

3D Printing App - Project Plan

App Description

[3D printing app] is a service that connects people who own 3D printers with people that want to print designs.

List of Pages

Landing Page

- Nav bar → Sign up, login, How it works (how it works takes you down to a different section), maybe fixed nav when you scroll the page.
- Main Title
- Brief description of application
- Two options - Designers and printers (get started)
 - If designer → take to designer registration page
 - If printer → take to printer rego page
- On the right - hero image
- How it works (how the company works)
- What is 3d printing?
 - Embedded youtube video
 - Optionally, video playing in the background - like on singularityNET
- Another get started link

Registration Page

- Two types of registration:
 - Designer
 - Drop down for type of application intended (student, hobbyist, professional architect, etc)
 - How big the design needs to be? (not sure if this is relevant, will have to do research - this might be better to include in the actual listing request)
 - Printer
 - Location - string - can we use a google maps lookup api?
 - Type of printer

- Availability / turnaround period
 - Are you willing to ship items? (might reconsider this depending on time)
- Both should ask for:
 - Name
 - Email
 - Phone number
 - Address
 - Some kind of verification? (ID / bank docs) ?

Dashboard (home)

- Designer →
 - Upload a new job (create listing)
 - Manage jobs (view listings, edit listings)
- Printer
 - Accept jobs
 - Manage jobs

Viewing a listing (as a printer)

- Location
- Pricing
- Description
- Rating
- Printer info
- How long to print a job
- Submit button

View Quotes

- A list of quotes, each containing:
 - Printer name
 - Price
 - Estimated completion date

Job Offers (printers)

Job History (printers, designers)

User Experience

- The user should be able to...
- In terms of listing viewings:
 - Should the designers be making the listings, or the printers?
 - It makes sense that the designers are advertising the job, and they set their own price. They also set how big it needs to be, and the kind of materials they want. The printers can then view the listings, and if they think that the price is fair, they can accept the job.
 - Who provides the materials?
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Resources

Example sites:

1. Airtasker - <https://www.airtasker.com/>
 - a. Good landing page, multiple ways to get somewhere (categories, get started). View listing page is good except side content (left sidebar)
2. Uber - <https://www.uber.com>
 - a. Landing page is what we want for ours, as there are 2 types of users.
3. Singularity net - <https://singularitynet.io/>
 - a. Good colour scheme,
 - b. Video playing in background with text in foreground
 - c. 3 column theme
 - d. Separation of sections - blue and white gives contrast
4. Aiva - <https://www.aiva.ai>
 - a. Good colour scheme, nice music player at the bottom that functions quite well.
5. 3D Hubs - <https://www.3dhubs.com/>

Coding Resources

1. Slick - JS Carousel for scrolling images etc <https://github.com/kenwheeler/slick>
2. Form helpers for rails forms - https://guides.rubyonrails.org/form_helpers.html

Gems

1. Devise (for logins and user authentication) - <https://github.com/plataformatec/devise>

List of Views

1. Landing page = "/" - root?
2. Sign up page - designer
3. Sign up page - printer
4. Login page
5. Dashboard - when logged in and signed up "/dashboard" - up the top display 'Hi, {name}'
 - a. Only accessible when logged in
6. Listings (view all listings)
7. Listing(id) - view a specific listing
8. Edit listing form (id)
9. Create new listing - view form for creating a listing (for designers)
10. View Quotes
 - a. Designer can see all quotes on their listings
 - b. Printer can see all quotes they have given
11. View specific quote (id)
12. Create Quote form (for printer)
13. Edit quote (for printer)
14. View Jobs
15. View specific job (id)

General Research

Chat with pete:

- 3D printing filament is very cheap - he did not even factor this into the cost
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- We'd charge based on the amount of effort we'd need to put it to make the print work- that was by far the biggest challenge
- People who have never used 3D printers often don't understand their nuances or the considerations you need to make for a successful print, so a lot of our work was updating their file so that it would actually print

Random Designs

1. Emerald Vase: <https://www.thingiverse.com/thing:2376777>