Tuesday: Market Research

Our goal for today is to sharpen the focus of our products. Perform market research, spend some time thinking about implementation, and develop product prototypes.

Deliverables

- Perform market research of product idea (see content below)
- Develop project pitch and perform user research (see content below)
- Review Usability content below
- Build product prototypes and establish user flow (content below)

Market Research

Our project ideas are coming together and we have an MVP. Before we start building anything, we need to take a look at the market for our product.

One thing to consider is the competition: does this product already exist? If it does, that's okay! Many apps in the real world are variations of one another. How many apps have you seen for playing music or requesting a taxi have can you think of?

If this is the case, then think about how the user experience be improved or made unique.

We also want to consider what kinds of customers our product going to serve. For example, let's say we want to build an event-planning application. How would the presentation and extra features differ if we were building it for:

- sports teams?
  - for adults
  - for children (or their parents)
- technology meetups?
- outdoors enthusiasts?

Task:

Spend half an hour as a team researching your idea online and refining your MVP according to your findings.

Project Pitch

So, you have an idea for the app you'd like to build as a team. If we recall our earlier discussion about the MVP, we need to understand what our user wants before actually building anything. What's the best way to do that? *By talking to users!*

Task:

For the next two hours, we're going to go out and do just that. Go out in groups (at least two people) to an area with potential users you can ask questions about your product. Designate one group member as the note-taker to record answers to questions.

1. Approach someone and introduce yourselves and your project
    - Example: "Hi there! We are [your names] and we're students at Moringa School. We're building an application and we are hoping to get some opinions on it."
2. Ask them for their time politely
    - Set a timeline for the pitch, and don't go over your time limit - respect their time
    - Example: "Would you mind if we take three minutes of your time?"
3. Introduce the problem you're setting out to solve
4. Instead of asking questions about an already-finished application, ask about ways to solve the problem. You're still in the planning phase - user experience research about the finished product will come later.
5. Make it a conversation. Ask open-ended questions - you'll get more information that way
    - Instead of "What is your favorite ice cream flavor?" try, "Can you tell me about a dessert you would go out of your way to try again?"
6. Have a few questions ready. Some themes to think about:
    - Accessibility: are you able to use this technology?
        - Example: Do you have a phone or laptop with internet access?
    - Relevance: Is your project relevant?
        - Example: For a money tracking app: how do you use money (mPesa, credit card, cash)?
    - Usability: do you have a system for doing this? Would you have to change a lot of things in your life to use this app? Can you integrate it into your life?
7. Thank them for their time

Task:

Now that you've conducted market research, re-evaluate your MVP and integrate your findings into your user stories. Feel free to divide your user stories into sections: "MVP" and "Bonus features". What did you get right the first time around? Did any findings surprise you? Were you making any assumptions in your product design?

Usability

Now that we have established the basic functionality of our project, it's time to consider another important aspect of product development: usability.

Usability measures how easy UIs are to use. As you may have experienced, usability is *critical* for an application or website's success. If it's difficult to use or figure out, then people can just leave the website or use a different app.

Usability is defined by 5 quality components:

- **Learnability**: How easy is it for users to accomplish basic tasks the first time they encounter the design?
- **Efficiency**: Once users have learned the design, how quickly can they perform tasks?
- **Memorability**: When users return to the design after a period of not using it, how easily can they reestablish proficiency?
- **Errors**: How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- **Satisfaction**: How pleasant is it to use the design?

Bonus reading

For some real-life examples of usability tests, check out the article **How Website Usability Affects Conversion – 7 Real-Life Examples** (https://www.techwyse.com/blog/website-conversion/how-website-usability-affects-conversion-7-real-life-examples/) by Sezgin Hergül on TechWyse.

Prototyping

Prototyping is used to convey the intention of a design both clearly and effectively. Prototypes help you think through design ideas, evaluate assumptions, and gather feedback from users. They're a low-cost way to understand what we need from the product: using prototypes, we can look at what works and what doesn't before spending valuable time on coding.

At this stage, we want to think about application design, structure, user flows, and interactions.

Wireframing

Wireframing is the part of the design process where basic outlines of applications are planned and sketched out, either with modern digital tools (such as **InVision** (https://www.invisionapp.com/) or **Balsamiq** (https://balsamiq.com/)) or simply with paper and pencil.

A wireframe can be as simple or as involved as you'd like, but what is important is that you include any information necessary to communicate your project needs, focusing on layout and content.

Consider this example from the article **20 Examples of Web and Mobile Wireframe Sketches** (https://speckyboy.com/web-mobile-wireframe-sketch-examples/) by Paul Andrew.

This sketch is simple and gets the point across with visual cues, such as the "play" button to indicate a video and the box labels.

Here is another example that uses numbered labels and zoom-ins to clean up the design.

Here's an example that shows that you don't need to be an artist or spend too much effort on the details to create an effective wireframe.

Mapping User Flow

Now that we know how to think of the general look of our app, we can start thinking about usability. Usability depends on how the user interacts with the product, so we need to map out possible user interactions with the product.

Consider the following example from Nate Wang of **Ask Nate Wang** (http://www.asknatewang.com/):

While a visual representation of the application's user flow is desirable, some simple text boxes with arrows can be just as effective at conveying user flow. See the following examples by Peep Laja at **ConversionXL (https://conversionxl.com/how-to-design-user-flow/)** :

The next example illustrates a *stacked* user flow, which uses a vertical arrow to distinguish between a first-time user and a more experienced user.

Task:

Using the above information on wireframes and user flow, spend the next couple of hours building out an interactive prototype of the application to represent how it will look and behave in production. We will be using these prototypes tomorrow for user experience research, so make sure they reflect how users would expect to use your app! Start adding colors, textures, images, and other details that communicate the product, and incorporate interactivity between the frames.