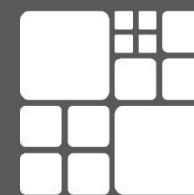


COURSE

DESIGN AN APP
IN A DAY



Apps
for
Good

DEVELOPED WITH



**DIGITAL
SCHOOLHOUSE**

Course objectives

CORE

- Identify everyday problems which could be solved by a mobile app

CHALLENGE

- Be able to expand and develop initial ideas to create a better understanding of the problem to be solved
- Understand how to utilise mobile device features in the design of an app

About the course

During this course, you and your teammates will work together to:

- Brainstorm a real life problem that could be solved by an app.
- Agree on an idea to take forward
- Identify the app features that would be most beneficial to potential users
- Design your app
- Pitch your app idea

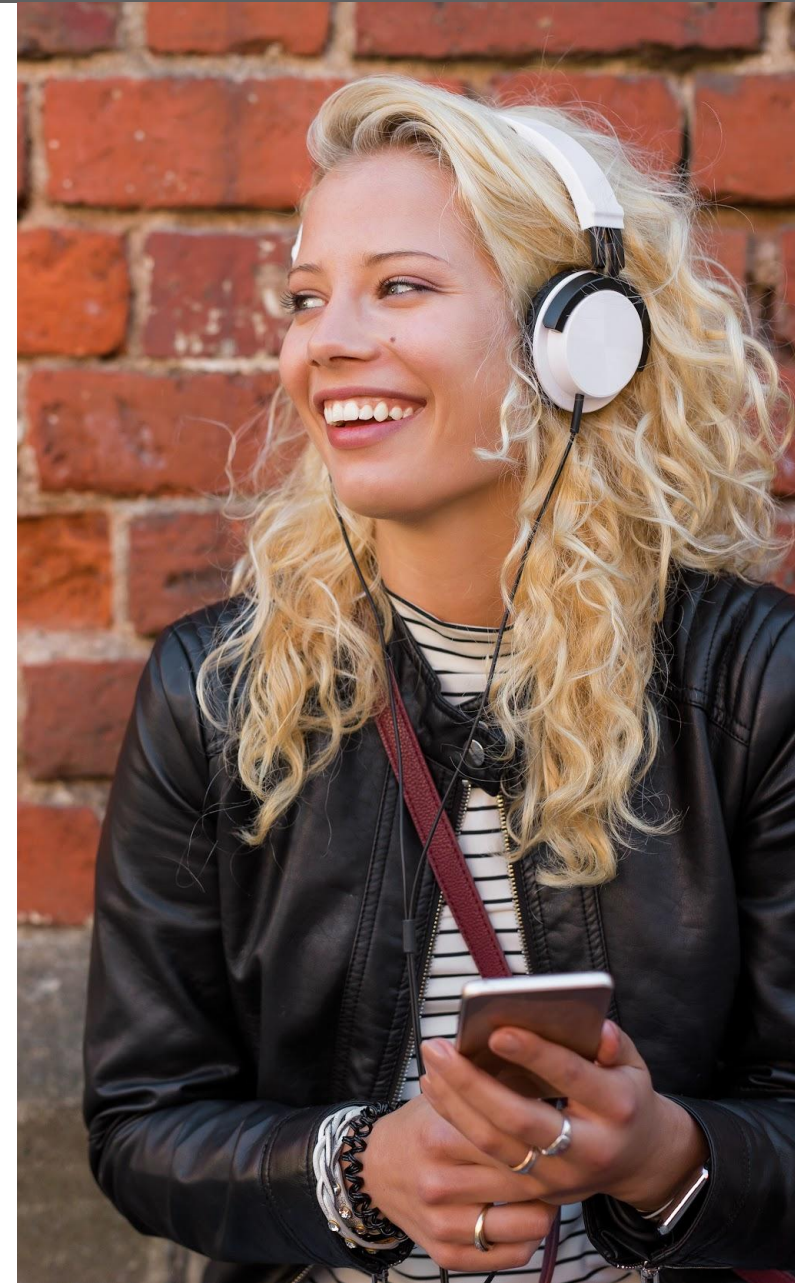


What is an App?

An app is a piece of software designed to help a user perform specific tasks. In short, apps help users to get jobs done.

An example app – Spotify

Spotify helps its users to listen to their favourite music, without having to upload or download the music onto their phone or computer.



Course activities

Activities and worksheets

1. Review existing apps
2. Identify your communities
3. Spot possible problems
4. Filter through problems
5. Brainstorm solutions
6. Draft mini elevator pitches
7. Create user profiles
8. List user needs and features
9. Develop an MVP
10. Paper designs
11. Prepare your pitch
12. Optional activities

Getting into teams

Each team should have 4–5 people

Each team member will take on a job:

- **Team leader/organiser**
- **Researcher - Scribe/feedback collector**
- **Lead designer**
- **Communicator - pitch presentations**

You can change jobs as the day goes on, if you need to.

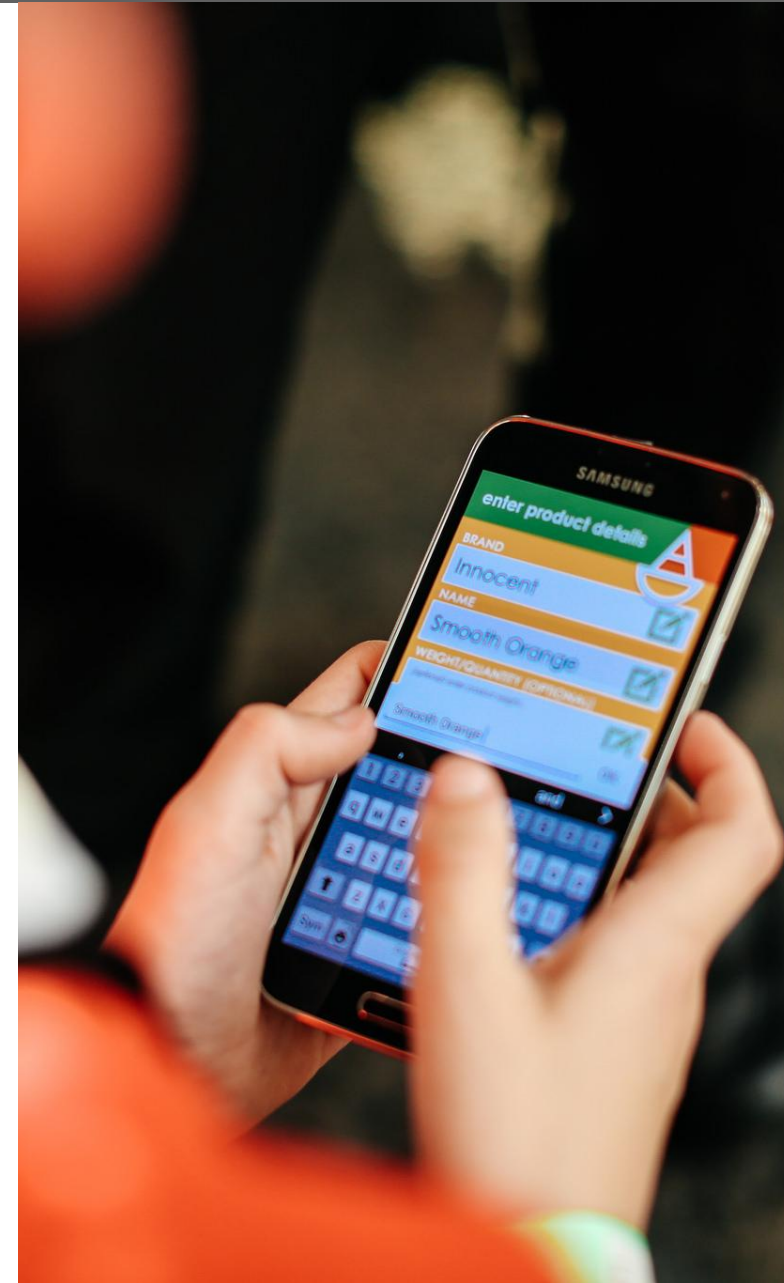


Activity 1 – Review existing apps

Activity

Think about an app you have used, and discuss the following with your team.

- What does the app do?
- What problem does it solve?
- Who is this app aimed at?
- What phone features does the app use?



ACTIVITY 1

REVIEW EXISTING APPS

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DESIGN AN APP IN A DAY

Example - Shazam	Your App (name) -
<p>What it does</p> <p>Captures a sample of audio and identifies it by comparing with files in the app's database.</p> <p>Problem it solves</p> <p>People hear a song (e.g. in a film or TV programme) and don't know what it is or who it is by.</p> <p>Who the app is aimed at</p> <p>Young people of either gender who like music</p> <p>Phone features used</p> <p>Microphone Touch screen Connectivity / Cloud storage</p>	<p>What it does</p> <p>Problem it solves</p> <p>Who the app is aimed at</p> <p>Phone features used</p>

To help you understand what type of problems apps can solve think about an app you have used. Make a note of what the app does, the problem the app is solving, who it's for, and the phone features it uses.

NAME

Activity 2 - Identify your communities

We all belong to lots of different communities. These might be related to our family, beliefs, school or local area.

Alternatively they may be based on clubs we belong to or support or are related to hobbies or to causes that we care about e.g. environmental concerns.

Make a note of all the different communities that you belong to or interact with.

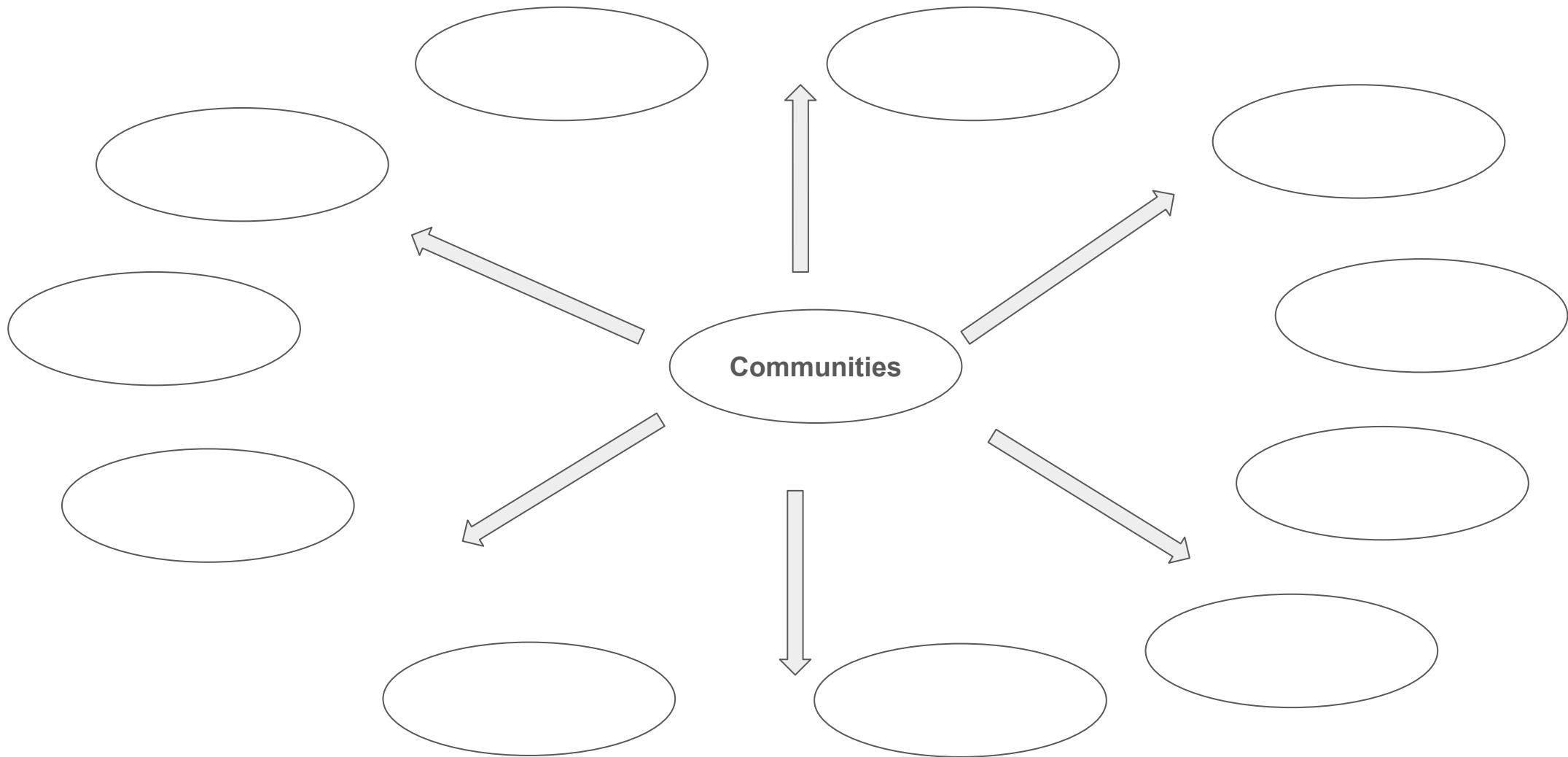


ACTIVITY 2

IDENTIFY YOUR COMMUNITIES

COURSE

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Use this page to draw out your mindmap of the communities you belong to

NAME

Activity 3 – Spot possible problems

Activity

It's now time to start working with your team to brainstorm ideas for problems that need solving.

Select four of the communities you identified in the previous activity and think about the challenges those communities might face.



Activity 3 – Spot possible problems

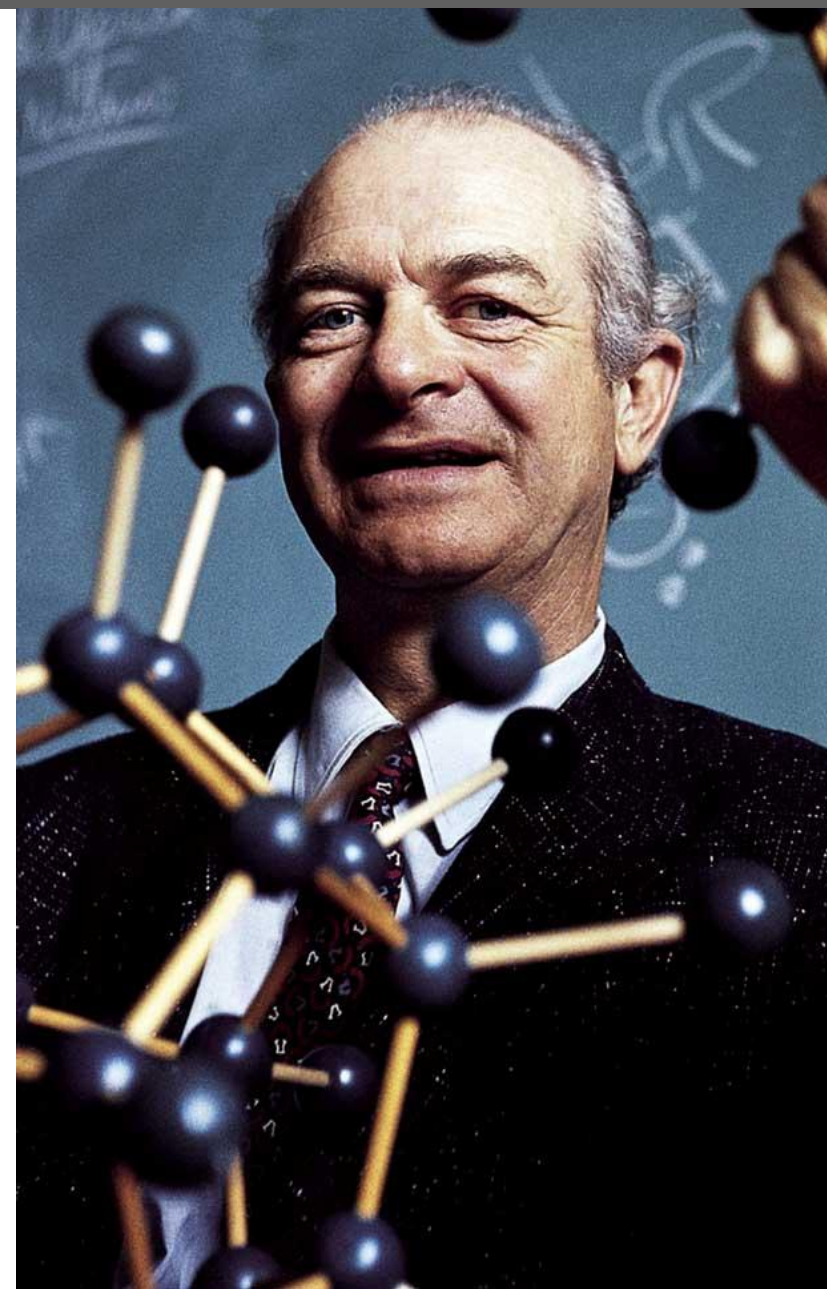
Go broad to start

Think of as many problems as you can that could be solved with an app.

Be creative! Some problems will seem small, some will be big and ambitious. Write them all down.

“The best way to have a good idea is to have lots of ideas.”

Linus Pauling, Nobel Prize winner



ACTIVITY 3

SPOT POSSIBLE PROBLEMS

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Community 1 -	Community 2 -
Community 3 -	Community 4 -

Use this sheet to jot down your ideas before discussing them with the rest of your team..

NAME



Activity 4 – Filter through problems

Activity

If you're going to invest time in designing an app, you need to be sure your problem is worth solving.

For each problem you've identified, consider how many people it impacts, and how much it impacts people's lives (how disruptive it is and/or how often it happens). Plot each problem in the grid.



ACTIVITY 4

FILTER THROUGH PROBLEMS

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Mass market ideas

Lots of people affected

Game-changing ideas

Low impact on people's lives

High impact on people's lives

Low appeal ideas

Few people affected

Targeted ideas

If you're going to invest time in designing an app, you need to be sure your problem is worth solving. For the problems you've identified, consider how many people it impacts, and level of impact, then plot each problem in the 2x2 grid. Problems bottom left are unlikely to be successful.

NAME



Activity 4 – Filter through problems



Activity

Using your grid to help you it's time pick to the idea that you want to take forward in the design process.

Step 1: Each member of the team places a dot next to up to three ideas they feel really passionate about taking forward.

Step 2: If necessary have a second round of voting to select between the two highest scoring ideas.

Activity 5 - Brainstorm solutions

Now you have selected the problem you want to help solve its time to think about it from a different perspective. What is causing the problem?



ACTIVITY 5

BRAINSTORM SOLUTIONS

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DESIGN AN APP IN A DAY

What is causing the problem?

What ideas does this generate to solve the problem?

Use this sheet to jot down your ideas before discussing them with the rest of your team.

NAME

Activity 6 – Draft a mini elevator pitch



Activity

Now you have decided which idea to take forward imagine you had 30 seconds in an elevator with a potential investor. What would you tell them about your idea and would you be able to communicate this in just 30 seconds?

Don't worry about getting your pitch perfect at this stage.

Example

Our team is called Zen Studio. We're creating an app aimed at students to help them to wake up earlier by providing them with incentives to get up.

ACTIVITY 6

DRAFT MINI ELEVATOR PITCH

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Pitch idea	
Our team is called...	
We're creating an app aimed at...	<i>(the sort of person who would use the app)</i>
to help them to...	<i>(the problem / challenge)</i>
by providing them with...	<i>(how the app could help solve the problem)</i>

Turn problems into product ideas with a mini 'elevator pitch'. As an example. "Our team is called Zen Studio. We're creating an app aimed at students to help them to wake up earlier by providing them with incentives to get up."

NAME



Activity 7 – Create a user profile

User profiles

To make sure your app's features are fit for purpose you need to have a good idea of who your user is. A user profile captures basic details about the person you are designing for.

Activity

Create a user profile by thinking of people you know who might be target users.



Activity 8 – List user needs & features



Functions

Through different features, apps let users do many things. Playing games, to socialising, to booking flights.

Activity

What needs does your user have, and what app features could help these needs? For example, if your user needs to make an appointment, your app might require a booking system feature.



ACTIVITY 8

LIST USER NEEDS AND FEATURES

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User need	User need	User need
Feature ideas	Feature ideas	Feature ideas
User need	User need	User need
Feature ideas	Feature ideas	Feature ideas

Explore your user's needs in more detail. Try to come up with ideas for feature that could meet those needs.

NAME

Activity 9 – Develop an MVP



What is a Minimum Viable Product?

This first version of your app should be a Minimum Viable Product, known as an MVP.

When building a new app, developers will often focus on building the most essential features first, to avoid wasting time and money building extra features that they think (but are not sure), users will like.

This way, they can provide users with a sample app including the most important features, get early feedback, and update it later with other features that users want.

Activity 9 - Develop an MVP

MVP - Example

When the iPhone launched in 2008, it left out Cut-And-Paste and searchability of contacts, two features that many felt were important. While Apple fans complained, these two features weren't really core to the product's viability. What was core to the iPhone's viability was:

- It could be used as a phone;
- It could access the Web and
- It could take pictures.



Activity 9 - Develop an MVP

Data

Some of your app feature ideas will need data to be able to work properly. For example a travel app might need details of bus routes and timetables.

If a feature needs external data you will need to think about where you will obtain that data and whether the person or organisation who owns the data would be willing to share it.

If you think that the data may be difficult to obtain you may choose to implement this feature in a later release to give you more time to investigate your options.

Activity 9 - Develop an MVP

To decide what to include in your first MVP:

1. Make a list of all the possible features your app could include
2. Rank all your possible features with 1 being the most useful feature for the user
3. For each feature decide whether it will need any data to implement and if so where you could get that data
4. Review your list and decide whether to include each feature in your first version of your app (remember you are looking for the features that are most useful to your user and easiest to implement)

ACTIVITY 9

DEVELOP AN MVP

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DESIGN AN APP IN A DAY

App name	Rank its importance	Data required and source?	Include in MVP?
Feature			

Use this worksheet to review the potential features of your app and decide whether to include them in your MVP

NAME

Activity 10 – Paper designs



Activity

Review the features you have decided to implement for your MVP and decide what screens you will need to allow your user to interact with your app.

Write each screen on a post-it and think about how they will be organised on your app.

The next screen shows the screens required for Spotify.

Activity 10 – Paper designs

SPOTIFY



HOME

BROWSE

SEARCH

RADIO

LIBRARY

MOOD

CHARTS

RECENT
SEARCHES

YOUR
DAILY
MIX

PLAYLISTS

POPULAR

NEW
RELEASES

RECENTLY
PLAYED

STATIONS

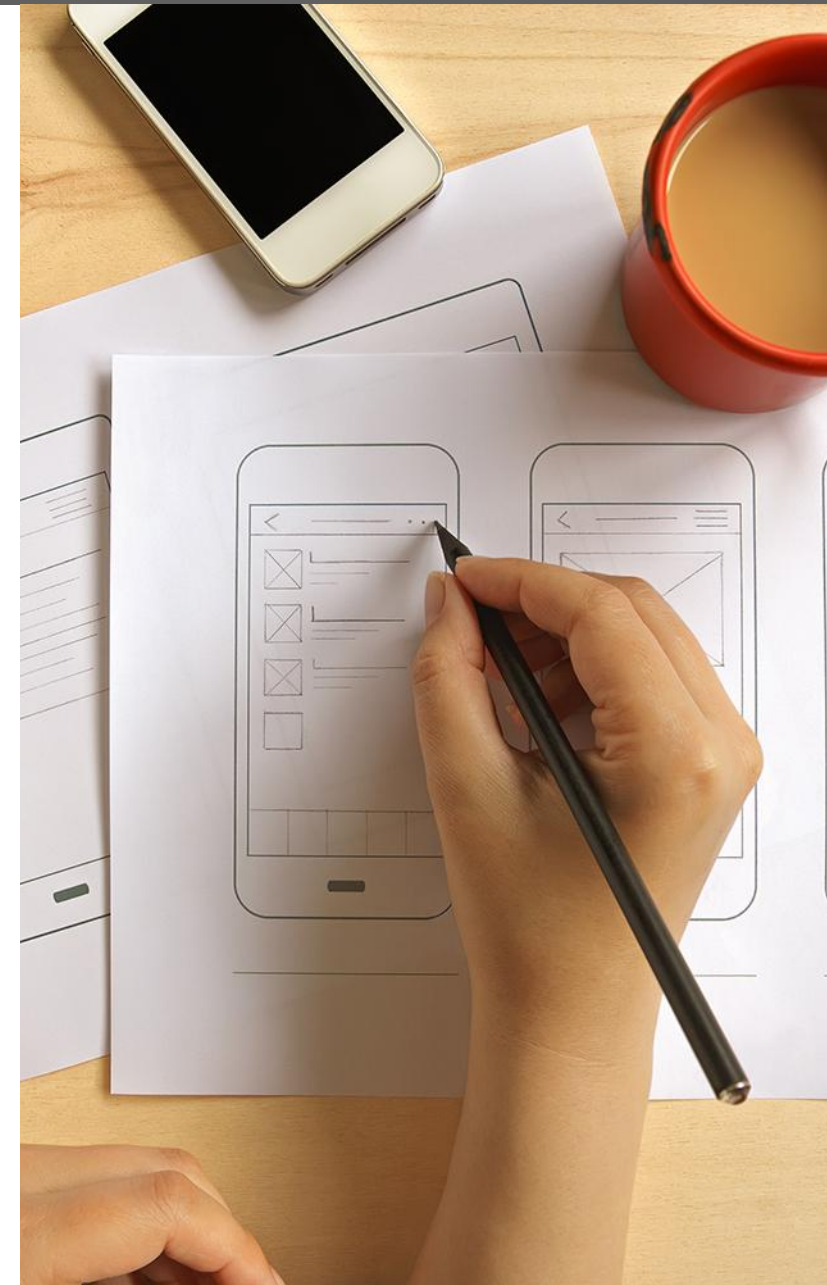
Activity 10 – Paper designs

Activity

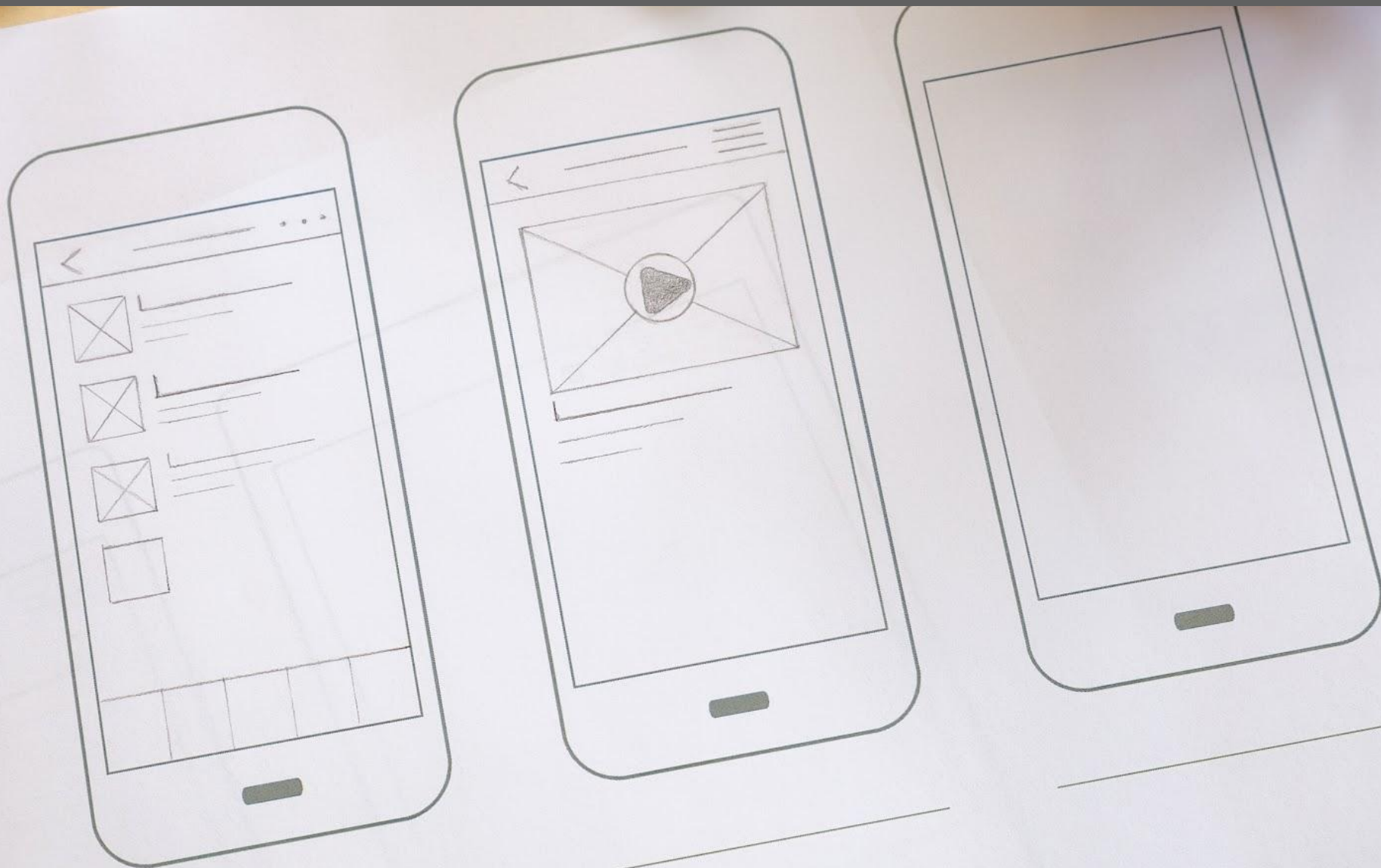
It is now time to design what these screens will look like.

Taking the most important features, sketch wireframes showing the main screens of your app.

Consider how the user will navigate your app, and how they will access different features. Wireframes help developers to build the MVP.

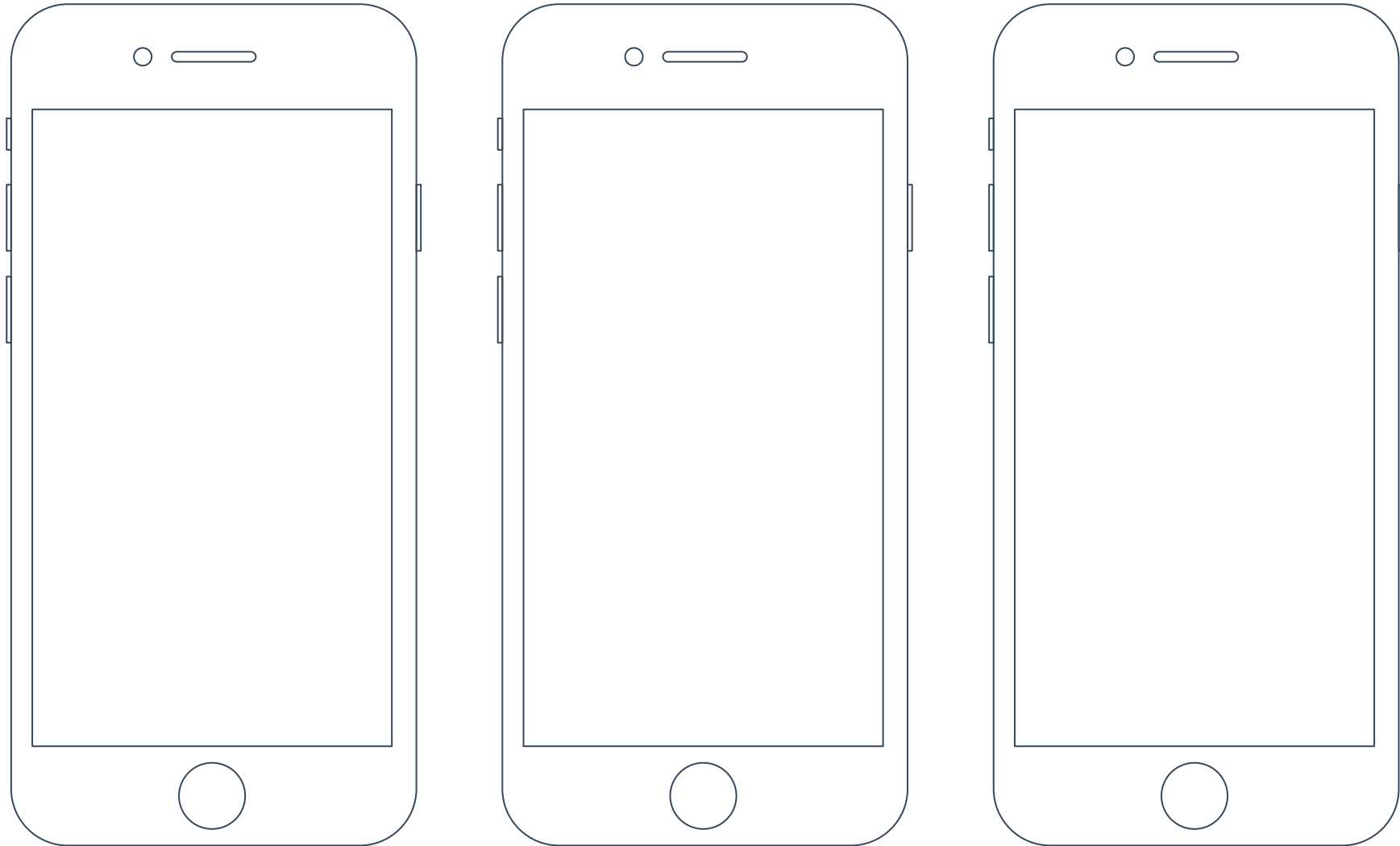


Activity 10 – Paper designs



ACTIVITY 10
PAPER DESIGNS

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DESIGN AN APP IN A DAY



Thinking about essential and feasible features, sketch out how you want your screens to look. Consider what the user sees when they open the app, and how they move through screens and use important features.

NAME



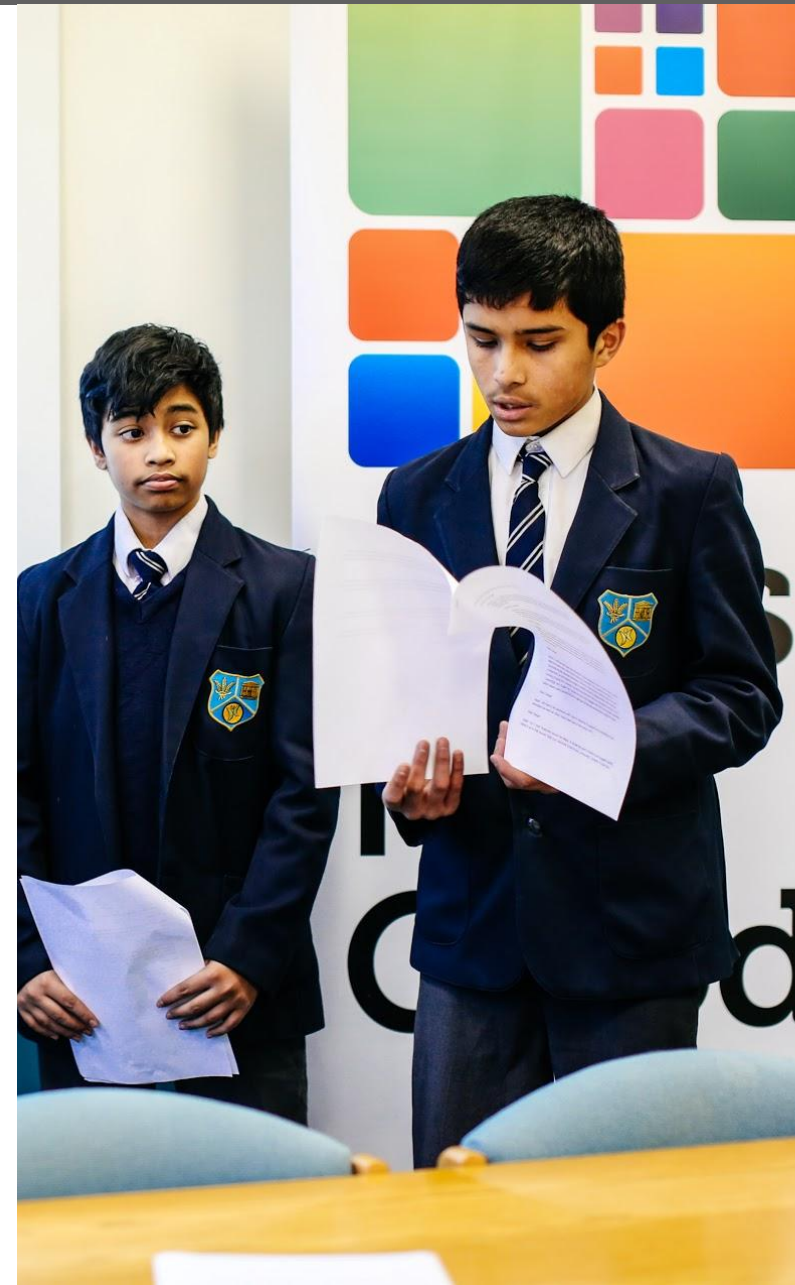
Activity 11 – Prepare your pitch

Pitching

It is now time to tell people about your app idea.

Telling other people about your product and persuading them to buy it is known as pitching.

Your presentation should take about 5 minutes. Be prepared to answer questions about your app idea.



ACTIVITY 11

PREPARE YOUR PITCH

COURSE

DESIGN AN APP IN A DAY

App name and slogan	Our problem	Our solution
Team member _____ Notes:	Team member _____ Notes:	Team member _____ Notes:
Our prototype / paper designs	Target users	Conclusion
Team member _____ Notes:	Team member _____ Notes:	Team member _____ Notes:

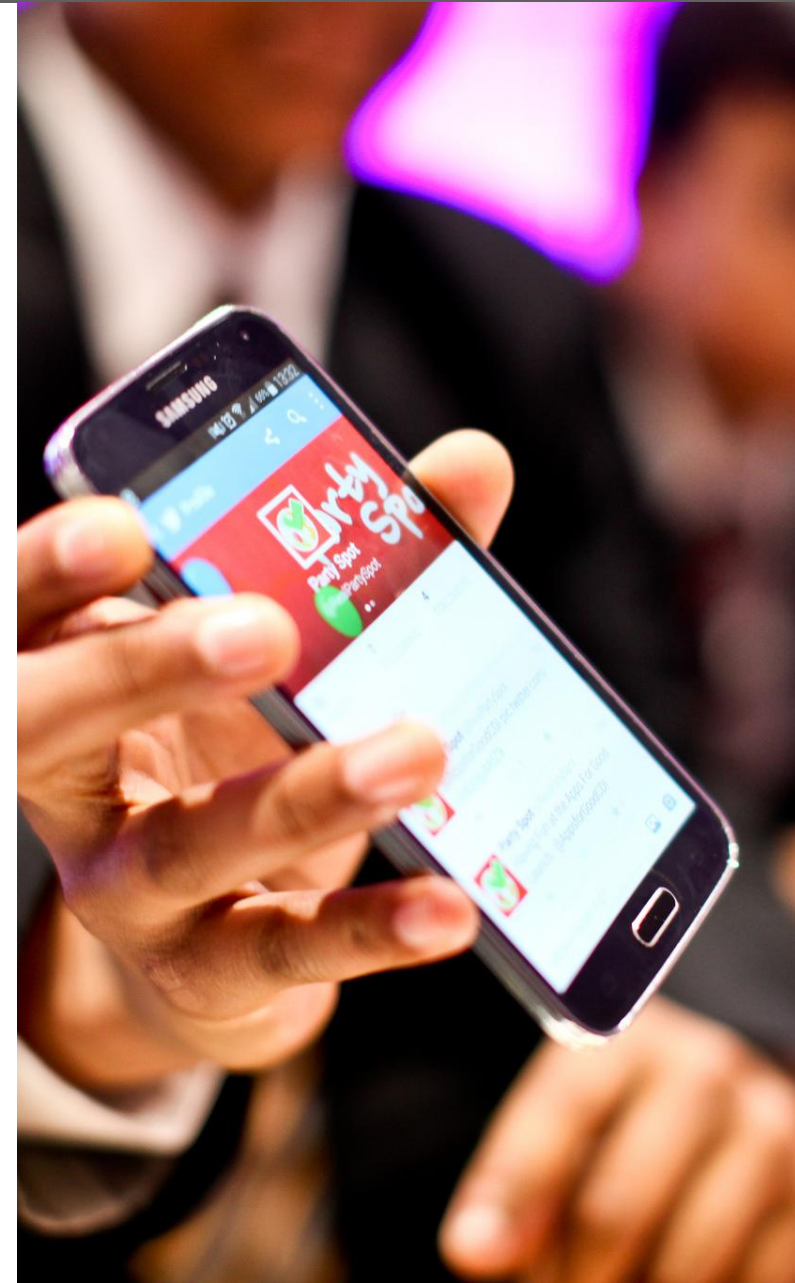
It is now time to tell people about your app idea. Telling other people about your product and persuading them to buy it is known as pitching. Use this worksheet to divide up the presentation and allocate sections to each member of the team.

NAME

Want to continue developing?

Ways to keep developing

- Conduct user research to better understand your user's needs
- Conduct market research to better understand your competitors
- Create a clickable prototype with [Marvel](#), [Balsamiq](#), or [Lucidchart](#)
- Create a working prototype with a blocks editor such as [App Inventor](#) or [App Lab](#)
- Use advanced tools to produce web apps or apps using APIs



Get more involved with Apps for Good for the opportunity to:

- Work in teams to design and prototype your own app
- Get feedback and advice from industry experts from companies like Google, Facebook and Thomson Reuters
- Submit your prototype to the Apps for Good Competition - finalists travel to London to pitch ideas



The Showcase

The AfG national competition – open to all UK students who take part in Apps for Good courses – gives students the chance to shine on a national stage.

The annual Apps for Good Awards recognise top apps created by student teams in our courses. They provide students with the exciting opportunity to come to London and pitch their ideas to industry experts.



Why should you participate?

- **Builds confidence** - Taking part will help students have confidence in themselves and their work
- **Broadens horizons** - Finalists get to travel to London and meet other students from across the UK and industry professionals
- **Develops public speaking skills** - Finalists will pitch their app idea to industry experts in front of 200 people
- **Boosts CVs** - Future employers will be impressed to see that students reached the finals of a national competition
- **It's fun!** - Students will visit partner offices across London and have a great time they'll always remember

Optional Activity 1 – Agree team values

“I'm not going to school just for the academics - I wanted to share ideas, to be around people who are passionate about learning.”

Emma Watson, Actor



Optional Activity 1 – Agree team values



Activity

What motivates your team?

- Are you curious to learn more about how to design apps?
- Do you enjoy working with others to create things?
- Maybe your key aim is to produce innovative, cutting edge designs?

Review the values on the next slide and decide which are most important to your team.

Are there any other key values that are important to your team that are not listed?

OPTIONAL ACTIVITY 1
AGREE TEAM VALUES

COURSE
DESIGN AN APP IN A DAY

<p>User-centred</p> <p>Having the needs of the person who will be using the product as the most important or focal element.</p>	<p>Innovative</p> <p>Featuring something new or advanced, through original and creative thinking.</p>	<p>Curious</p> <p>Eager to know or learn something. This could be about people, places, or things around you.</p>
<p>Creative</p> <p>Creating something through good imagination or original ideas, or through mixing existing ideas.</p>	<p>Collaborative</p> <p>Working well as a team, or with other teams, to successfully achieve something.</p>	<p>Business-savvy</p> <p>Shrewd and knowledgeable about business, and having common sense and good judgement.</p>
<p>Ethical</p> <p>Avoiding activities or organizations that do harm to people or the environment.</p>	<p>Passionate</p> <p>Caring deeply about something. This could be about an idea or the thing you are creating.</p>	<p>Hard-working</p> <p>Working with energy, being committed, and doing your best to achieve something.</p>

Which of these team values are most important to your team? Discuss with the rest of the team and tick the five which best represent your values.

NAME

Optional Activity 2 – Map out the data process



Where will you get the data or content for your app?

Without data or content, your app is just an empty box. Think about what data your app needs to process in order to solve solve the problem you've identified.

Consider the information that is outputted from **Google Maps**, and what the user inputs.

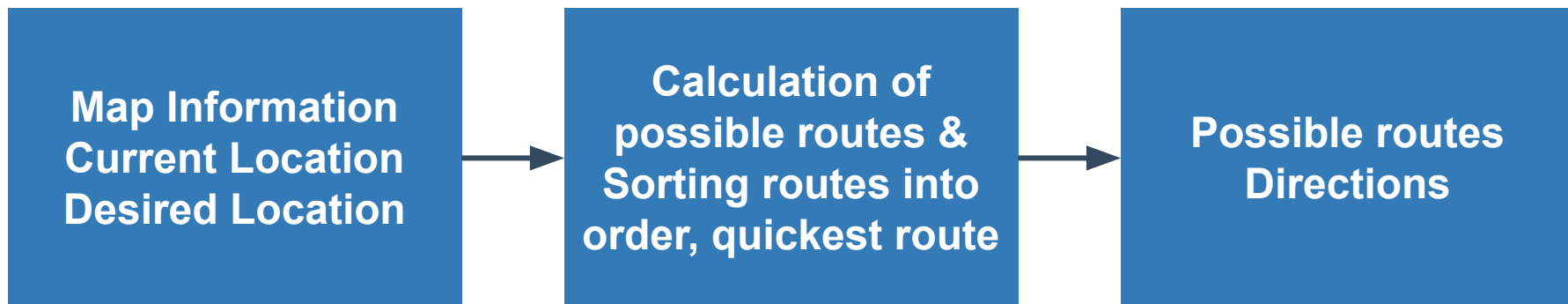


Optional Activity 2 – Map out the data process

How data is processed



Example – Google Maps



- In Google Maps, current location and desired location are obtained from the user (GPS location and user input)
- Map information will need to be obtained externally

Optional Activity 2 – Map out the data process



Activity

In your teams, identify the Data Input, Process, and Output for your app.

Approach in the following order

1. **What is the desired Output?** What information does the user want? In what format would they like it?
2. **What is the required Data Input?** Where will you get the data from? What format will it be in?
3. **What is the required Process?** What process does the data undergo? Sorting, Filtering, Selecting, Mixing...

OPTIONAL ACTIVITY 2

MAP OUT THE DATA PROCESS

COURSE

DESIGN AN APP IN A DAY

DATA INPUT	PROCESS	OUTPUT
What data do you need for the desired output?	What do you need to do to the input data to achieve the desired output?	Starting here , what is the desired output of your app?

Approach the problem in the following order: (1) What is the desired data output? (2) What is the required data input for this output? (3) What happens to the input data to get the desired output? What process does it undergo?

NAME

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