# Introduction [Lab 1 Introduction]

### Professional movers are expensive.

### Characteristics of a move

#### Cost estimation

#### Keeping track of everything

#### Efficient space usage

#### Packing

#### Fragile items

#### Heavy items

#### Distance

#### Time frame

### Truck Loading takes careful consideration

### There are so many unknowns!

## Purpose [Lab 1 Section 2 introduction]

* Software based solution
* Solution Characteristics
* Load Plan Generation
* Keep track of box throughout move
* Tips and tricks
* Cost/time optimization
* Goals and Objectives

## Scope [Lab 1 Section 4.2]

* Measuring an item
* 3d model generation
* Box locator
* Load plan
* Trip estimation
* Packing tips
* Expert articles
* Move feedback
* Case Study  
  [Lab 1 Section 3]
  + Identify the actors involved
  + Give them names
  + Consider moving case study paragraph here

## Definitions, Acronyms, and Abbreviations

* Paste from lab one.

## References

* Paste from lab one.
* Add reference to lab 1 for each individual

## Overview

* Listing of what’s 4in the paper.

# General Description

* Overview paragraph here

## Prototype Architecture (Hardware/Software)

* Key components
  + Ubuntu 16.04 Virtual Machine
  + Docker
    - Apache tomcat
    - CXF for web API
    - MySQL
  + UI
    - Android app interface
    - Test harness interface
* Provide and describe the prototype MFCD [Insert MFCD here]
* Algorithms and user interfaces
  + Flush this out some more [TODO]
  + Load Plan Algorithm
  + …

## Prototype Features and Capabilities

* Discuss features
* Insert prototype features table
* Describe Algorithms and user interfaces here
  + Might include some diagrams like site map

## Prototype Development Challenges

* Test Harness changing values in the database
* Changing truck sizes
* Changing move inventory
* Prioritizing search results for expert tips
* Multiple trips
* Dealing with edge cases

## External Interfaces

* Interfaces:
  + Networking
    - TCP/IP
    - DNS
    - DHCP
  + Software
    - SSL
  + Hardware
    - Smartphone with camera
    - Install of apk
* Talk about the simulated data from the vendor synchronization

# Specification Requirements

## Functional Requirements

### Android Application

#### Login (Byron)

#### Registration (Byron)

#### Reset Password (Byron)

#### Box Locator (Greg)

#### Furniture/Item Measurement (Jason)

#### Load Plan (Byron)

#### Logistics Planning (Greg)

#### Move Inventory (Chris)

#### Authentication (Byron)

#### Expert Tips (Lance)

#### Expert Articles (Paul/Lance)

#### Feedback (Paul)

### Test Harness

#### Sample Move Inventory (Chris)

#### New Truck Size (Greg)

### Algorithms

#### Box Measurements (Jason)

#### Load Plan (Jason)

#### 3D model generation (Jason)

#### Expert Tips (Lance)

### Database (Lance)

### Web API

#### Authentication (Byron)

#### Expert Tips Indexer (Paul)

#### Services (Paul)

## Performance Requirements

### App Load Time (Paul)

### General Action Response Time (Lance)

### Load Plan Generation (Jason)

### Android Compatibility (Lance)

## Assumptions and Constraints

### Items Larger than Truck (Chris)

### Extremely Heavy Objects (Chris)

### Dimensions of a Truck

### Rotation of items

### Couches and how they go in the truck (jk)

### Will have fine china (jk)

## Non-Functional Requirements

### Server Setup (Greg)

### Containers (Greg)

### Security

#### Encryption (Chris)

#### Authorization (Chris)

#### Public Facing Resources (Greg)

### Maintainability (Lance)

### Reliability (Byron)

**Appendix**