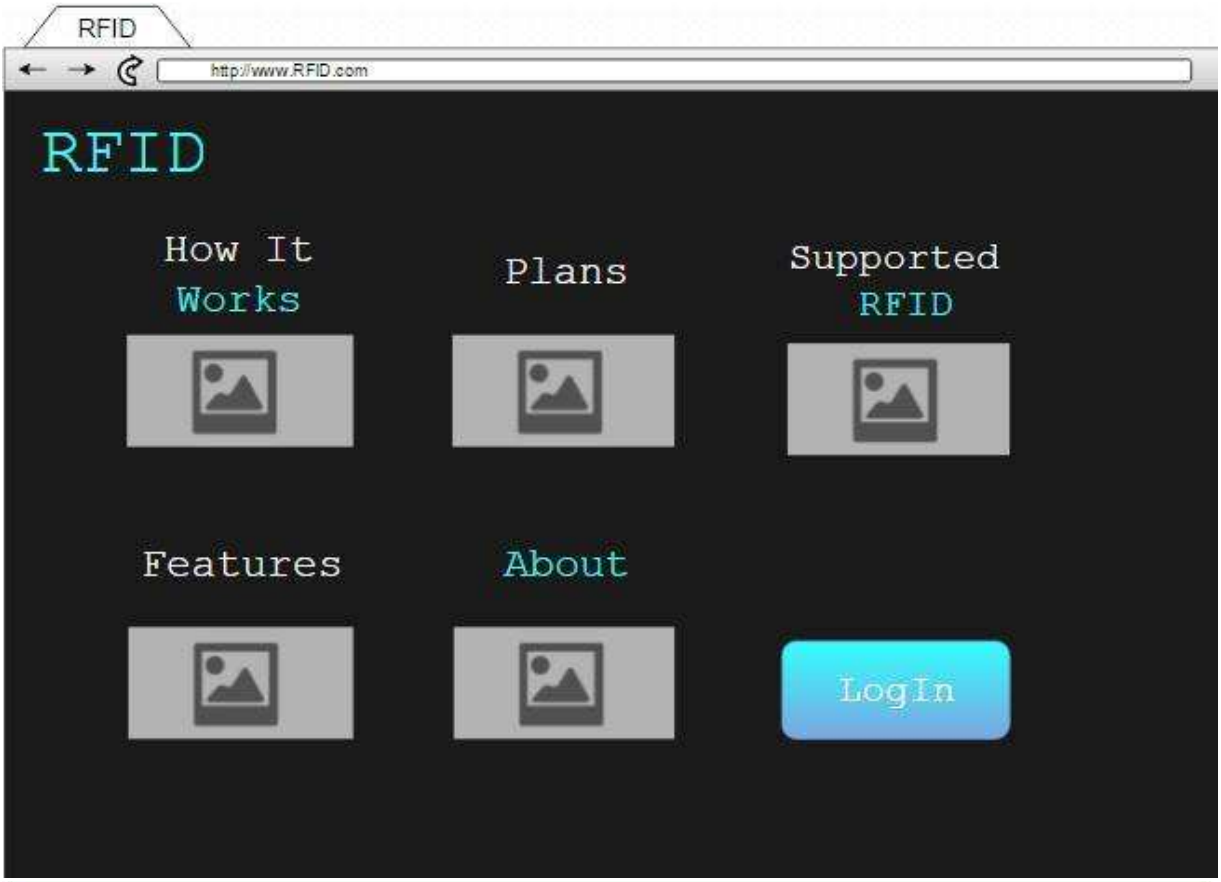
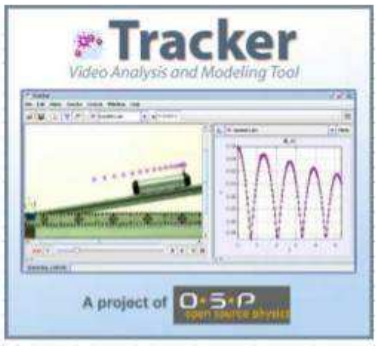
How To Use Plans Supported Devices **Featues** About Login

Features





In the manufacturing business you need complete command of your equipment and parts inventory to avoid operational disruptions. Tracking all of your equipment, inventory and tools can present a significant challenge. Imagine if management and inventory challenges could be met with an affordable, easy-to-use software package that allowed you to track any asset that can be tagged with a label.



Error Proofing Tools & Quality Management

Increase line productivity and reduce scrap with error proofing tools and quality management.

Global Flexible Assembly Standard

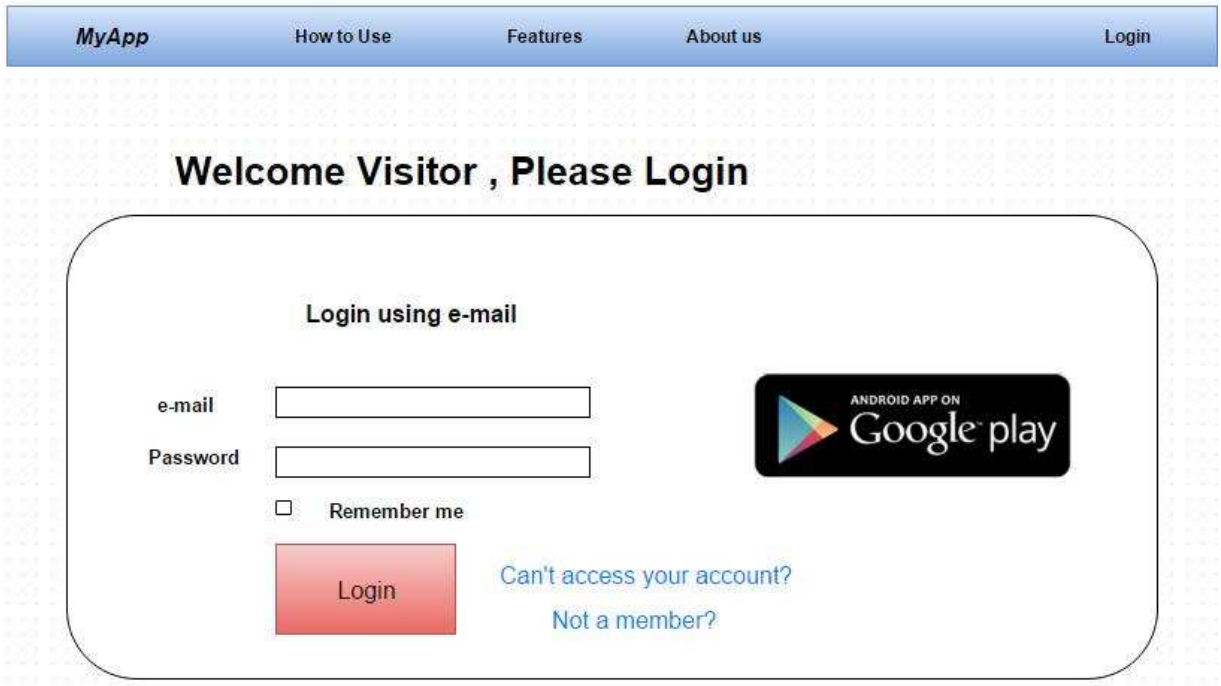
Standardize lines with a global flexible assembly standard to save time, labor and costs.

Easy-to-Use, Configure & Rebalance

Implement assembly line maintenance and line changes, without bringing them down.

Real Time Data & Reporting

Receive real time production data and reports on a paperless system with complete plant floor visibility.


MyApp
How to Use
Features
About us
Login
Welcome Visitor , Please Login
Login using e-mail
e-mail
Password
Remember me
Login
Can't access your account?
Not a member?
ANDROID APP ON
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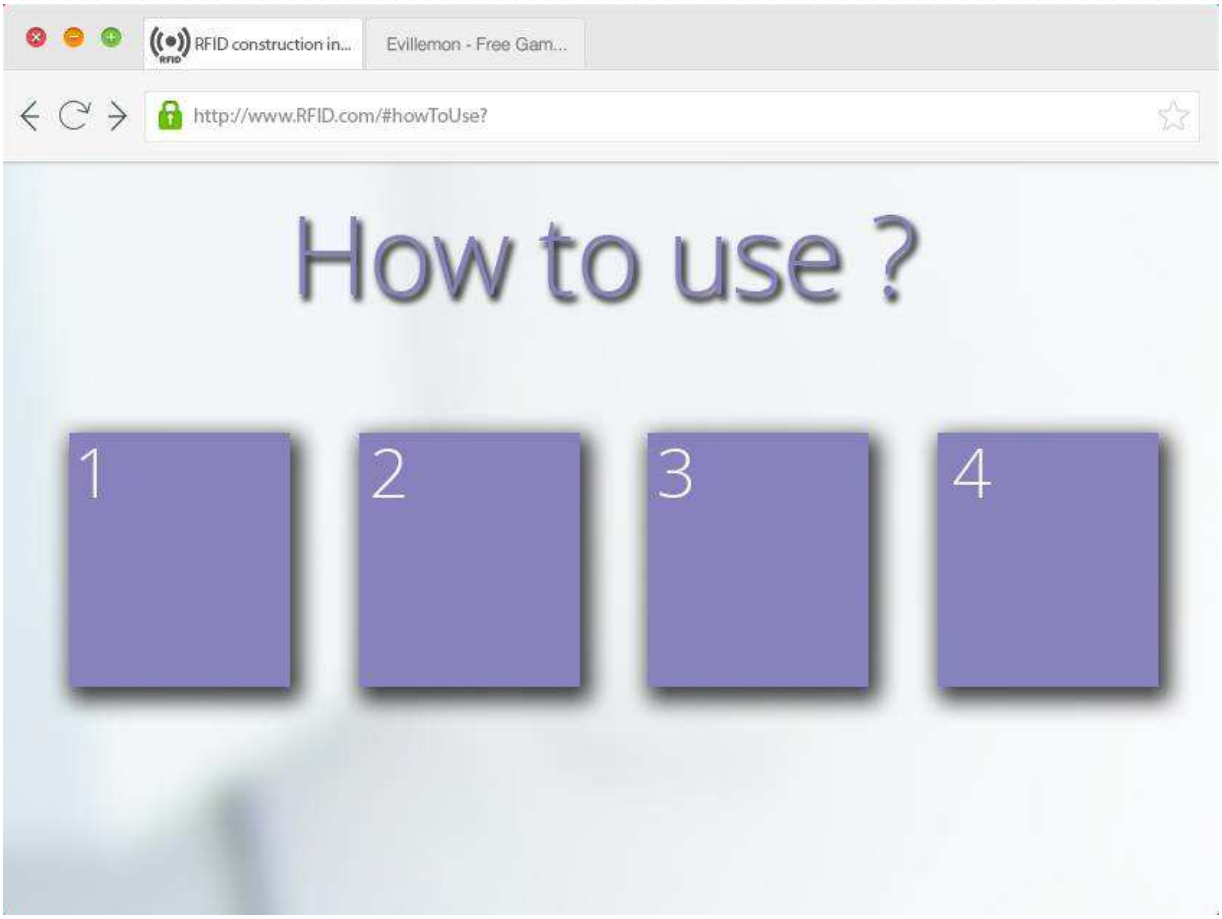
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How to use ?
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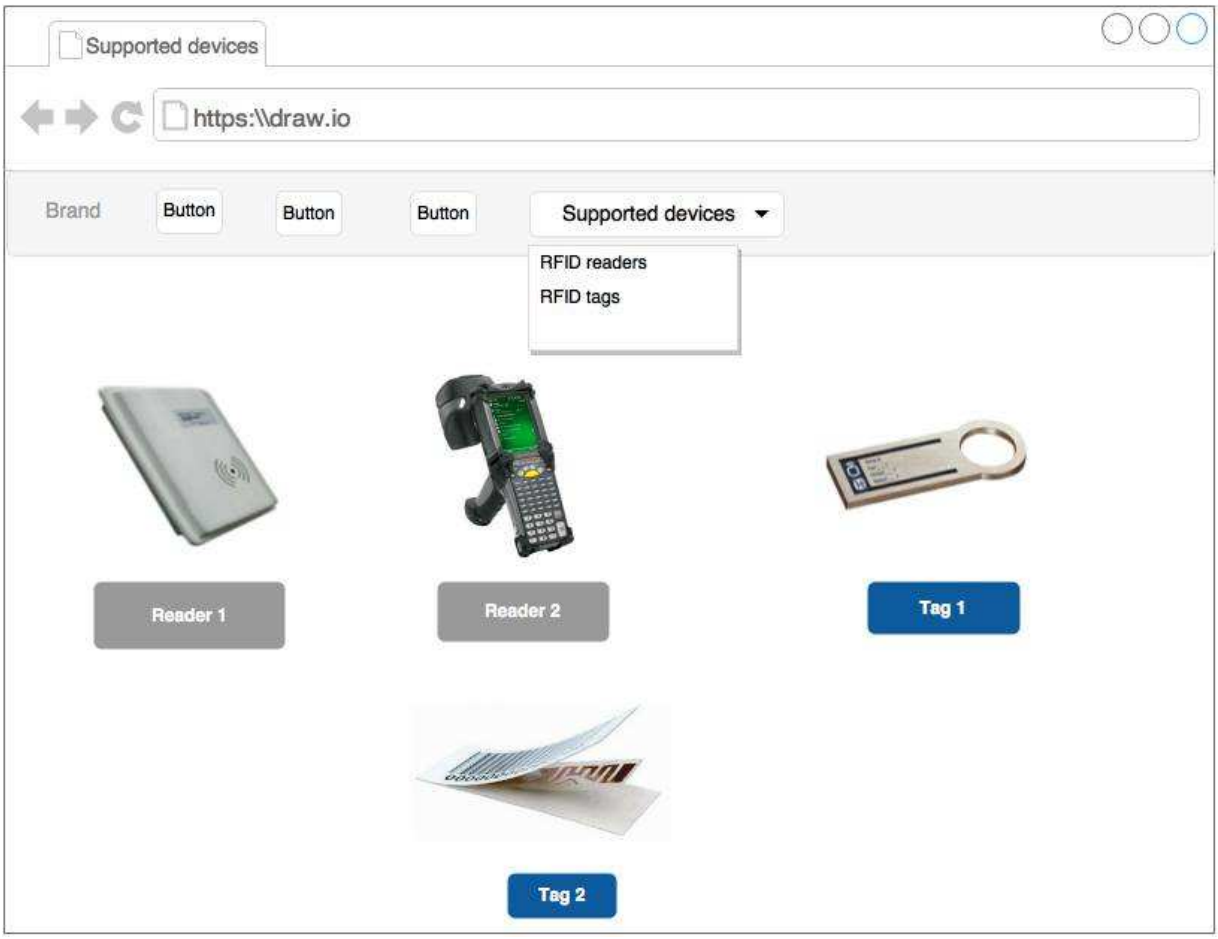
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Supported devices
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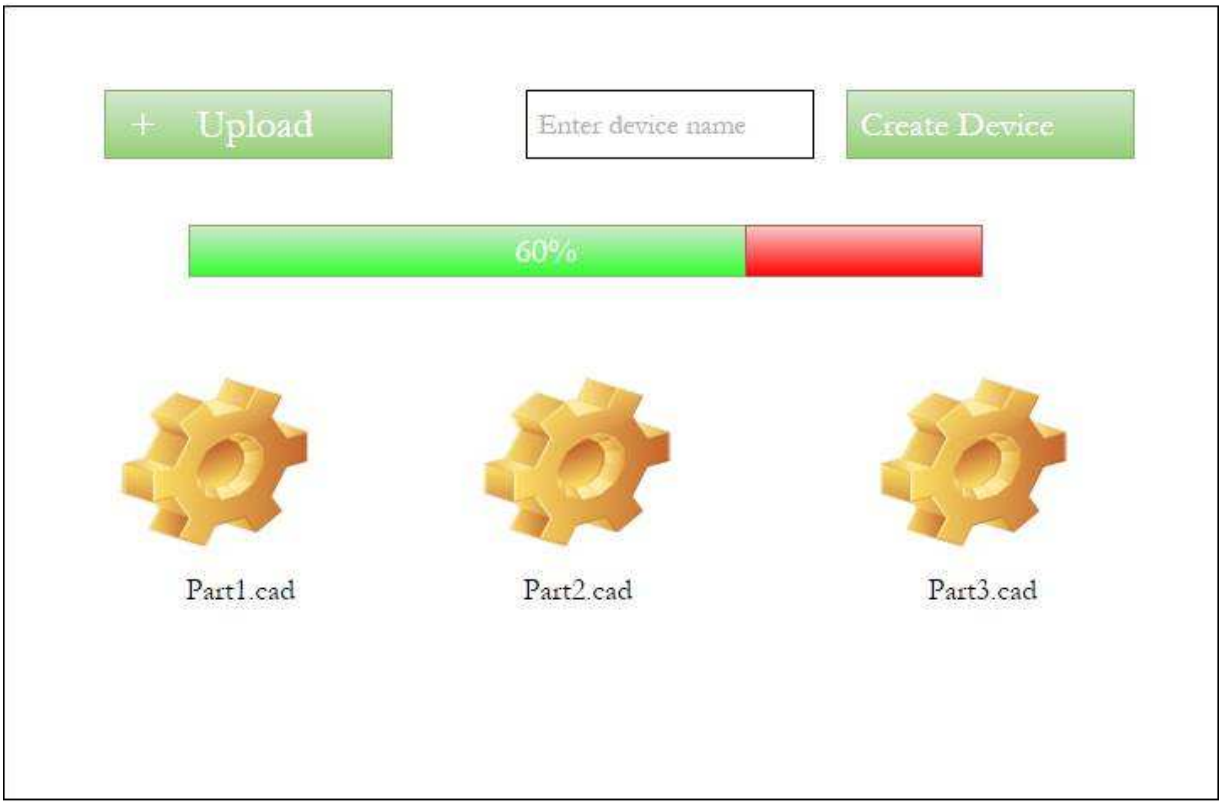

Expected To Do Next Two Months:

1. Draw Class Diagram and ERD.
2. Start Coding Phase.