

# Professional Apps

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# Table of Contents

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## **Exploration Research**

- 3 Introduction
- 4 Technology Research
- 9 Professional Research
- 10 Topic Choice
- 11 Professional Research

## **Brainstorming**

- 12 Brainstorming
- 13 App Research
- 16 Prof. Description & Ideas
- 17 Target Audience & Personas
- 18 Conceptualization

## **Sketches**

- 19 PC/Personal Computer
- 22 Tablet
- 24 Smartphone
- 26 Scenarios

## **Usability Testing**

- 27 Usability Results 01

# Introduction

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## Professional Apps Overview

Develop a system of three integrated apps for an existing profession or life situation. Each app will target one of three devices (smartphone, tablet, and desktop browser). This assignment explores how people use technology to work together and how to design interface systems that can be applied to different platforms.

This project will integrate three main interface platforms: a smartphone interface, a tablet interface (target user must be different from the smartphone app user), and a web based interface (target user should be different from the other two users). Begin by identifying existing professions and life situations where smartphone technology could add substantial value. The final project will include a presentation of your app design and a comprehensive process book.

## Project Steps

- Make sure to follow all the project steps in order to pass the project.
- The steps may be rearranged or repeated as your individual project requires.

## Profession App Design

- Design for smart phone, tablet, and desktop screen sizes
- Design multiple screens for each environment to demonstrate functionality

## Presentation

- Keep your presentation to a seven minute time limit
- Highlight the goals you established for your calculator app
- Discuss how user tests affected your final app design
- Present your final calculator app

## Process book

(print, pdf, website)

- Cover
- Table of Contents
- Summary Section (“five minute presentation” version)
- Comprehensive Section (include research, design exploration, usability testing, refinements, etc.)

## To be successful app:

- Needs to be adaptable
- Simple, uncluttered
- Easy to navigate
- Easy to understand
- Needs to be private

# Exploration: Technology Research

## Computer

A computer is a general purpose device that can be programmed to carry out a set of arithmetic or logical operations automatically. Since a sequence of operations can be readily changed, the computer can solve more than one kind of problem. By 1938 the United States Navy had developed an electromechanical analog computer small enough to use aboard a submarine. With the continued miniaturization of computing resources, and advancements in portable battery life, portable computers grew in popularity in the 2000s.



## Tablet

A tablet computer is a mobile computer with a touchscreen display, circuitry and battery in a single unit. Tablets come equipped with sensors, including cameras, a microphone and an accelerometer, and the touchscreen display uses finger or stylus gestures substituting for the use of computer mouse and keyboard. Tablet devices became popular in 2010.

## Smartphone

A smartphone (or smart phone) is a mobile phone with an advanced operating system.[1][2][3] Smartphones typically include the features of a phone with those of other popular mobile devices, such as personal digital assistant, media player and GPS navigation unit. Most have a touchscreen interface and can run third-party apps, and are camera phones. In 2007, Apple Inc. introduced the iPhone, one of the first mobile phones to use a multi-touch interface.



# Exploration: Technology Research

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## Features

Computer, tablets and smartphones all have the ability to do all the following things:

- Internet
- email
- social media
- camera
- video
- photos
- weather
- games
- ebook reader
- cookbooks
- media storage
- calendar
- information
- writing source
- calculator
- music
- drawing/art
- documents
- timer
- map
- shopping
- communication
- contacts (friends)
- voice recording
- reminders
- stocks
- news



Tablets and smartphones have a few features that the desktop or laptop doesn't have. For starters, size makes a difference in what it is capable of. They also have:

- alarm
- light
- GPS
- text
- odometer (car doesn't work)
- compass
- talk (phone)
- touchscreen
- more portable

# Exploration: Computer App Research

Samples of computer applications.

I already have thoughts and designs running through my mind to use. I chose these images for the color, shape and all around appeal. These could any be altered and revised in form to create an app for a subject.





# Exploration: Tablet App Research

Samples of tablet applications.

There are so many different types; kindle, ipad and many various android styles. Each of these have a crisp bold design that could appeal to the user.



# Exploration: Smartphone App Research

Samples of smartphone applications.

So many styles to choose from, I will be focusing on an iPhone for the smartphone since that is what I have. Here are some random images I found on Google that appealed to me for color and style.



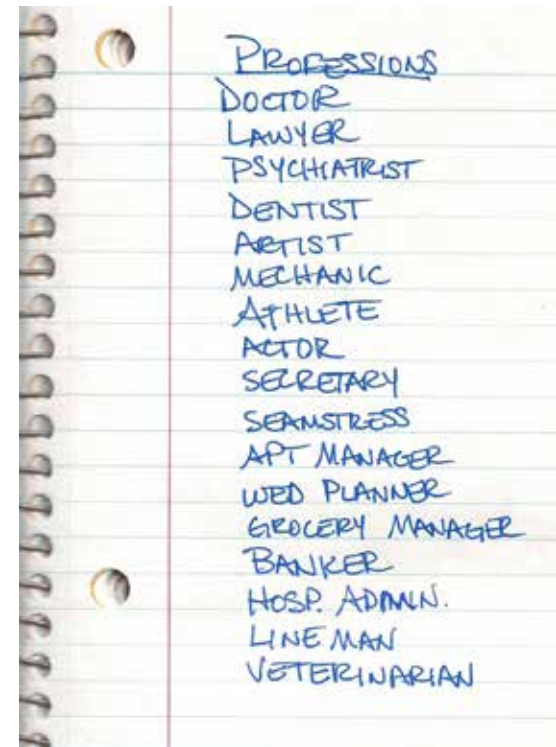


# Exploration: Profession Research

## Professional App Ideas

Child with diabetes	Doctor, parents, child
Someone w/ genetic disorder	Doctor, parents, child
Drug addict	Addict, therapist, doctor/parole officer
Physical therapy	Doctor, patient, therapist
** Wedding planner	Wedding planner, bride, florist/photographer/baker
Artist	Artist, gallery owner, buyer
Movie crew	Producer, director, actor
Dentist	Dentist, secretary, patient
Psychiatrist	Psychiatrist, secretary, patient
Photography	Photographer, client, printer
** Realtor	Realtor, buyer, seller
*** Apartment manager	Apartment manager, renter, maintenance man
Florist	Florist, consumer, wholesale supplier
Prescriptions	Doctor, pharmacist, patient
Veterinarian	Veterinarian, assistant, pet owner
Mechanic	Mechanic, customer, supplier
Shipping	FedEx/UPS, warehouse/main office, client

The coordinating list is a list of random professions that could use a computer, tablet or smartphone app with the associated people that would use them together. These are just a few of the ones that could be named. As I looked them over, I ruled out those that were medically inclined since it is not my area of expertise.



# Topic Choice: Apartment Management

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I chose Apartment Management for my project. I worked for a senior center that manages low income senior apartments and still work there a few days a week. It was my job to recertify the tenants for their yearly government certify. I am familiar with this area and do not see this as an area that has been overdone with apps. With the way technology is going, this would be an area in the future that would require something like this.

Granted, each of these should be accessed via any device but for the sake of this project, we will assume that the manager is using the computer, the maintenance person will be using the tablet and the tenant will be using the smartphone.



# Exploration: Profession Research

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## Apartment Manager

Typical duties expected of a property manager include finding/evicting and generally dealing with tenants and coordinating with the owner's wishes. Such arrangements may require the property manager to collect rents, and pay necessary expenses and taxes, making periodic reports to the owner, or the owner may simply delegate specific tasks and deal with others directly.

A property manager may arrange for a wide variety of services, as may be requested by the owner of the property, for a fee. Where a dwelling (vacation home, second home) is only periodically occupied, the property manager might arrange for heightened security monitoring, house-sitting, storage and shipping of goods, and other local subcontracting necessary to make the property comfortable when the owner is in residence (utilities, systems operating, supplies and staff on hand, etc.). Property management can also include commercial properties where the property manager may operate the business, as well as managing the property. Some jurisdictions may require a property manager to be licensed for the profession.

## Maintenance, repair, and operations

Generally speaking, there are three types of maintenance:

**Preventive maintenance**, where equipment is maintained before break down occurs. This type of maintenance has many different variations and is subject of various researches to determine best and most efficient way to maintain equipment. Recent studies have shown that Preventive maintenance is effective in preventing age related failures of the equipment. For random failure patterns which amount to 80% of the failure patterns, condition monitoring proves to be effective.

**Operational maintenance**, where equipment is maintained in using.

**Corrective maintenance**, where equipment is maintained after break down. This maintenance is often most expensive because worn equipment can damage other parts and cause multiple damages.

## Tenant

Renting, also known as hiring or letting, is an agreement where a payment is made for the temporary use of a good, service or property owned by another. A gross lease is when the tenant pays a flat rental amount and the landlord pays for all property charges regularly incurred by the ownership.

There are many possible reasons for renting instead of buying, for example:

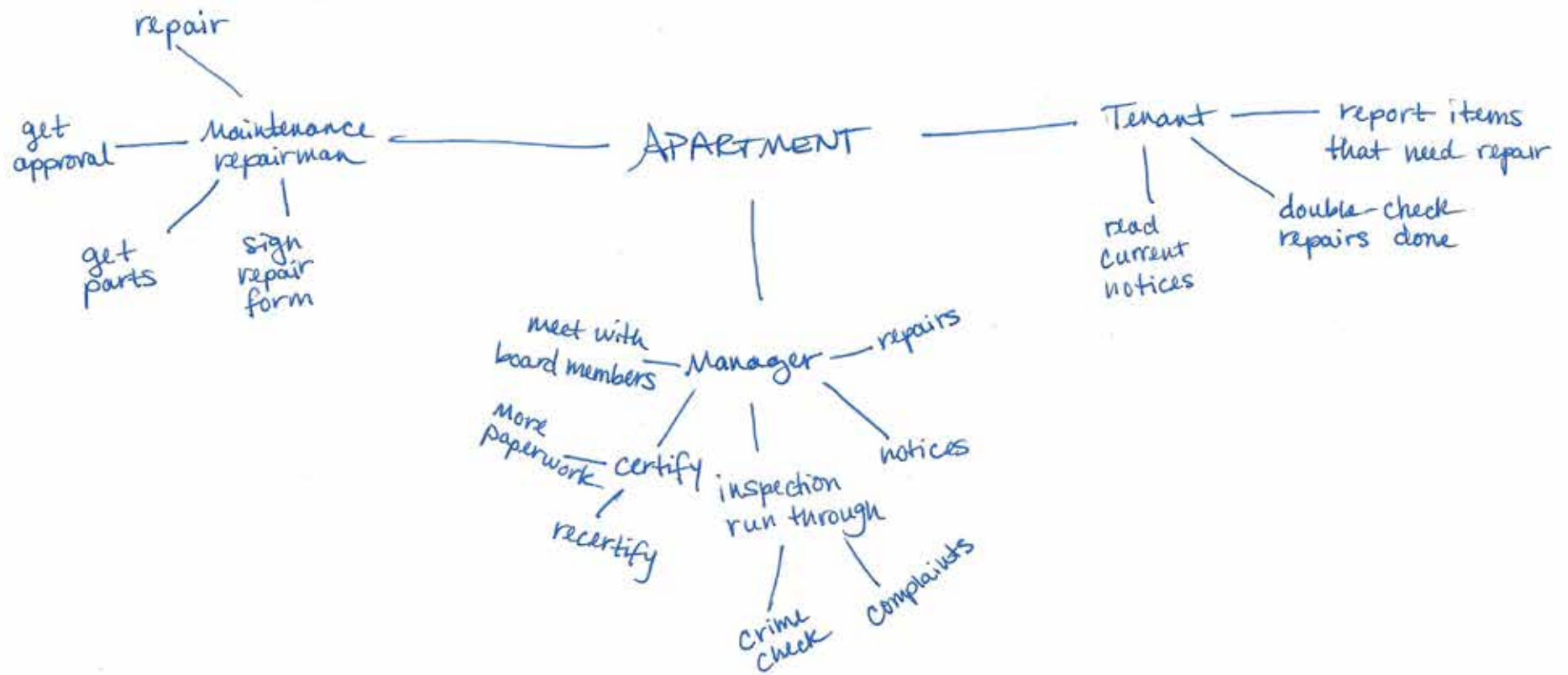
In many jurisdictions business rent is tax deductible.

Financial inadequacy, such as renting a house when one is unable to buy it. One may not wish to pay the full price that ownership would need, allowing for smaller payments over a specified period of time.

Reducing financial risk due to depreciation and transaction costs, especially for real estate which might be needed only for a short amount of time.

The tenant may want to leave the burden of upkeep of the property (mowing the lawn, shoveling snow, etc.) to the owner or his agents.

# Brainstorming

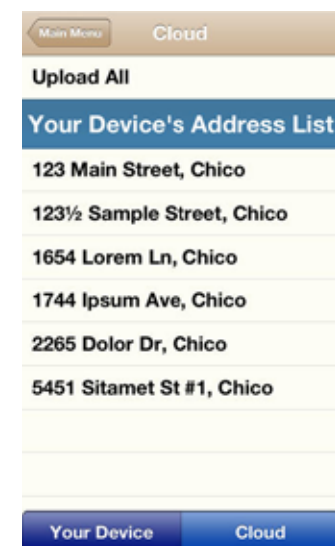


Here is my brainstorming map. It started out with the apartment and went to the manager, the tenant and the maintenance repairman. It also includes some of their responsibilities.

# Exploration: Manager App Research

When I searched for apps for an “apartment manager”, 75 apps came up similar to Zillow Rentals – Apartments & Hotels or Property Pal (for realtors).

Property Pal is to be used for property inspections. It would be useful if it could coordinate with the maintenance person and the tenant on various problems.

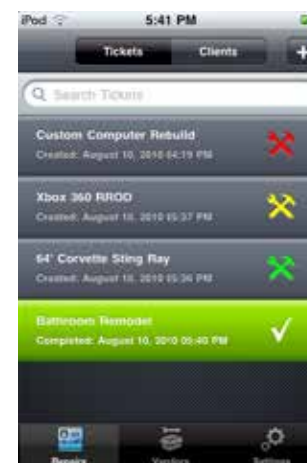




# Exploration: Maintenance App Research

“Maintenance” is the keyword I used for the repair man. I received a list of over 1000 car maintenance and home organizational apps or a few to maintain your body/health. The only other similar topic would be repair manuals.

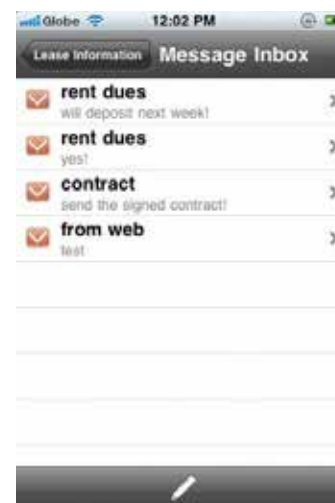
I did find one app called “Repair Ticket” that describes itself as the only professional repair ticket solution available. I only found 4 maintenance apps available.



# Exploration: Tenant App Research

When I searched “renter” it came up with 34 results that had nothing to do with my topic. When I entered “tenant” I got a lot more but a majority of them were geared towards the landlord, not the tenant. There is a clear need for these type of apps.

Without purchasing these specific apps, I am unable to determine if these apps would correspond with the tenant. There was one app that seemed promising, RENTi Tenant. It is to help the tenant keep track of the condition of the property they are renting.



# Professional Description & Ideas

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## Apartment Manager

### Job description:

- Take & review housing applications
- Place people in apartments as available
- Re-certify follow up
- Apartment inspections
- Items for review
- Deal with complaints
- Authorize repairs
- Meet with board members

### On the computer:

- Recertify
- Write up apartment notices \*
- Do crime checks
- Write up inspections
- Print forms
- Fill out approved repair forms \*
- Authorize the hours for repair/maintenance \*

## Maintenance /Repairman

### Job description:

- Maintain apartments and grounds
- Make repairs
- Painting
- Supervise outside contractors
- Sign repair forms
- Order parts
- Empty trash
- Vacuum

### Possibly on a tablet app:

- Take photos of the repair/damage
- Sign repair forms upon completion
- Order parts

## Tenant

These specific apartments are for elderly 60 and older or disabled persons. Clearly not everyone would have a smartphone.

### Life description:

- Get renter's insurance if desired
- Enjoy retirement/life
- Keep receipts & papers for recertification
- Report problems/repairs
- Approve repairs

### Possible on a smartphone:

- Sign/approve repair upon completion
- Lodge complaint for repair
- Take photos of damage
- Check for apartment notices

# Target Audiences & Personas

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## Apartment Manager

Barbara

Age 62

Barbara has been managing three senior and disabled housing complexes for about 25 years. She has to deal with government paperwork since they are subsidized income-based housing. She spends many extra hours making sure her tenants are all taken care of.



Professional Apps by Dawn Grow

## Maintenance/Repairman

Mark

Age 45

Mark has worked for almost 20 years as a repair/maintenance man. He has worked his way up and now enjoys being the boss. He loves his job being able to help care for the elderly in the complexes.



## Tenant

Louise

Age 82

Louise moved into her current apartment a few years ago after her husband passed away. She has the opportunity to be near other people her own age while remaining independent. She enjoys the peace of mind that she doesn't have to mow the lawn or make repairs, it is done for her.



# Conceptualization

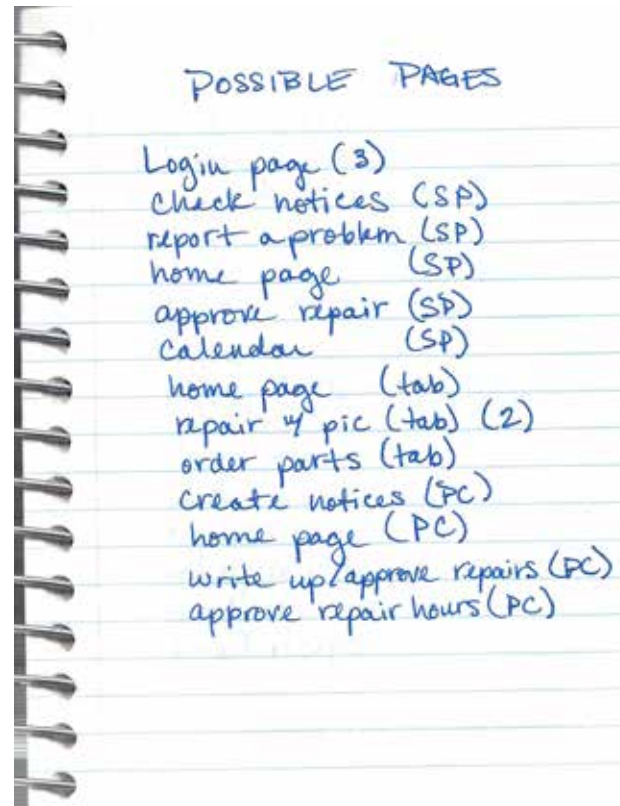
The app must have:

- Login for privacy
- Simple for elderly and professionals
- Easy to navigate
- Easy to understand
- Adaptable for all devices



**Lease  
Link**

I decided to use the name “Lease Link” for my app. It will represent a link for those who lease/rent with those who manage the apartments.





# Sketches: PC Pages

Lease Link

LOGIN

Name

Password

Title  
manager

Send

The login page will allow the user to enter their name and selected password. The title will be a drop-down menu with the choice of manager, maintenance or tenant. This will determine what kind of pages they will be receiving. The tenant will not need to have part ordering pages.

Lease Link

HOME PAGE

write up notices

run crime check

write up inspection

print forms

review repairs

inspection checklist

The home page will lead to choices for that specific field based on the title choice. Not all of these will be accessible in the prototypes based on the scenarios. It is possible for the computer to do more than the items listed here but these are the ones (plus a few extra) that we will be focusing on.

# Sketches: PC Pages

Lease Link

Repair

Reported Mar 1, 2015

the bathroom faucet is leaking around handles

tenant Louise

complex South apt 2

approve & send for repair

The repair page will be a specific item that has been reported that needs fixing. This will then be reviewed by the manager and approved for repair. When it leaves this stage, it will be immediately attributed to the maintenance man's repair list. This will be the one that the tenant will be filling within their scenario from the smartphone.

This page will be the review of work done, before and after with pictures. This is for the manager to approve for the maintenance man to get paid or not approved which means he will redo said repair. This also confirms that there were no other issues at the time, such as damage done while the repair were being made. This would include photos taken by the tenant and maintenance man.

Lease Link

WORK APPROVAL

CMPLX South Apt 2

BEFORE

AFTER

PROBLEM: Leaking faucet

X \_\_\_\_\_

approve work done

# Sketches: PC Pages

Lease Link

DATE	COMPLEX	APT	PROBLEM	SENT	DONE	APRD
Mar 1, 2015	South	2	leaky faucet	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mar 3, 2015	North	9	Spray for bugs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mar 4, 2015	North	3	repaint	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mar 6, 2015	Oak	4	clogged toilet	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mar 7, 2015	South	20	leaking lightbulb	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mar 10, 2015	Oak	0	mow lawns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

See more      See previous

This page would be a list of the repairs as they come in, those done and those waiting for approval. This shows the progress of each repair item. It also shows the date, location and problem. If the repair were clicked on, it would show the form that led to the repair. This is a way for the manager to keep abreast of issues and priority.

Lease Link      NOTICES

COMPLEX     APT

MESSAGE

To All South Residents,  
 Spring is here, the grass is getting taller.  
 Our maintenance guy will be here on  
 Tuesday to mow the lawns. Please make  
 sure you don't have any items on the  
 lawn for him to mow.

to all tenants.

attach signature

This is a sample of the notices that would go out to tenants. This could range from a personal one about keeping the noise down along with the statute found in the lease agreement they signed upon move-in to the all complex notice that the grass will be getting mowed on a certain date and to be aware of it.

# Sketches: Tablet Pages

Just as with the login for the PC, each of the logins will have the same values required. This enables that not just anyone can pick up a device and get into the users page.

Lease Link

Login

name

password

title ▾

send

Back

This page would be specific to the maintenance man and his needs. I believe I will have all of these links functioning for my prototype.

Lease Link

Make repairs

Sign off repairs

order parts

repair calendar

Back

Although the manager would normally order parts for higher priced items, the maintenance man could order smaller parts. For my scenarios we will have them order a part that I know is found in both local area stores and is easily found.

Lease Link

Order Parts

Item Store

Item #

Model #

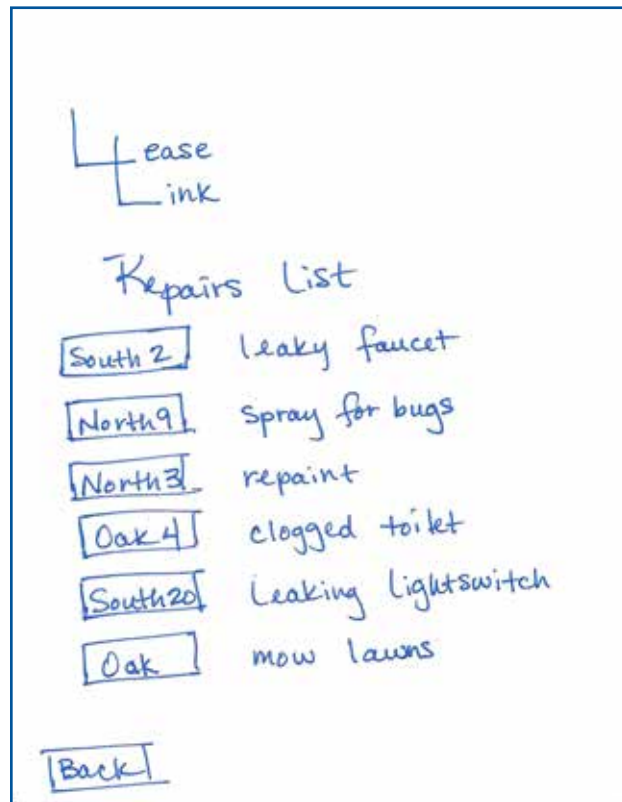
Home Depot \$

Lowe's \$

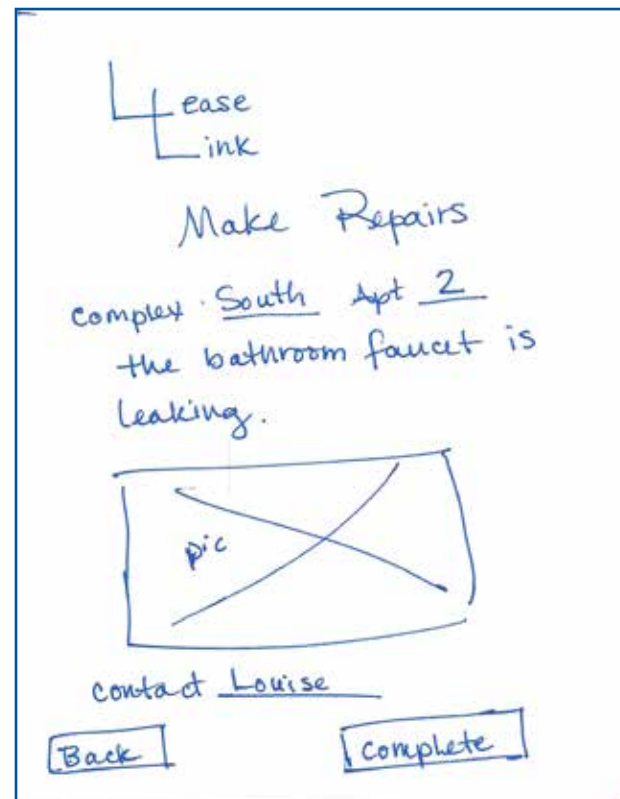
Back

# Sketches: Tablet Pages

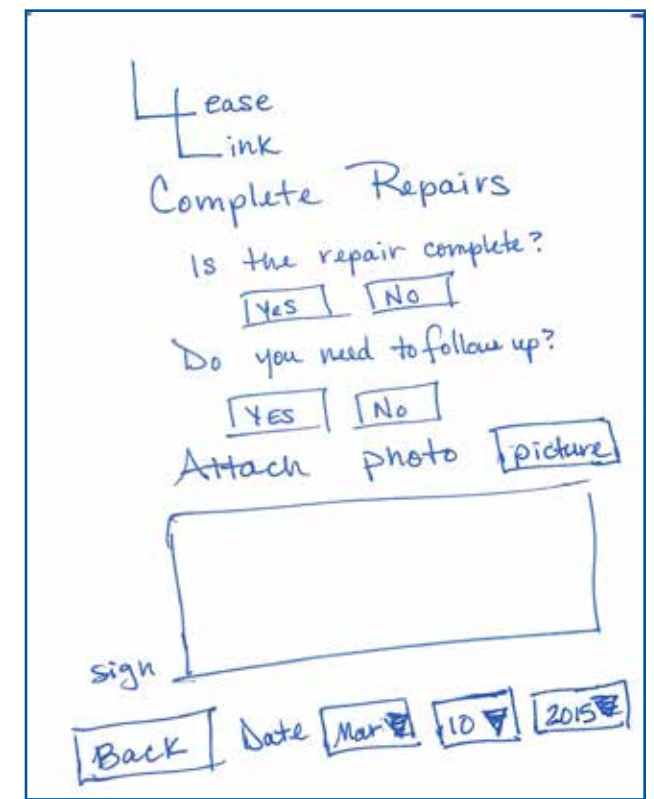
This is the repair list page. The page will list all the current repairs waiting for repair. They could be listed by order of importance or by date.



This is a sample of the repair needing to be made. When he clicks on the order, it will go to this page which shows the problem in more detail and a picture if one is available. If he clicks “complete” it will go to the next page.



The complete repairs page will be to confirm that the repair was made. He will follow the specifics and take a picture of the repair for review. In the larger box, he will sign or initial that the repairs were done.





# Sketches: Smartphone Pages

Again, the login page is there for the privacy of the individual but it also specifies who is reporting the problem etc.

A hand-drawn sketch of a login page. At the top left, the text 'Lease Link' is written in a stylized font. Below it, the word 'Login' is centered. There are four input fields stacked vertically: 'name', 'password', and 'title' (with a small downward arrow on the right), and a 'send' button at the bottom. A 'Back' button is located at the bottom left of the page.

The home page, again, is specific to the user type. This shows different items for the user according to their settings and needs.

A hand-drawn sketch of a home page. At the top left, the text 'Lease Link' is written. Below it, there are four rectangular buttons stacked vertically: 'Report a problem', 'check notices', 'approve repairs', and 'tenant calendar'. A 'Back' button is located at the bottom left of the page.

The tenant will be able to report a problem, specify date, location and add a picture of the problem. This will also enable the manager and maintenance man to determine importance and tools needed.

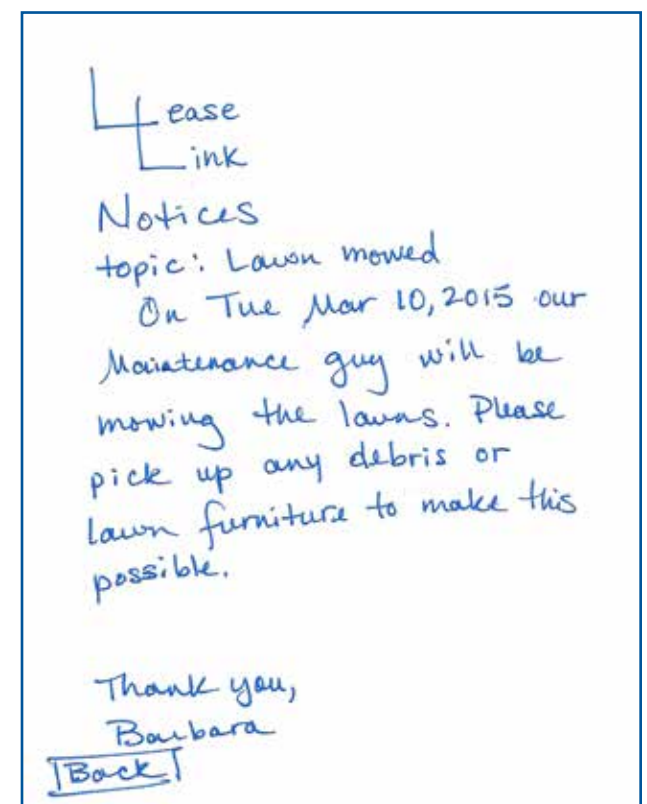
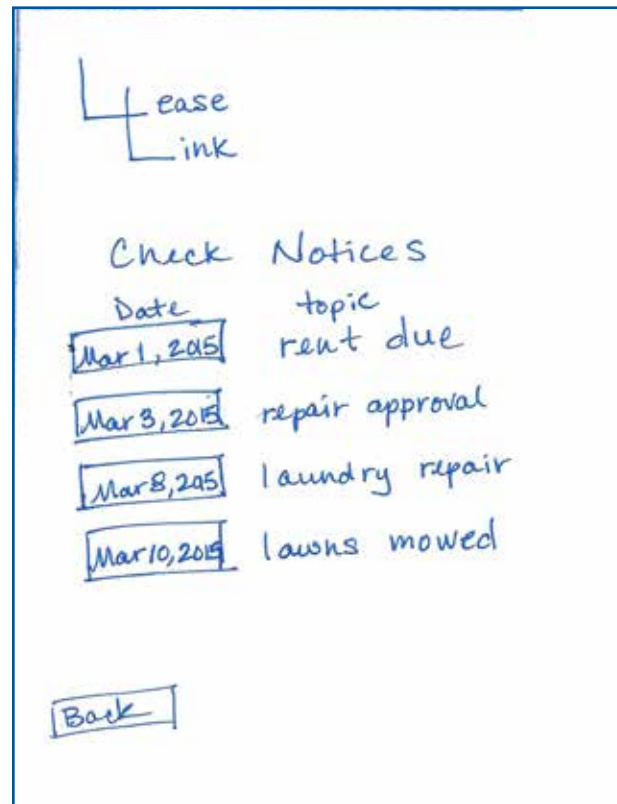
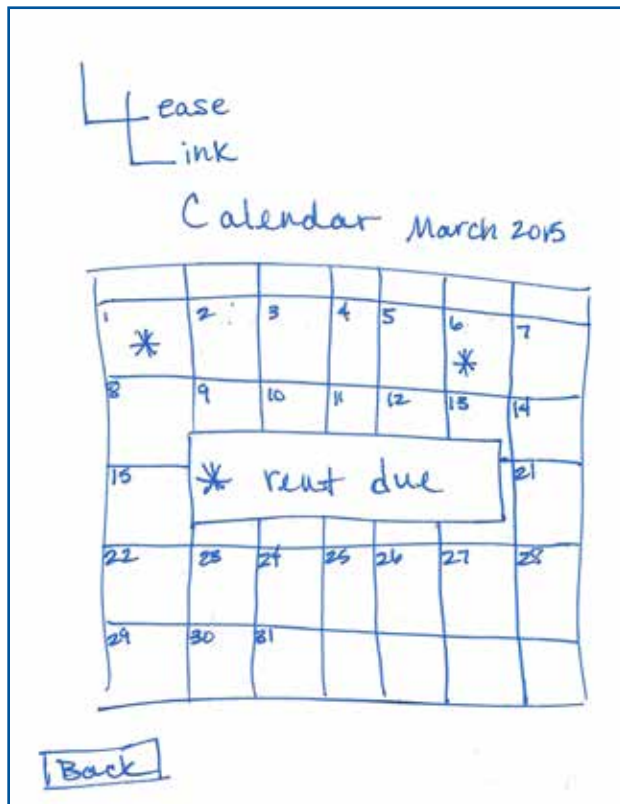
A hand-drawn sketch of a 'Report a problem' page. At the top left, the text 'Lease Link' is written. Below it, the title 'Report a problem' is centered. There are two dropdown menus: 'Apt 1' and 'complex North'. Below these is a large rectangular 'Problem text box'. At the bottom, there is a 'Date' section with three dropdown menus showing '01', '01', and '1990', with the year '2015' written below them. There are also two buttons: 'Back' on the left and 'Add a picture' on the right.

# Sketches: Smartphone Pages

The calendar will have a star on all the important dates the tenant needs to know. This will include the rent due all the way to the grass being cut. This is also important in case the maintenance man is coming to repair something on a specific date so she/he will be home.

If the tenant missed a notice or wants to go back to reread it, it is at their fingertips. They can choose which one had the vital information that they needed to recall.

The notices that the manager posts for the tenants will come into the app for the tenant to see right away. No waiting for the mail to get there, they can be kept informed timely. These could also have a “notifications” so they will get it without logging into their app.



# Scenarios

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## Apartment Manager

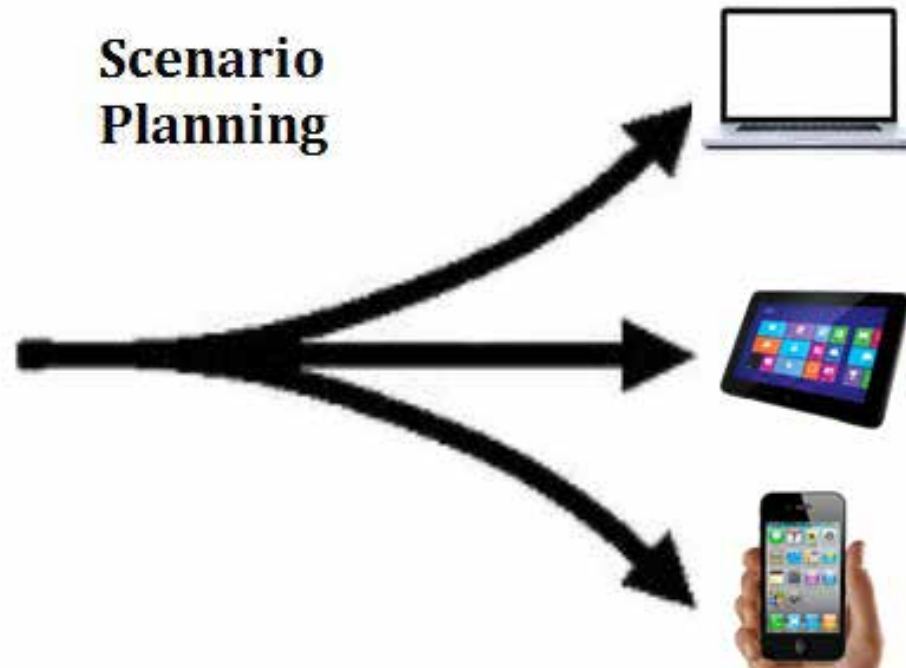
1. Review all the recent repairs. Pull up the newest repair and approve for repair.
2. Recently the maintenance man made a repair, review and approve it.
3. Write up a notice to all the tenants about the maintenance man mowing Tuesday March 10th at the South complex.

## Maintenance man

1. Order a new stove for an apartment. The manager has approved a Hotpoint Gas Range for an apartment.
2. From the repair list, review and repair the first item on the list.
3. Complete the repair and sign it off with a picture attached.

## Tenant

1. Report a leaking faucet in the bathroom for your apartment #2 South.
2. Check your calendar for any new items.
3. Check notices and reread the one sent for March 10th.



# Usability Test 01: Manager

## Apartment Manager

1. Review all the recent repairs. Pull up the newest repair and approve for repair.
2. Recently the maintenance man made a repair, review and approve it.
3. Write up a notice to all the tenants about the maintenance man mowing Tuesday March 10th at the South complex.

## Scenario 1 Results

A “home” link needs to be added to each page so that wherever they are, they can return to the home page quickly.

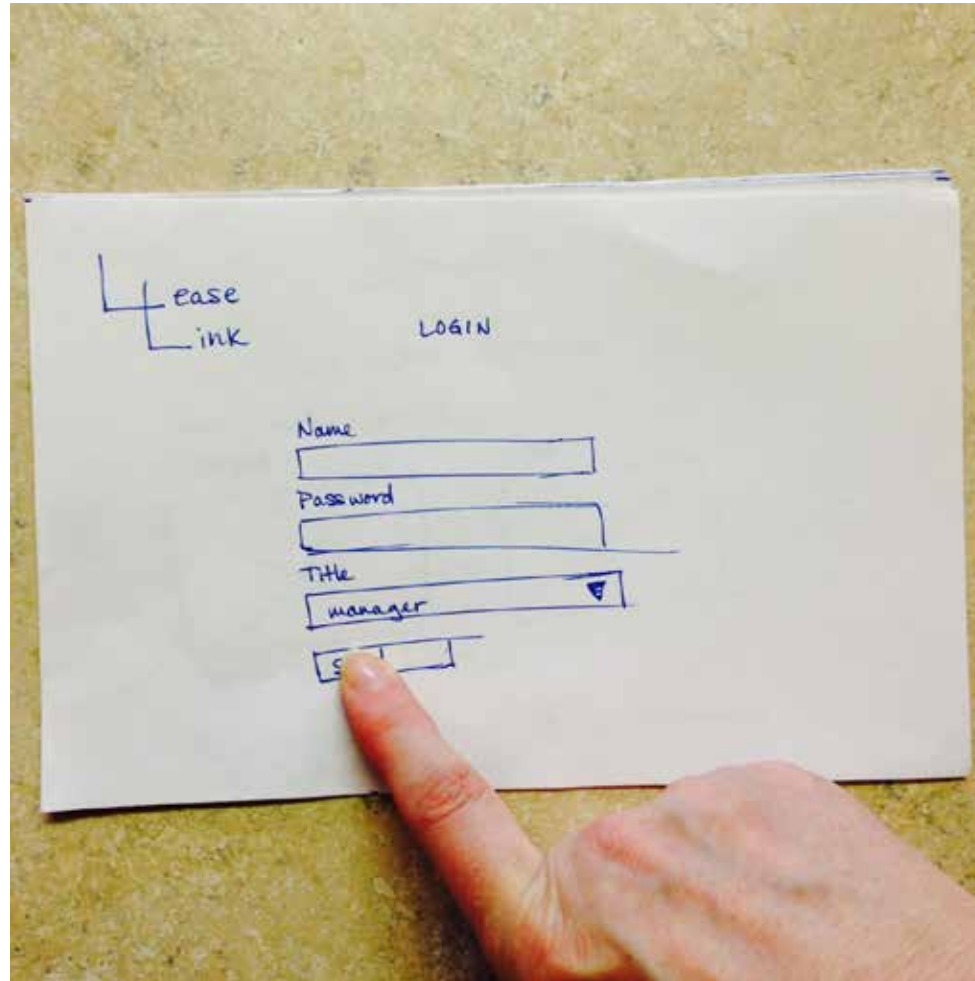
## Scenario 2 Results

The send button needs to be added to the page.

## Scenario 3 Results

On the notice page, it is redundant to have the notice repeat what apartment and complex they are at.

I ran all of my test subjects through all nine scenarios to see if each had anything different to add.



# Usability Test 01: Maintenance

## Maintenance man

1. Order a new stove for an apartment. The manager has approved a Hotpoint Gas Range for an apartment.
2. From the repair list, review and repair the first item on the list.
3. Complete the repair and sign it off with a picture attached.

## Scenario 1 Results

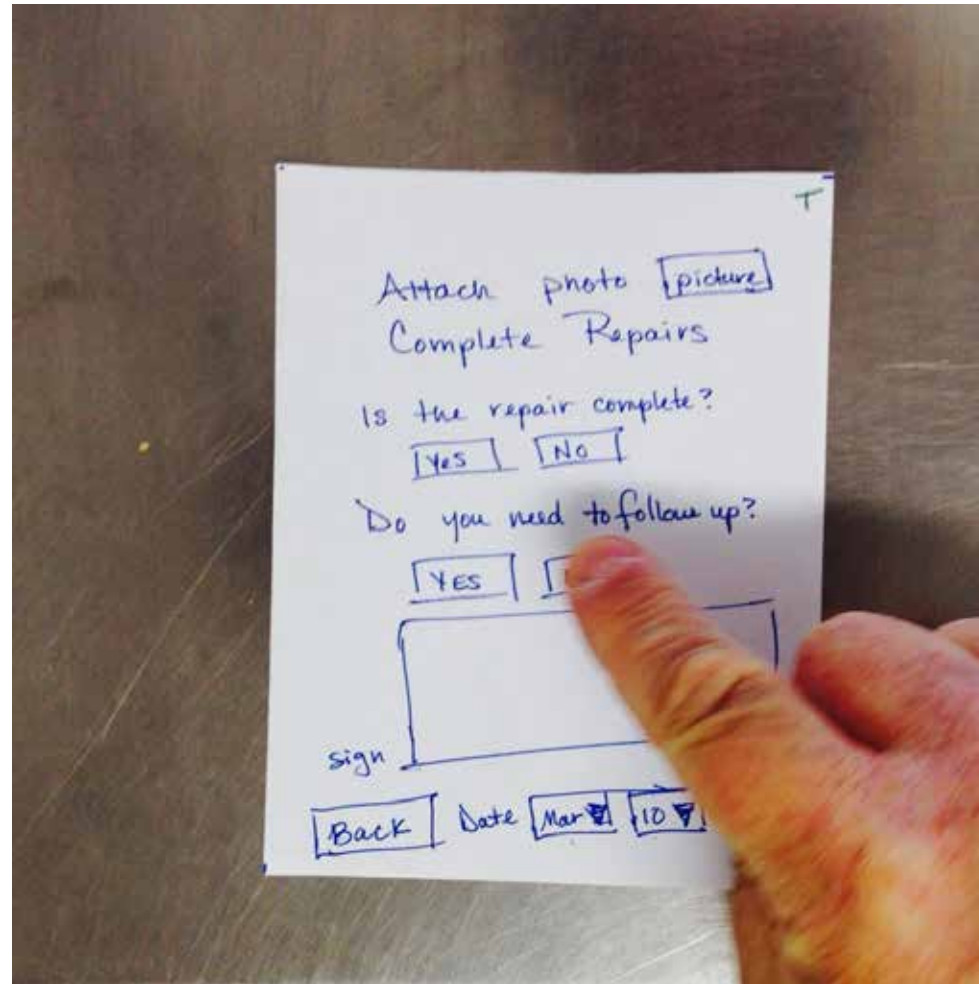
The send button needs to be added to the page.

## Scenario 2 Results

It would be good if a calendar page were set up for the maintenance guy.

## Scenario 3 Results

The maintenance man needs to check the smoke alarms in each apartment when he makes a repair. Those need to be added to each repair form.





# Usability Test 01: Tenant

## Tenant

1. Report a leaking faucet in the bathroom for your apartment #2 South.
2. Check your calendar for any new items.
3. Check notices and reread the one sent for March 10th.

## Scenario 1 Results

On the smartphone report form, it is unnecessary to have them fill in the date when the phone could do it automatically.

The report form needs the tenant signature if it is found on the manager's form when they have final approval.

## Scenario 2 Results

The send button needs to be added to the page.

## Scenario 3 Results

A "home" link needs to be added to each page so that wherever they are, they can return to the home page quickly.

