2015 Season
Student Workbook

About Technovation

Mission: Our mission is to promote women in technology by giving them the confidence and skills they need to succeed in computer science and entrepreneurship

Vision: Our vision is to empower every young woman who wants to have a career in technology entrepreneurship.

Goal: Our goal is to teach young women the basic skills that will allow them to understand the opportunities in technology and entrepreneurship.

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Overview of Lessons

Determine your class meeting schedule and write the dates in below.

Lesson	Date	Topics	✔
1		Introduction to Technovation Career Exploration – Get to know your mentor! Talk to Me tutorial	
2		Ideation – Brainstorming community issues Lean Startup Design a survey – get feedback on the issues Collection of Games tutorial	
3		Ideation – Brainstorming solutions Design a survey – get feedback on solutions **Potential Market Size** Get feedback on Market Size from Teachers/Mentors Maps Tutorial	
4		Revise Market Size calculations based on feedback User Interface and Product Design - Paper Prototyping **Product Description** Get feedback on paper prototype from peers/potential users Get feedback on product description from Teachers/Mentors	
5		Revise Product Description based on feedback Revise paper prototypes based on feedback and transfer to AI Product Planning **Competitive Analysis** Get feedback on Competitive Analysis from Teachers/Mentors	
6		Revise Competitive Analysis and Pricing based on feedback **Branding and Promotion** 100-word app description Continue working on prototype	
7		**Potential Revenue** Revise branding and promotion plan based on feedback Continue working on prototype	

8		Revise potential revenue based on feedback **Pitch Guidelines** – Plan pitch video, write out script Get feedback on pitch video plan Continue working on prototype	
9		**Demo video guidelines** – plan demo video Begin filming pitch video Continue working on prototype Get feedback from peers/potential users for your app so far	
10		Begin filming demo video Continue working on prototype Continue working on pitch video	
11		Edit Videos Put together business plan Review deliverables Continue working on prototype	
12		Make any last edits and revisions Reflection Submission Post-Surveys	

2015 Final Deliverables

- ☐ App prototype source code
- ☐ 3-5 Screenshots of your app prototype
- ☐ Pitch Video on YouTube under 4 minutes (+/- a few seconds)
- ☐ 100-word app description
- ☐ Demo Video on YouTube under 2 minutes (+/- a few seconds)
- ☐ Business plan – typed and in PDF format

Judging Rubric

DIRECTIONS: The judging rubric for Technovation 2015 contains objective and subjective scoring. The objective score composes of the Ideation, Technical, and Entrepreneurial scores. It is possible for all teams in your scoring batch to receive a perfect score on these objective scoring. The Overall Impression score is where you should score the apps in your batch relative to each other for a subjective score. Maximum points on the subjective part should only be awarded if the submission has truly exhausted their research and development for a complete prototype.

Objective Score	**Ideation Score**	**0**	**1**	**3**		**5**	**SCORE**	**COMMENTS**
	Did the team identify a real problem in their community?	No	The problem identified is more of a nuisance, and does not have larger social implications.	The problem seems to be real, but could use a little more detail.		Yes		
	Does the app address the problem that they identified?	No	The app addresses a tangential problem.	The app addresses some parts of the problem.		Yes		
						10 maximum possible points		
	Technical Score	**0**	**1**	**3**		**5**	**SCORE**	**COMMENTS**
	Is the prototype they submitted fully functional? (All buttons and links functional and no obvious bugs.)	No	Only superficial functionality. (i.e. screen transitions)	Mostly, except for a few minor issues. I can still get the general idea.		Yes, no bugs that I could see.		
	Does the prototype go beyond static information? (e.g. calls another app on the phone, saves information to an external server to coordinate multiple users, etc)	No, only information stored directly in the app is used.	The app uses other resources, but it seems unnecessary for the purpose of the app.	Mostly, but there are one or two other places where the app could have used an external service to be more effective.		Yes, the app uses multiple resources and does so effectively.		
	Does the prototype match the feature list defined in their product description?	No	Less than half of the features listed are in the prototype and minimal explanation for why features are missing.	More than half of the features are in the prototype, and there's a reasonable explanation for the missing features.		Yes, everything stated is included.		
	User Interface. Is the UI intuitive and easy to use?	No	All the functionality is there, but I had to watch the demo video to and read the product descriptionto understand the app.	The app was obvious after thoroughly reading the product description.		A quick skim of the defined problem and product description was enough to understand how to use the app.		
						20 maximum possible points		
	Entrepreneurial score (Business Plan and Pitch Video - broken down into its components)	**0**	**1**	**2**		**3**	**SCORE**	**COMMENTS**
	Product Description	None	A short and vague description.	Describes the app, but value of the app is vague.		Describes app and value added.		
	Potential Market Size	None	Groups of people mentioned, but no estimates done.	Estimates done and some groups defined. Could have been more thorough.		Estimates done and groups defined. Estimates clearly explained.		
	Competitive Analysis	None	Competitors are named, but explanations are sparse or nonexistent.	Competitors are named, and explanations are provided. Could have been more thorough.		Analysis is exhaustive.		
	Potential Revenue	None	Calculations are suspect, and explanations are unclear.	Calculations exist, but basis of the calculations could use more explanation.		Calculations and explanations are thorough and believable.		
	Branding and Promotion	None	A logo or promotional sources are included, but explanations are sparse or nonexistent.	Logo and limited promotional sources are included. Explanations for promotional plan could be more thorough.		Logo and promotional plans are included, well explained and exhaustive.		
						15 maximum possible points		
Subjective Score	**Overall Impression -** Award points based on which ones gave the best pitch in your batch.	**0**	**2**	**5**		**10**		**COMMENTS**
	Overall Pitch Quality. Is the Pitch compelling? Can you see this app being used by consumers?	Not at all. Argument was flawed and difficult to follow.	I understand their argument, but I'm not sold.	Compelling arguments were made, and a small following may form.		Yes! The argument was compelling enough to think this app has true growth potential.		
						10 Maximum total points		
Total Score	**Deliverables (subtract 1 point for each item missing)**	Pitch Video	Demo Video	Prototype Source code	Screenshots	100-word app description	Business plan	
	Bonus points: Has the app already been launched the the Play Store or App Store? (2 possible bonus points)							
	TOTAL SCORE					**55 maximum total points**		

Career Exploration

A major step in career exploration is an informational interview of people who are in your field of interest. Here are some questions you can ask your mentors.

- Describe a typical day at work.
- How many hours do you normally work in a week?
- What do you see as the potential for growth in this field?
- What can I do now to help me find employment in this field?
- What do you like about your career and what don't you like about it?

What other questions would you ask of the mentors? List them here:

Q. _____ A:_____

Q. _____ A:_____

Q. _____ A:_____

*If you don't have a mentor yet, take a look at the "What is it like to work at…" videos here: http://www.youtube.com/playlist?list=PLl3AijnqmcEhtjTJu2wpkVApC0Q0jrNsO

NETWORKING: Did you meet or learn about anyone you want to follow up with? Write their name and email here.

Name:_____ Email:_____

Name:_____ Email:_____

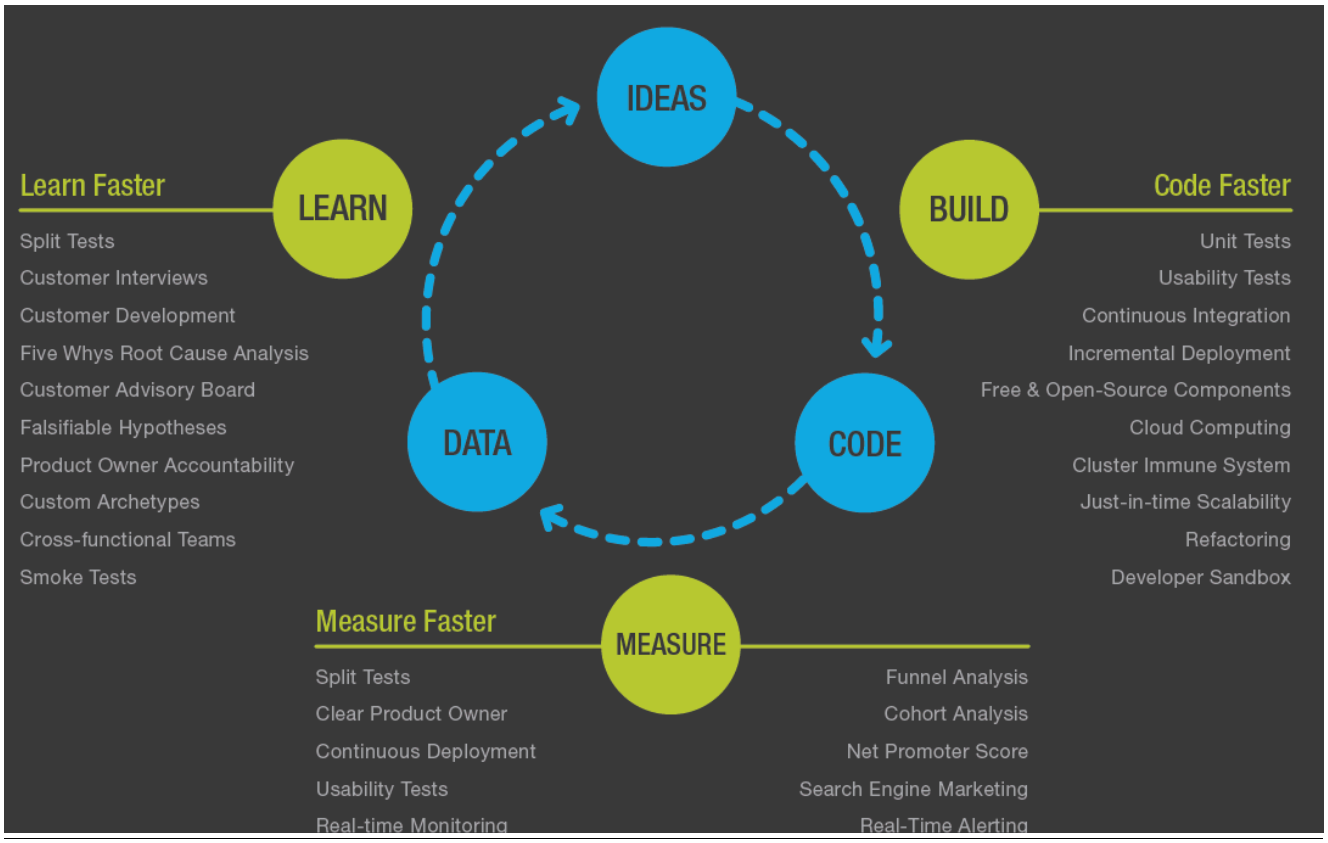
FOLLOW UP: Sending thank you emails or cards is a great way to let people know that you appreciate their time. We encourage you to stay connected with your mentor panel or reach out to the mentors in the videos so you can build your network of female mentors. Here is a sample email or card you can send. Put your own touch on it and personalize the thank you!

Dear Ms. _____,

Thank you for attending our Technovation Career Panel. I am interested in the field of _____ and appreciate your time sharing your experiences with our team. I hope we can stay connected in the future.

Thank you,
(YOURNAME)

Lean Startup



Draw the cycle that represents the process you'll use as you build your app.

Example Surveys

Shazam is a mobile app based music identification service.

Survey Questions:
The goal of this survey is to find a group of people that can give you information about your idea/ product / market opportunity

1. Do you enjoy listening to music? (yes or no) _____
2. How often do you find yourself wondering the name of a song that you hear? (1= never, 10 = all the time) _____
3. How can we contact you to talk further about this? _____

Resulting Metrics (data we received):
Divide the number of people who responded in a selected way by the number of people who took the survey.

1. 45/50 said yes, they enjoy listening to music
2. 22/30 reported a 5 or greater about not knowing names of songs
3. 40/50 included at least one way to contact them

What we learned:

- There is a large market size for our product
- Most people wonder the name of the a song they hear
- People are interested in talking to us about it

Write your Final Survey Questions and Results Here:

Survey Question	Summary of Survey Results
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Why do Startups Fail?

"The vast majority of startups fail NOT because they could not build a great product or technology, but because no one wanted the product!" — Steve Blank

Can you name anything appealing about these two product flops? Anything not appealing? Are there other products that can serve a similar function but in a better way? (Do some Internet research if you need to.)

Oakley Thump Sunglasses: Sunglasses with a built in MP3 player – only 256 MB flash memory, cost $495 back in 2007.

Twitter Peek: Allowed Twitter fans to check their feed and post updates using a built-in keyboard. Only had 20-character previews and was $199.

Potential Market Size

- What problem does your app address?
- What groups of people have these problems?
- How big is this group(s) of people (i.e. your market)?
- If your app existed, would people use it? How often?
- Does your target audience have the problem that you think they have?
- Is your solution (your app) the only solution to the problem? If not, how many users does the competition have?

Do some rough calculations here to determine your potential market size.

Example Surveys

Angry Birds is a mobile app game

Survey Questions:
The goal of this survey is to find a group of people that can give you information about your idea/ product / market opportunity

1. Do you enjoy puzzle games? (yes or no) _____
2. How satisfied are you with your options of mobile phone games? (1= not satisfied, 10 = very satisfied) _____
3. How can we contact you to talk further about this? _____

Resulting Metrics:
Divide the number of people who responded in a selected way by the number of people who took the survey.

1. 30/50 said yes, they enjoy puzzle games
2. 12/30 reported a satisfaction rate of less than 7
3. 40/50 included at least one way to contact them

What we learned:

- We have a good market size for our app
- Most people are fairly satisfied with their options of mobile games
- People are interested in talking to us about it

Market Research Survey

When creating your survey think about the following:

- What do you want to know about your target user?
- What problem does your app solve?
- What groups of people have these problems?
- How big is this group(s) of people (i.e. your market)?
- Where is there a need for your app?
- What currently fills that need?
- If your app existed, would people use it? How often?
- Who would be willing to pay for it and how much would they pay?
- Which features are most important for your app to have?
- Does your target audience have the problem that you think they have?
- Is your solution (your app) the only solution to the problem?

Brainstorm Survey Questions

Tip: If you had your customer in front of you, what questions would you ask them to find out what they need from an app, how they would use it, etc. List your ideas and questions here. Make sure your final survey is typed when you give it to people.

Write your Final Survey Questions and Results Here:

Survey Question	Summary of Survey Results
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Product Description

Write up a summary of your app here. Keep this description, you'll need to submit it! It should include at least the following:

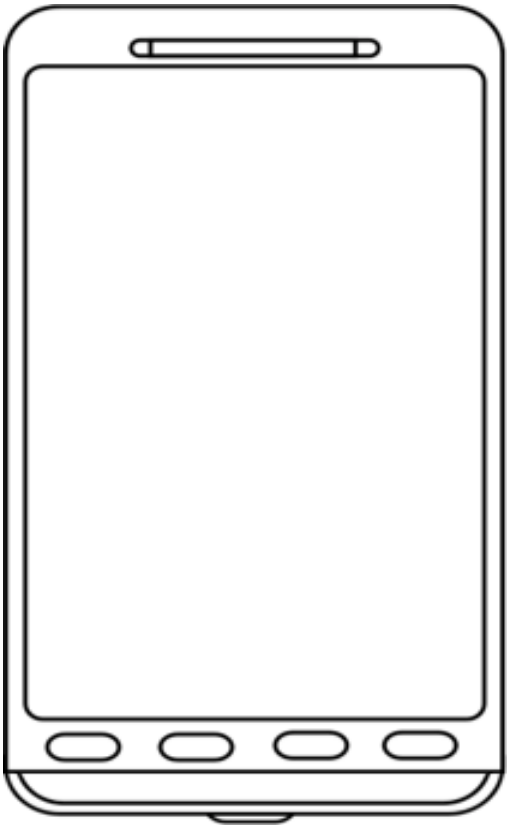
- **What issue does your app address?**
- **How does your app address the issue defined?**
- **What are the main features of your app?**
- **Who are your users?**

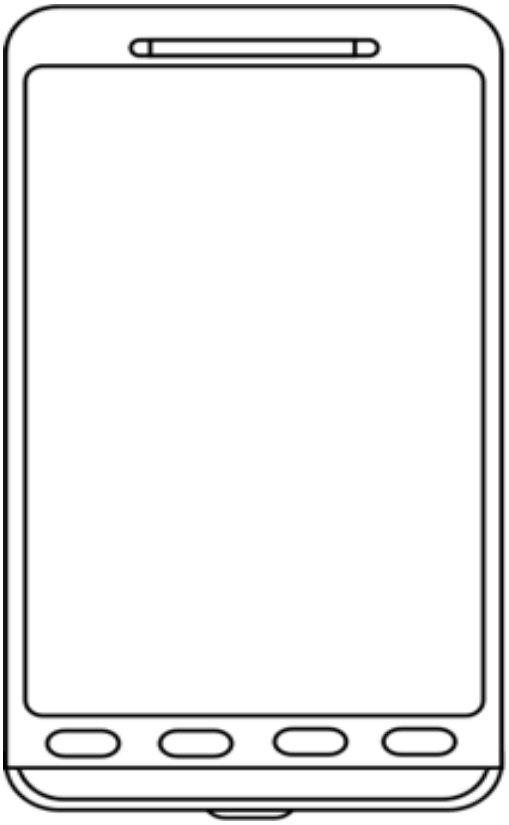
Usability testing of competitor apps

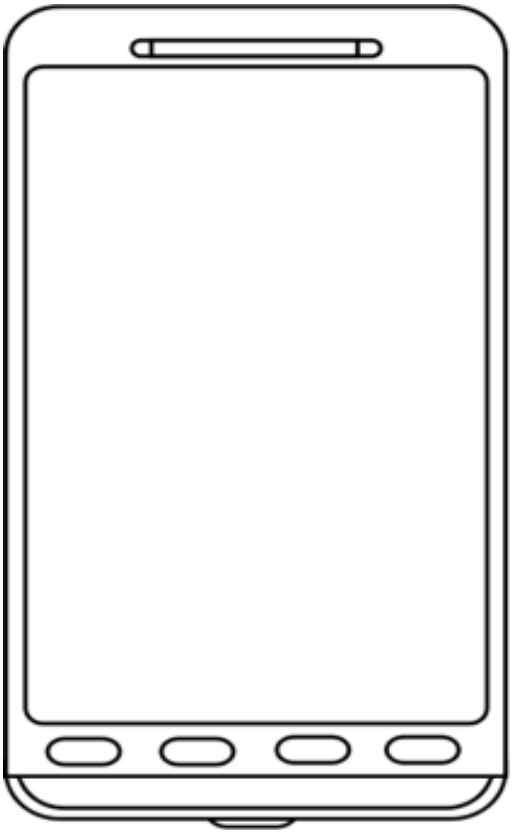
Name of competitor	What does it do well?	What could it do better?	How will your app be different?

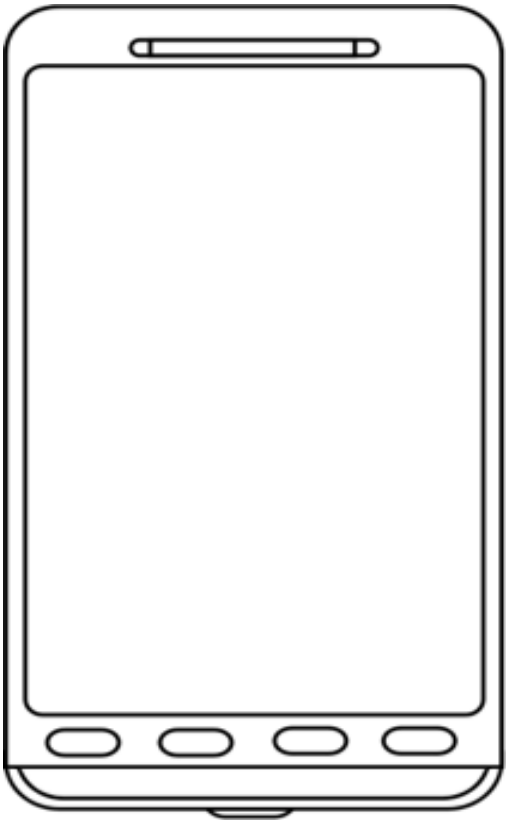
Sketch Your Paper Prototype

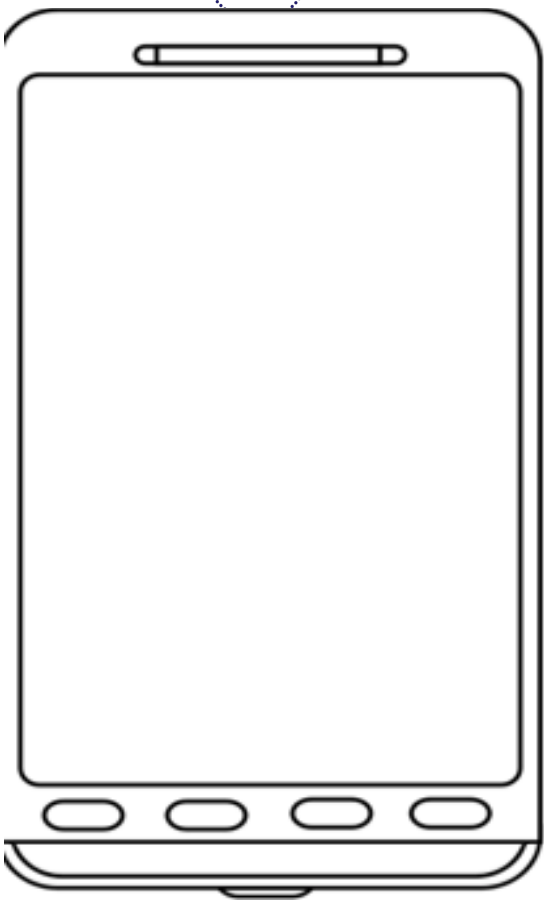
Draw your screens out here or use index cards. Think about how your screens will interact with each other, and draw arrows to indicate the flow of your app.

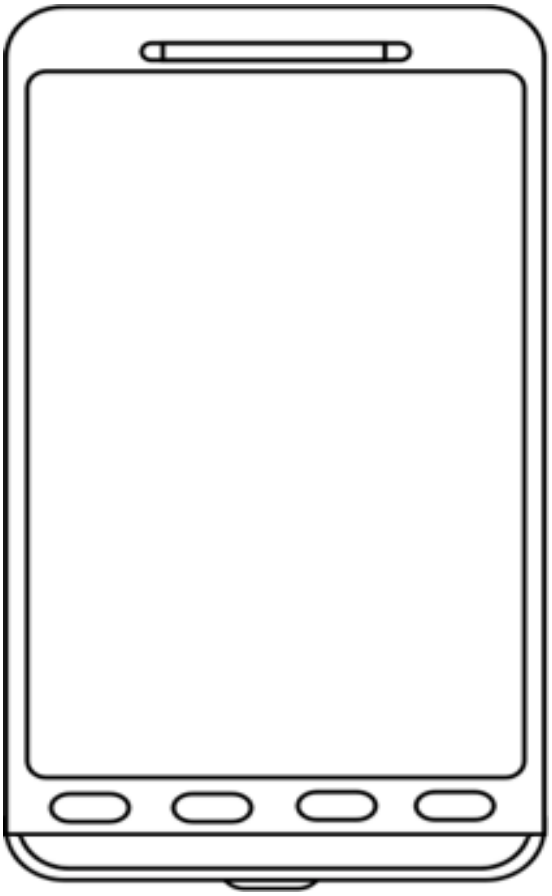


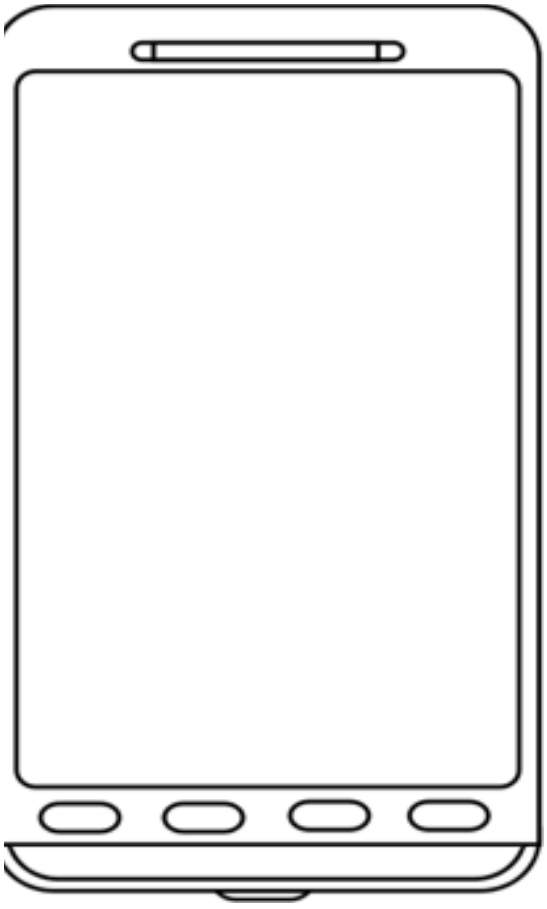


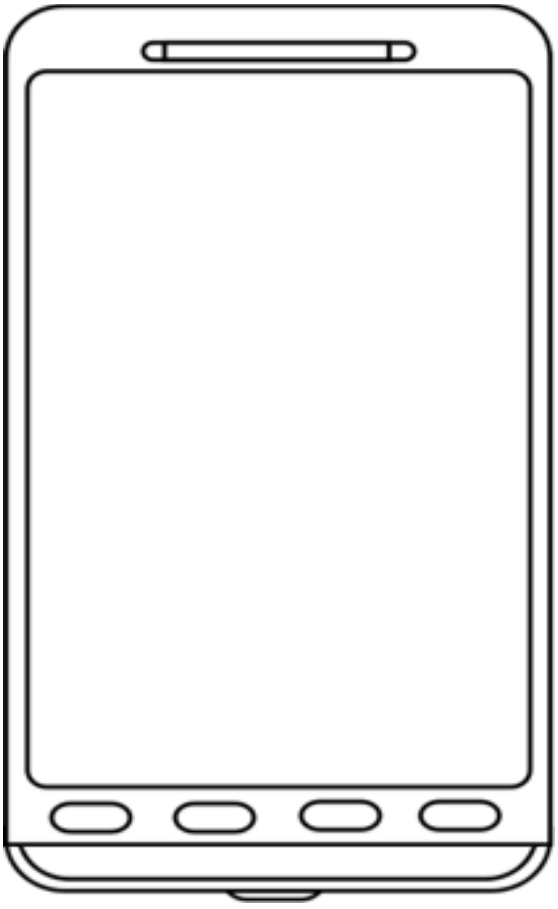


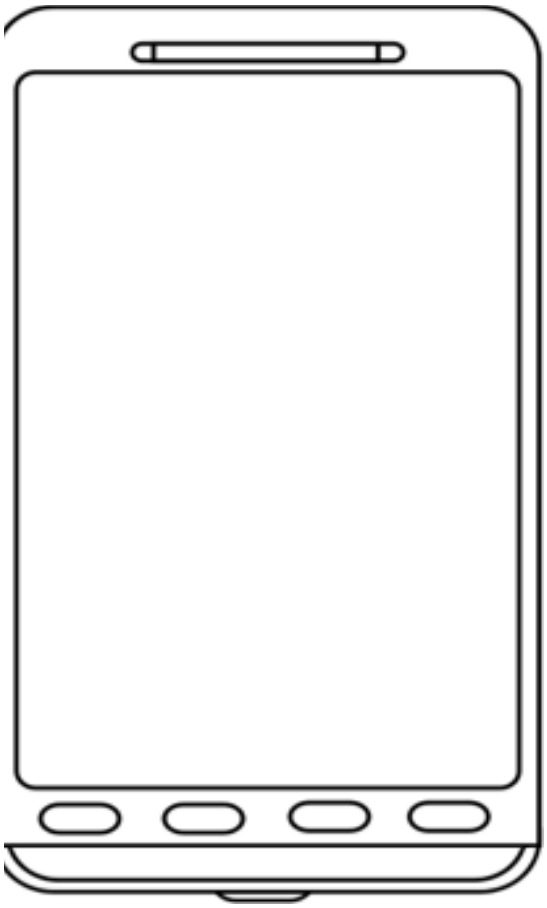


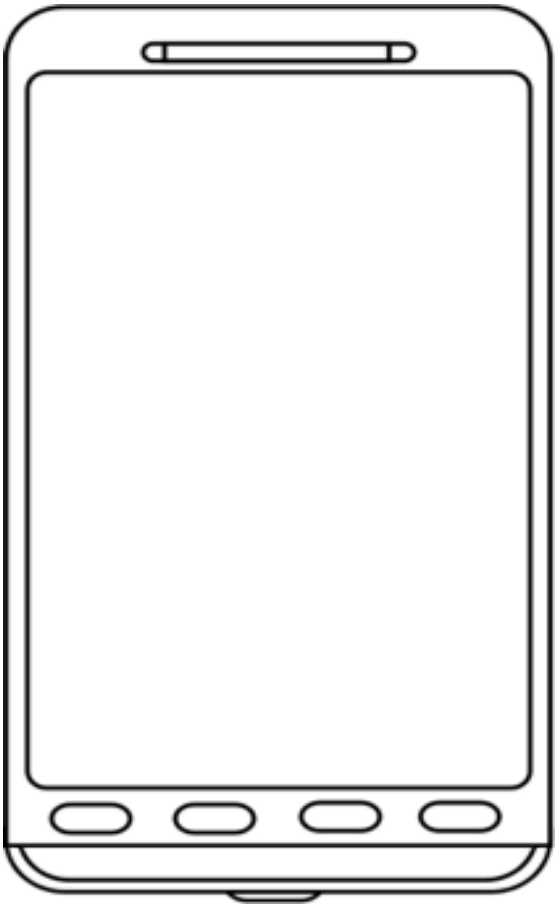


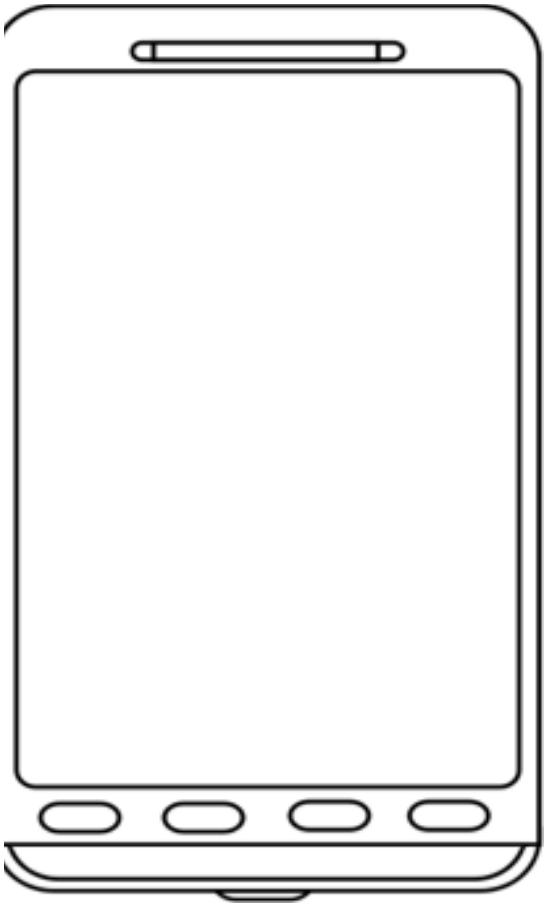


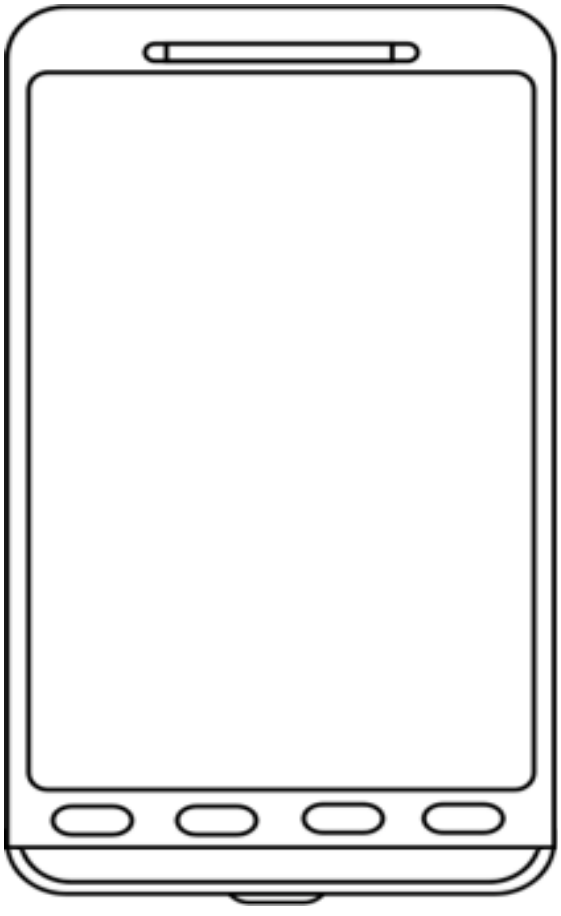












Test your paper prototype:

Take notes on the feedback you receive here. Answer the Usability Testing questions and add some of your own before you begin if needed.

Questions	Notes	Changes that need to be made by the team
Is there anything that is unclear or confusing in the user-interface?		
Would you prefer the app look or behave differently?		
Which features of the app interface and usability are of highest value?		
Are there any missing buttons or other content from the app?		
Did your expectations differ from the intent of the app?		

Project Planning:

Create a plan for how you will complete your prototype. Figure out what basic features or components your app will need (text-to-speech, accelerometer, lists, etc.) and then research videos or tutorials that will teach you how to implement those features. Finally, make a plan for when you will work on each component.

Feature	Resources to learn how to use feature	Timeframe	Priority

Competitive Analysis

Write up a summary of your analysis here. Keep your final analysis, you'll need to submit it! It should include the following:

- **What features does your app that other apps do not?**
- **Use the chart you filled in on page 17 to help you here.**

Logo and App Color Development

Thinking about the colors you use on your app screen and in your logo can set the mood for what people will feel when they interact with your app. Different colors can create different mental and physical responses from your consumer. Take some time to strategically think about what colors you want to use depending on what you plan your app to do for your consumer.

Color Wheel:

- ☐ The first color diagram was developed by Sir Isaac Newton in 1666.
- ☐ 12 colors on the color wheel:
- ☐ Primary: red, yellow, and blue (no other colors can be mixed to make these colors.)
- ☐ Secondary: green, orange and purple (created by mixing the primary colors)
- ☐ Tertiary: yellow-orange, red-orange, red-purple, blue-purple, blue-green, and yellow green

Color tips:

- ☐ Look to nature for inspiration of colors you want to use
- ☐ Check out your competition and how they use colors
- ☐ Ask yourself what you want the colors you use to do for the consumer

Color meanings:

- ☐ Red: is one of the top two favorite colors of all people. Approximately 77% of all flags in the world contain red in them. Red is the international color for stop.
- ☐ Yellow is the most vibrant of colors and represents happiness and creativity. Generally, yellow captures our attention more than other colors.
- ☐ Blue is the favorite color of most people. The shade of blue can change the feeling you get from something. This is often the most over-used color so be careful with placement.

Want more color wheel and strategy information?

Google the colors you are thinking of using or check out these websites: Colormatters.com, tigercolor.com, color-wheel-pro.com

Branding and Promotion:

Write your strategy for promoting your app here.

- Messaging – How will you describe the app to consumers?
- Channels – What methods will you use to get the message to consumers?
- List the actions you will take to launch your product or service.
- How will you bring the product or service to the market?
- How do you plan to grow the number of users over time?

100-Word App Description:

Use this space to write your 100-word app description. You've already written a Product Description on page 16. Now, take that description and trim it down to 100 words or less. This description should be fun, catchy, and entice someone to buy your app. Remember to type up your final draft, count the words, and have it saved and ready by the submission date.

Brainstorming Questions:

1. What is unique about your app?

2. What problem do you think your app is solving?

3. How are you solving the problem?

4. Who is your target consumer and why would they want to use your app?

Final Description:

Potential Revenue:

Use this space to write what your potential revenue may be. Keep this because you'll need to submit it! It should include at least the following:

- **How much does your product or service cost?**
- **Based on the market size you already calculated, how much money will your app make in the first year?**

The Pitch:

Your Hook (quote, statistic, photo, skit, question, etc):

TELL THE STORY:

Who:

What:

When:

Why:

How:

Remember that all team members must speak in the pitch. Assign team members to the different parts of the presentation:

Hook:

Middle:

Beginning:

End:

2014 Final Deliverables

Your team will be judged on the following items. Assign a team member to finish anything that still needs work.

- ☐ 3-5 Screenshots of your app prototype
  - Team member responsible: _____
- ☐ Source code for your team's app (show **at least** 3 functional screens of code for your team's app)
  - Team member responsible: _____
- ☐ Pitch Video on YouTube under 4 minutes (+/- a few seconds)
  - Team member responsible: _____
- ☐ Demo Video on YouTube under 4 minutes (+/- a few seconds)
  - Team member responsible: _____
- ☐ Business plan – typed and in PDF format
  - Team member responsible: _____
- ☐ 100-word app description - typed and in PDF format
  - Team member responsible: _____

Other deliverables:

- ☐ Team photo
- ☐ Survey in week 12

Glossary

User-Centered Design: Designing with the user in mind (*You* are not necessarily the user!)

User Interface: Way of interacting between person and product, especially in software.

User Interface Design: Designing things that will make sense for the end user, by thinking about how the user will interface with the product.

Market Research: Figuring out what your market wants. What problem is your customer interested in solving and does your product/service solve this problem in the customers' eyes?

Lean Startup Methodology: Talking to your customers early and often, testing your product with potential customers as early as possible even if the product is imperfect, and learning as much as you can about your market and business quickly, before pouring resources into it. Developed by Eric Ries.

Pivot: Changing your business strategy/app idea to suit either a new customer or the same customer… for example, making your app a solution to a problem that your customer indicates as a problem, rather than the one you originally intended to solve.

Customer development: Understanding your customer's needs even better than they do, and making sure customers will use your product.

Value Propositions: What value do we deliver to the customer? Low Price/ /Accessibility/Convenience?

Distribution Channels: How are you reaching your customers? Which method works best? Which are the most cost-efficient?

Cost Structure: What are the important costs in your business?

Market Size: Who are all the people and organizations for which you are creating value? There must be enough people who would buy your product/service to make a profit.

Revenue Streams: How will you make money and from whom? Paid apps? In-app purchases?

Profit: The extra money that you have made, subtracting any costs incurred, at the end of the day. Profit = Revenue – Cost.