

# Technovation Technical Checklist (with explanations)

## Instructions

In your submission, you'll need to explain the components you used in your app with a simple sentence. You only need to explain one instance where you used it.

For example:

### Strings

"We used a string to display the user's name at the top of the screen."

## Code Components

*Use at least 4 (1 point each, 4 points maximum)*

**Strings** use a string anytime you add a text field to your code

**Numbers** use Math blocks whenever you need to use numbers, like calculating a score or counting how many times your app does something

**Variables** use blocks from the variables section to track scores or location or dates (ie. anything that *varies*)

**Lists or Arrays** (in many programming languages, lists are called arrays) use to select lists to organize data; use lists anytime you have multiple pieces of information that you want to include under the same variable name like if you wanted to display the top ten high scores for a game

**Booleans** can be one of two values: true or false; you go to logic in the built in functions to grab one of these blocks

**Loops** use these blocks to repeat something over and over again, useful for circumstances with conditions like "while this happens, repeat this" or "while this hasn't changed, repeat this"

**Conditional Statements** the way computers can make decisions; where the app does something **if** the condition is true or **else** does something different when the condition is false-- use the if, then, else blocks for things like preventing users who aren't the appropriate age from using the app or who enter the password incorrectly

## Databases and Connectivity

*Use at least 1 (1 point each, 1 point maximum)*

**Local Database** use the component **TinyDB** to save data on your user's phone that will be there each login to your app; TinyDB only allows you to store data *locally*

**Web Database** use web databases, like **TinyWebDB**, to allow the app programmer/creator to access and edit what is in the database through the internet as well as make it possible for more than one phone to share a database such as image uploads, game scores, restaurant reviews, etc.

**API** API, or application programming interface, is the way your app can talk to the web; use to get information the app needs like providing weather updates or maps

## Mobile Features

*Use at least 1 (2 points each, 2 points maximum)*

**Location Sensor** use LocationSensor to communicate with a phone's built-in GPS receiver

**Camera or Video** use these components to take profile pictures or videos of user

**Accelerometer** use this component to detect when the user's device is shaking

**Text Messaging or Phone Call** use call or call texting to send messages

**Sound or Speaker** use this component to make sounds like 'ding'

**Sharing** use new Sharing component to share files and messages with other apps installed on the user's device

**Clock** use component for setting a timed alarm, using a timer or knowing when it is daytime or nighttime

**Canvas** use this component to move images or draw, which is useful for games

## Pictures of Your Process

*Do all 3 (1 point each, 3 points maximum)*

Upload a picture of your **paper prototype**. Cut out a few phone shapes and draw up the main screens as they appear in the demo. Take a photo of these together.

Upload a picture of your **flowchart** or **pseudocode**. **A photo of your wireframe will suffice.**

If you want to submit pseudocode, outline a function with jargon free language, see below.

Example: In this app, the user can search a database of women scientists. The app displays the names in a `ListView` and the user can select a scientist to learn more about her.

### *Search Button*

- When the user hits search
- The app uses a **for loop** to search through all of the names and descriptions stored in **TinyDB**
- **If** there is a match
  - The app adds the scientist name to an empty list variable called *searchResults*
- **If** *searchResults* is empty after the loop ends
  - The app notifies the user that there are no matches
- **Else**
  - The app displays *searchResults* in a **ListView**

### *Scientist Selection*

- When the user makes a selection from **ListView1**
- The app opens a *Screen2*
- The app retrieves the description and name of the scientist from **TinyDB**
- The app displays the description and name of the scientist

Upload at least 2 screenshots of your app.