

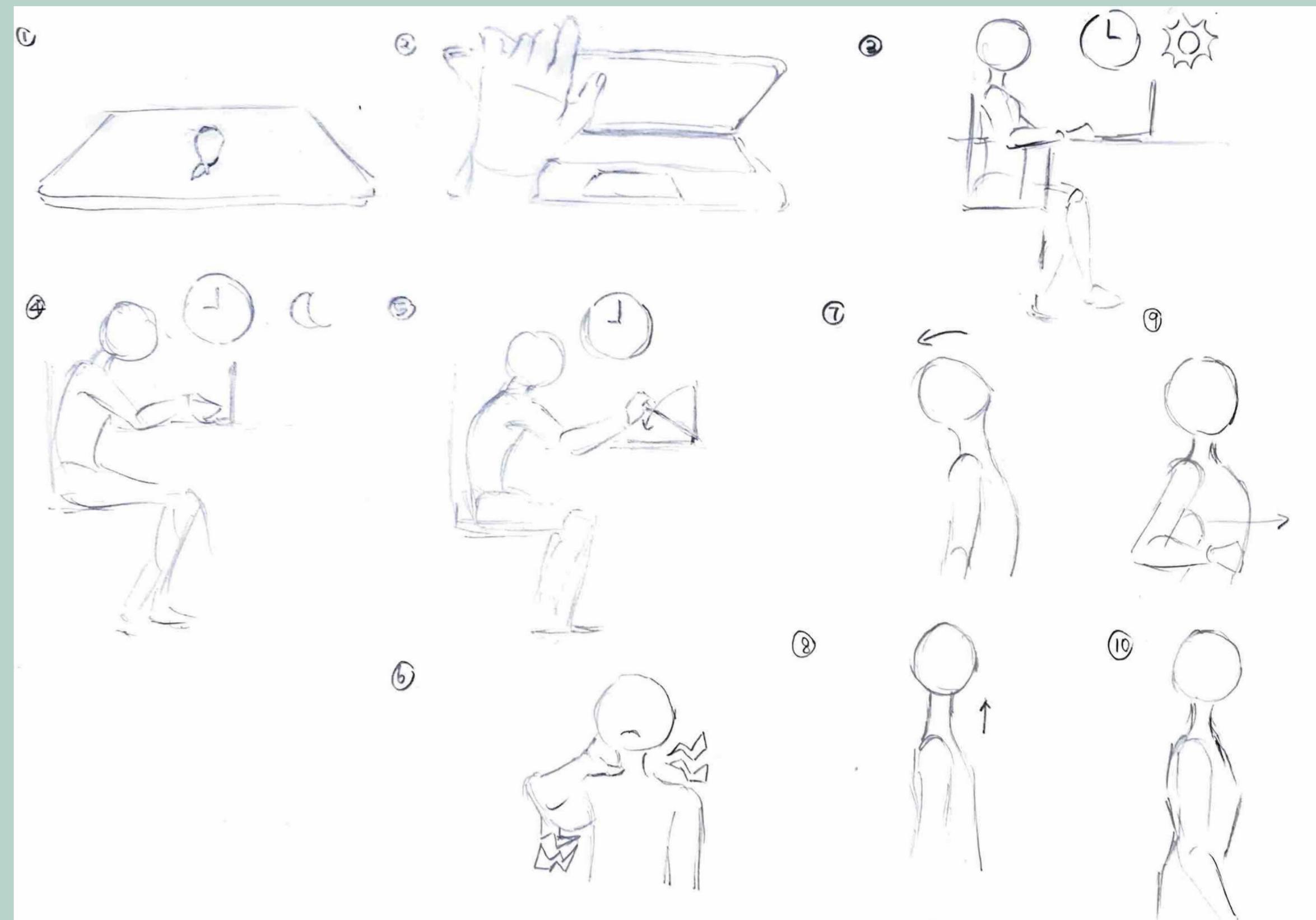
# **TECH-NECK-LOGY TIMER**

**Yizi Shao**

# What is the nature of the task that you currently struggle to complete? (Describe the task's essence, it's features, steps)

I currently struggle in practising and maintaining good posture when studying. By definition, posture is how one aligns and holds their body, when standing or sitting. With technology integrating into the daily lives of people, the constant use and overuse of devices have subjected many to develop poor posture. Rounded or hunched shoulders and a forward leaning head, are some of the symptoms. The forward head posture is also known as 'Tech Neck' or 'Text Neck', which leads to neck pain caused by extended periods of bending the head down or forwards to use the phone or computer.

The essence of this task is to reset posture and encourage a habit that is beneficial for my confidence and physical wellbeing. The features of the task include a reflected surface such as a mirror and a table. I would need a mirror to judge my posture and a table to do exercises that relieve posture pain.



'Map' and cognitive sketch representing the task and its various parts (including areas I struggle with - poor posture).

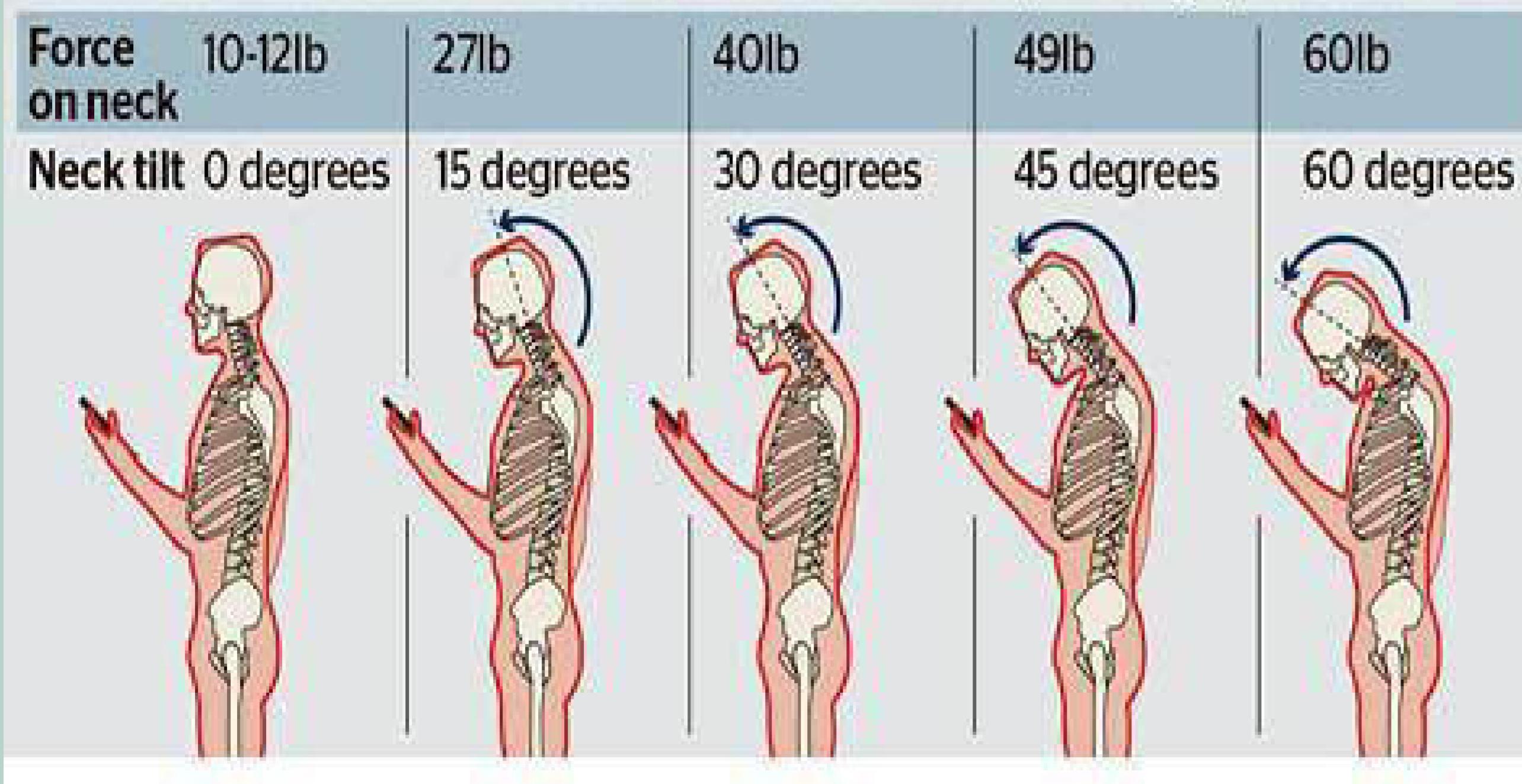
To practise good posture when studying, I first identify that I currently have poor posture and pause from using my computer. It may be that my head is bent downward or moved forward, shoulders and back hunched and neck strained. I would uncross my legs, if I did so. I would pull my head up or backward, until it is in line with the shoulders. I would roll my shoulders to relax them, before pulling them back, in line with my hips. I would straighten my back by sending the sternum slightly forwards and pulling in my stomach. I mindfully keep myself in this state for at least 2 minutes before continuing to study on my computer.

## What goals do you have in mind when you carry out the task?

When carrying out this task, the goals I have in mind include showing confident body language. Good posture nonverbally communicates to others that I am composed and in control. Another goal I have is to prevent long-term health problems caused by poor posture, such as neck and back pain, and dysfunction of joints and muscles. The third goal is to be able to fully concentrate on my study, rather than the 'tech neck' pain.

### How texting could damage your spine

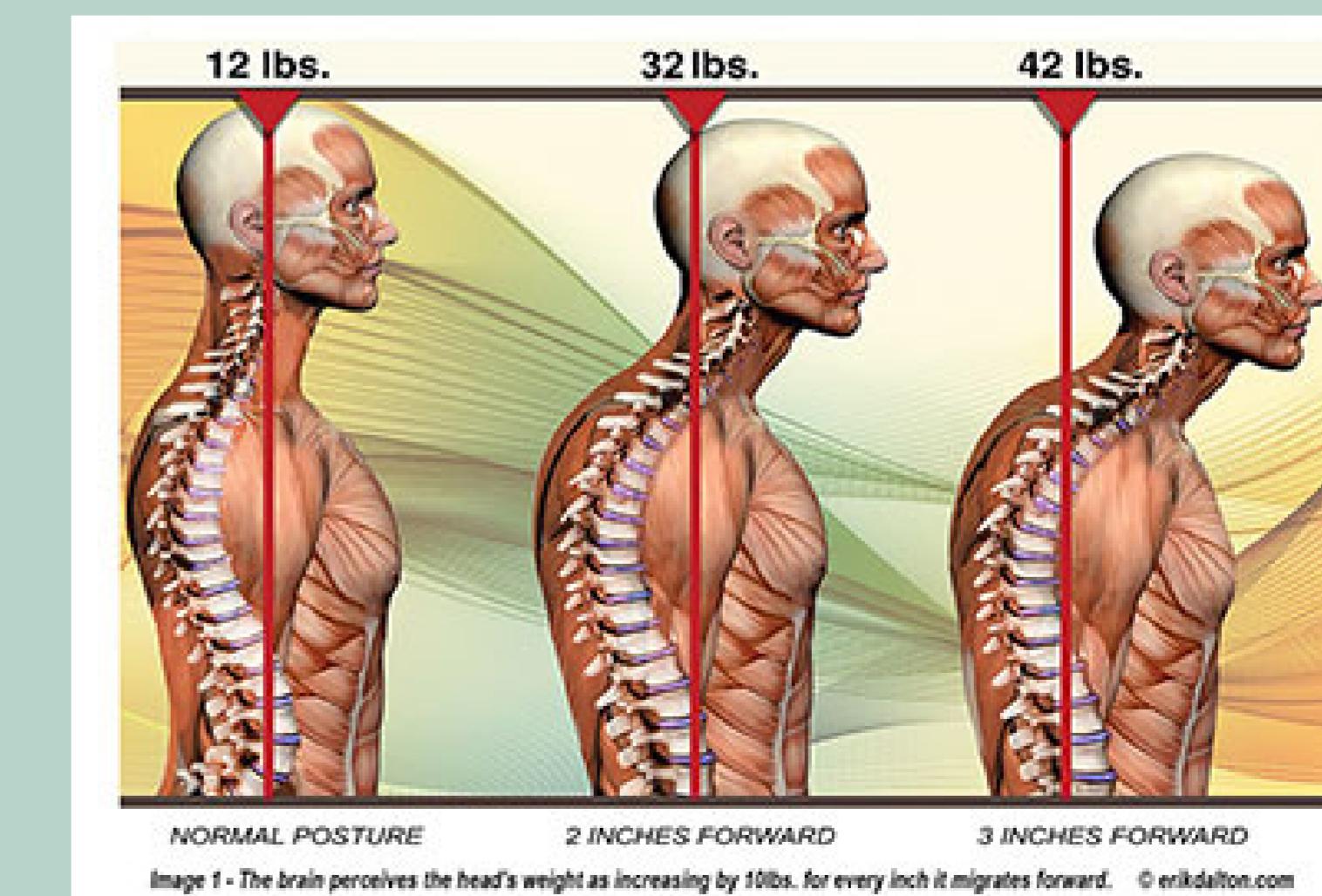
Forces on the neck increase the more we tilt our heads, causing spine curvature



Visualisation of 'tech neck' via <https://www.vital-balance.com/en/tech-neck/>

## What are your feelings, before, during and after the task, and do they influence your ability to complete the task?

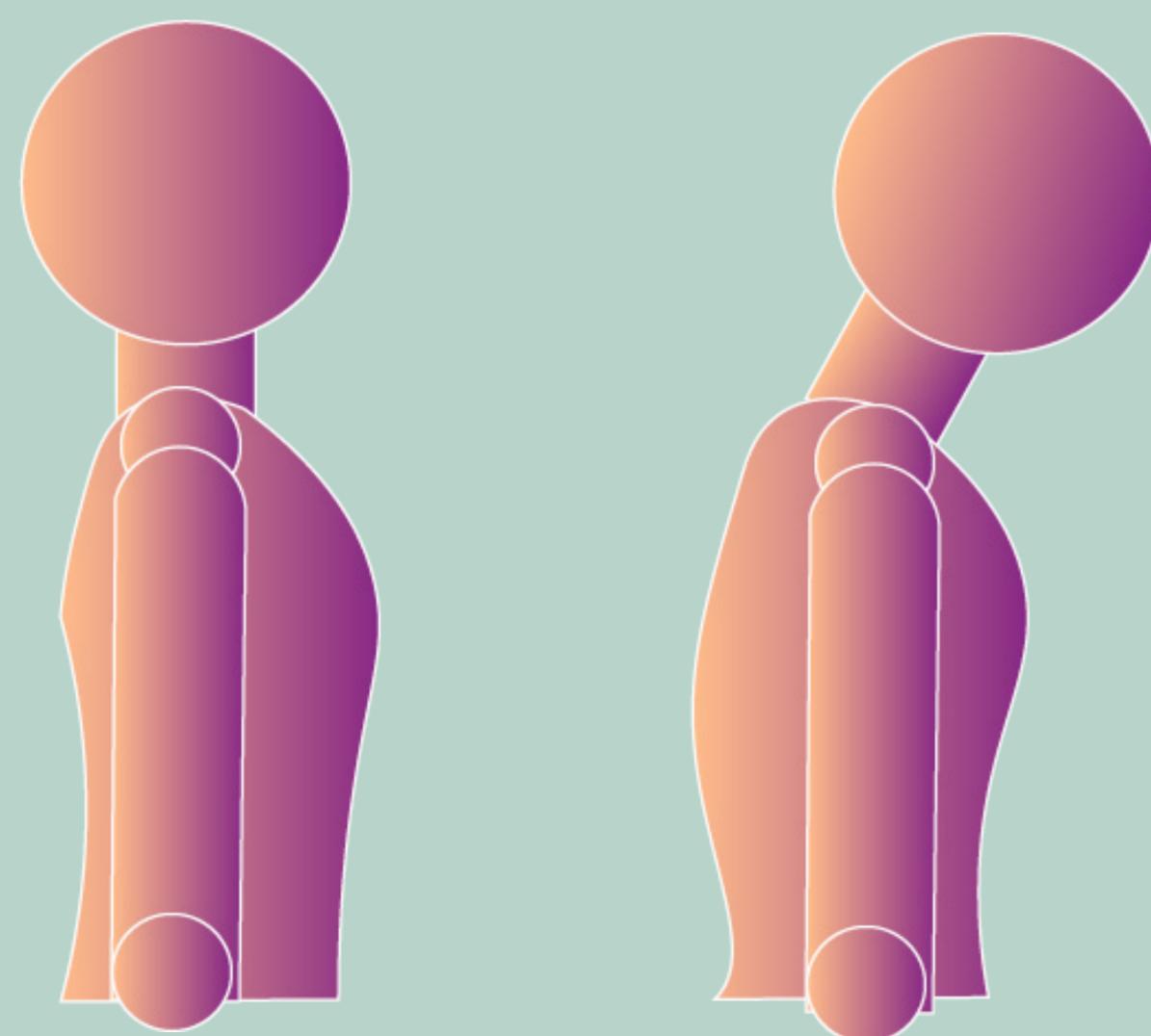
Before the task, I feel uncomfortable and insecure about the tilted position of my body. This motivates me to correct my posture and keep it that way, completing the task. During the task, I feel careful and conscious about how my head, shoulders and back appear. These feelings influence the speed of completing the task, since I am nearly achieving my goals regarding body language and health. After the task, I feel relaxed and reassured because my goals have been met. My posture reflects my personality and back pain is mitigated. This will encourage me to also complete the task in the future, establishing a habit.



Visualisation of 'tech neck' via <https://www.fonkechiropractic.com/pain-in-the-neck/>

What are you thinking about before, during and after you carry out the task?

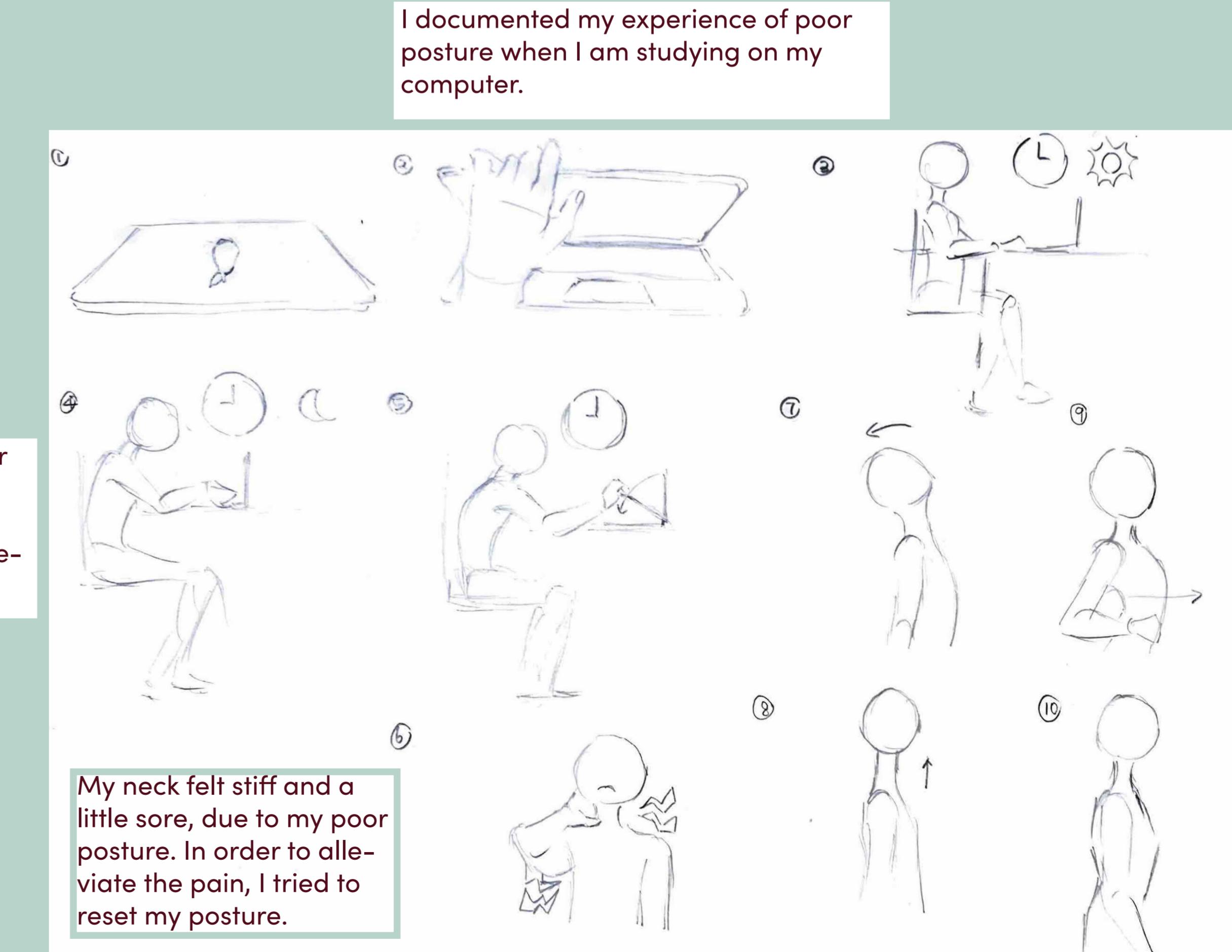
Before I am practising good posture, I think about the imbalance and awkward positions of my head, shoulders and back. I would think, “Why is my posture so bad?” I realise I need to lift my head higher and bring it backwards to keep it in line with the rest of my body. I also think about how I need to stop hunching my shoulders and back. During the task, I think about whether my posture is corrected properly or not. After all, the posture needs to look and feel natural. I would think, “Does my head look like it is in place?” and “Are my shoulders relaxed and back straight?” After completing the task, I think about how the pain has subsided and that I need to maintain good posture for as long as possible. I would think, “I must stay in this posture.”



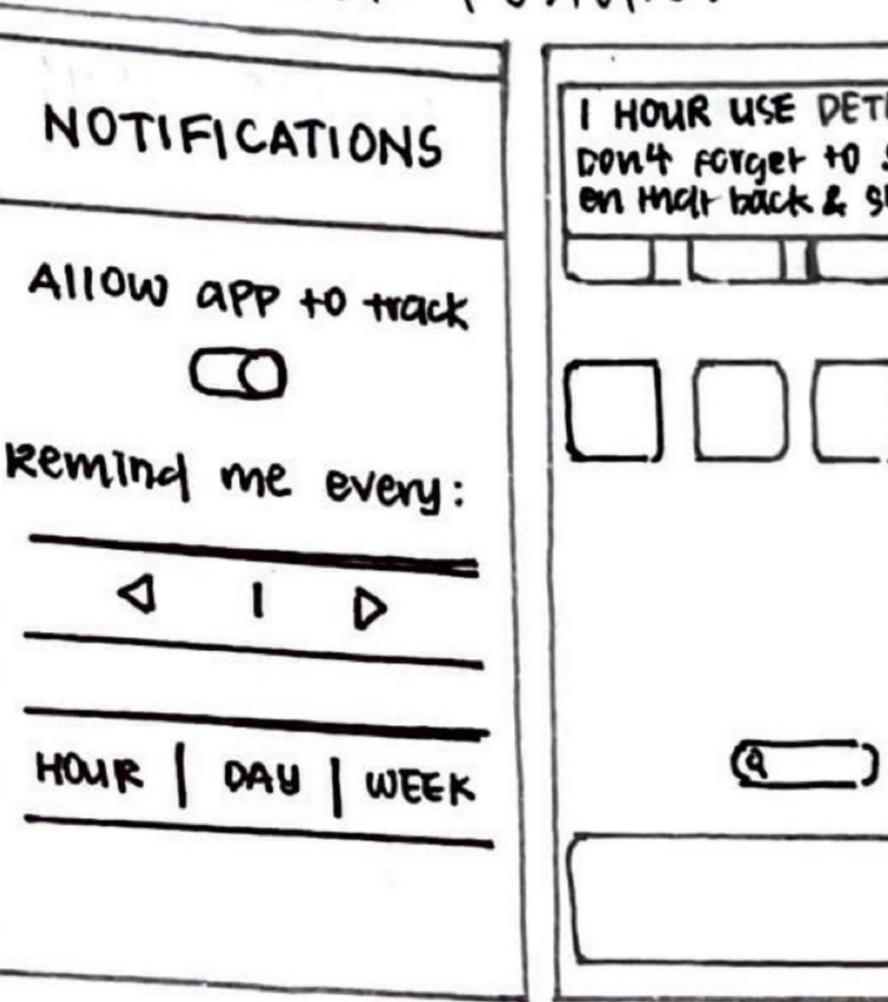
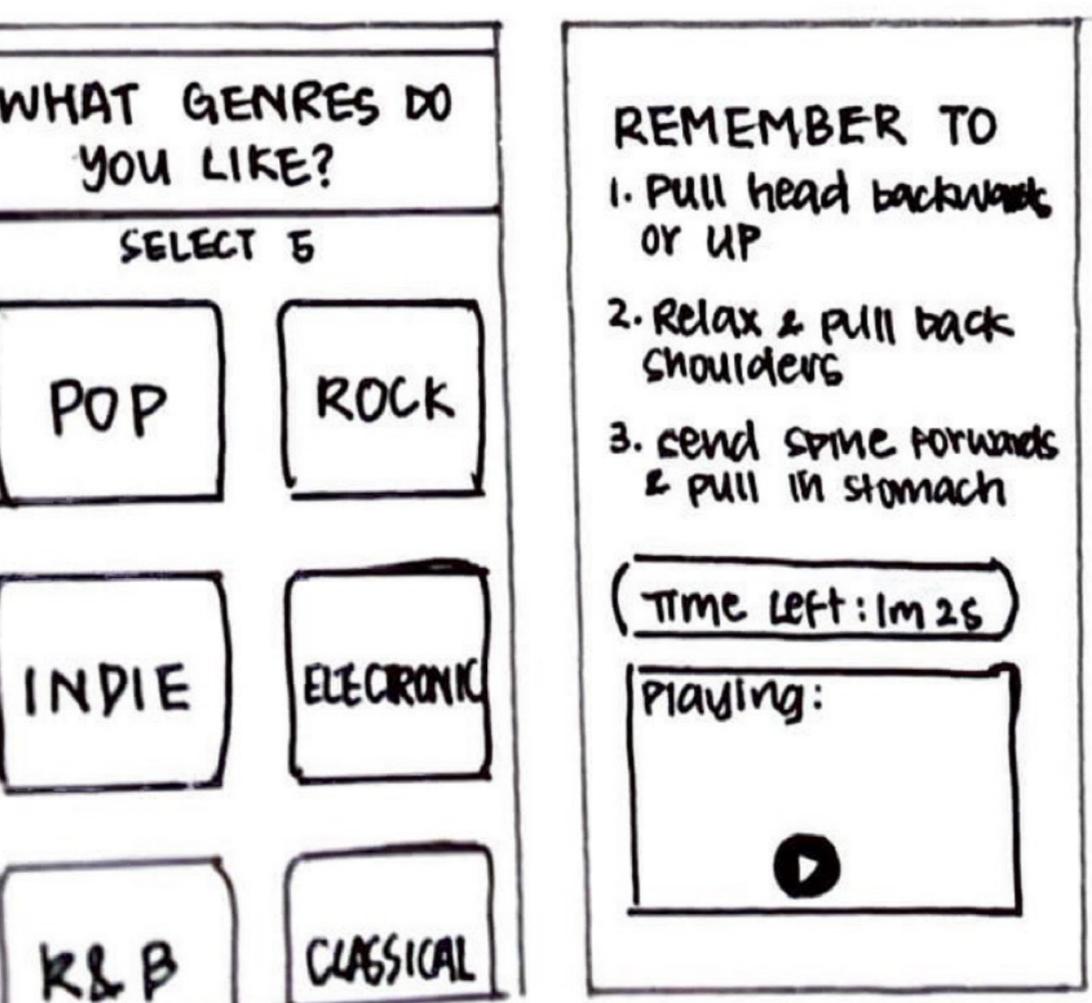
# **My illustrations of good and poor postures.**

# What context(s) is the task typically taking place in?

Typically, the task takes place in a library, where I would bring my computer to study. It would be within the time-frame of 9:00am to 5:00pm. The actors involved would be myself, my friends, other students studying and people visiting the library. The artefacts involved would be my computer, phone, study table, chair and light sources (sun and light bulbs).



# CRAZY EIGHTS

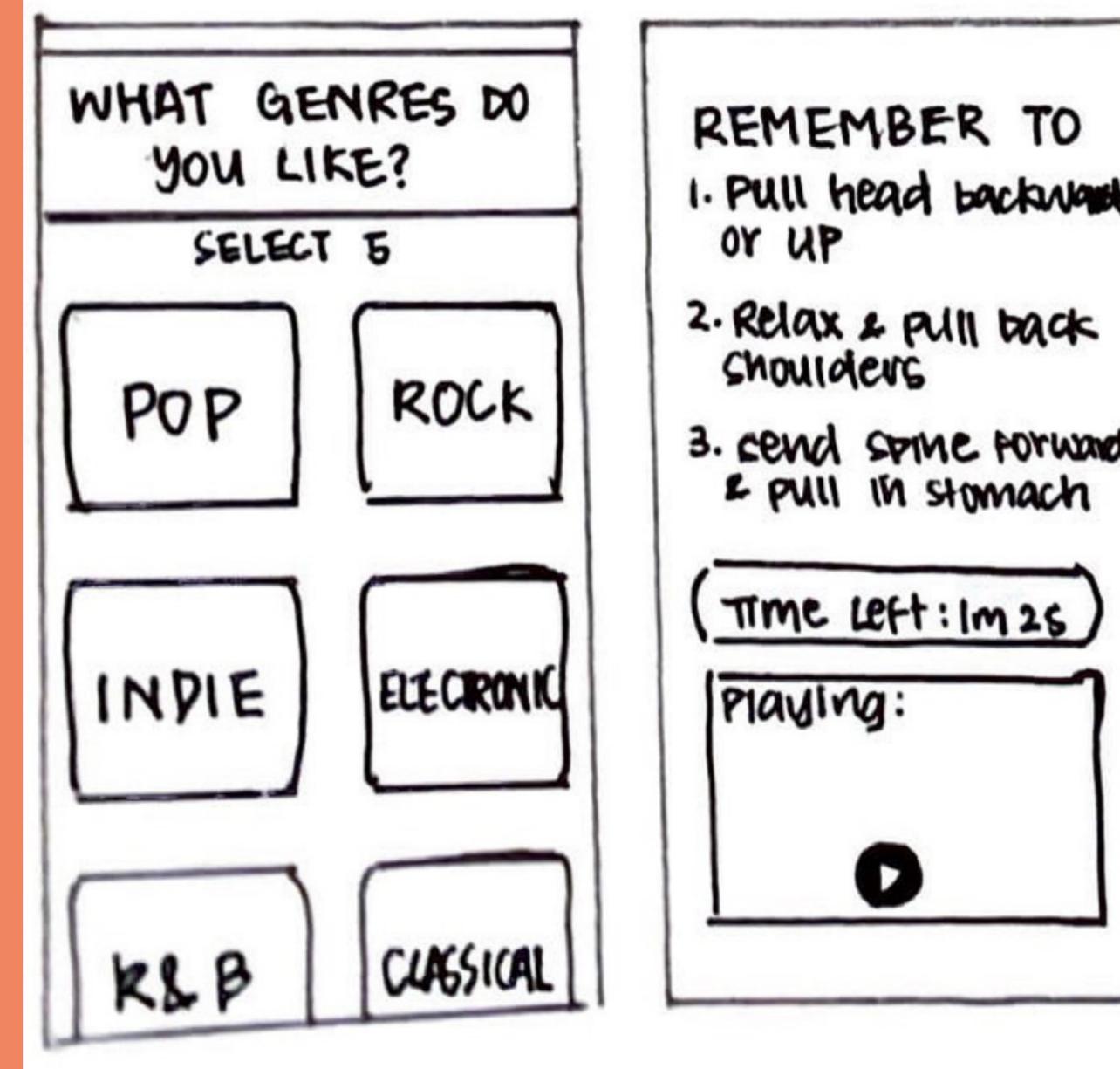
<p>1 APP that detects when users have used their phones for an hour (or set time duration they cannot ideally exceed) and sends a notification to check posture.</p> 	<p>2 APP with a cute mascot that teaches posture exercises tailored to users' circumstances (i.e. relieving back pain, at-home exercises, etc)</p>	<p>3 APP that has a timer function, allowing users to spend a set amount of time practising good posture.</p>	<p>4 APP with a stopwatch function and leaderboard. Users record time spent on practising good posture and this accumulates. They can compete with their friends and others.</p>
<p>5 APP that plays a song in a genre the user enjoys. In that song's duration, they must maintain their good posture.</p> 	<p>6 APP with randomised posture exercises for each day.</p>	<p>7 APP that has a check-in feature. Users must maintain a streak by tracking if they practised their posture each day.</p>	<p>8 APP with a study buddy mascot, monitoring the user's posture in real-time. This can be through the cameras of the phone.</p>

Crazy-8's technique used to sketch and develop ideas for the 'product'.

Using the Crazy-8's technique, I brainstormed various ideas that could be used to create a product for practising and maintaining good posture. From these results, I decided to further explore ideas 3 and 5.

3 APP that has a timer function, allowing users to spend a set amount of time practising good posture.

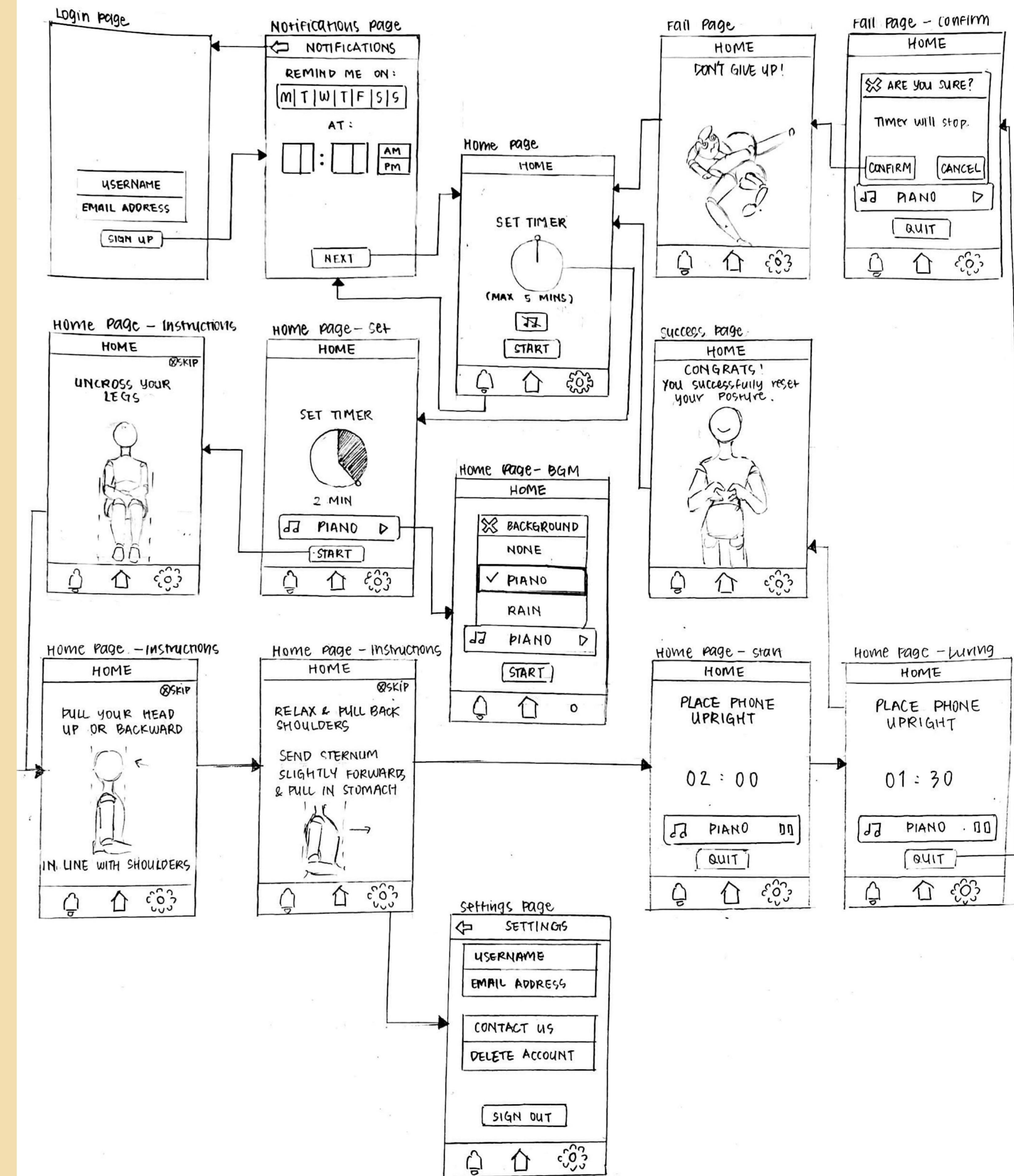
5 APP that plays a song in a genre the user enjoys. In that song's duration, they must maintain their good posture.



Idea 3 explores the timer feature, allowing users to spend a set amount of time practising good posture. For this idea, I would need to consider how much time should be dedicated to the user practising and how they would learn what good posture is. Further, while the product fulfils the task of maintaining good posture, I need to consider how I can make it more engaging and unique.

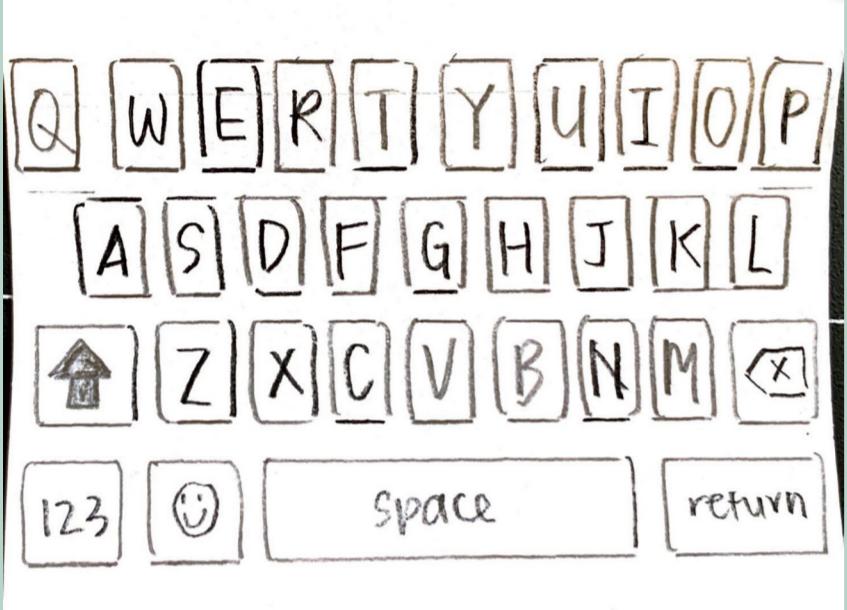
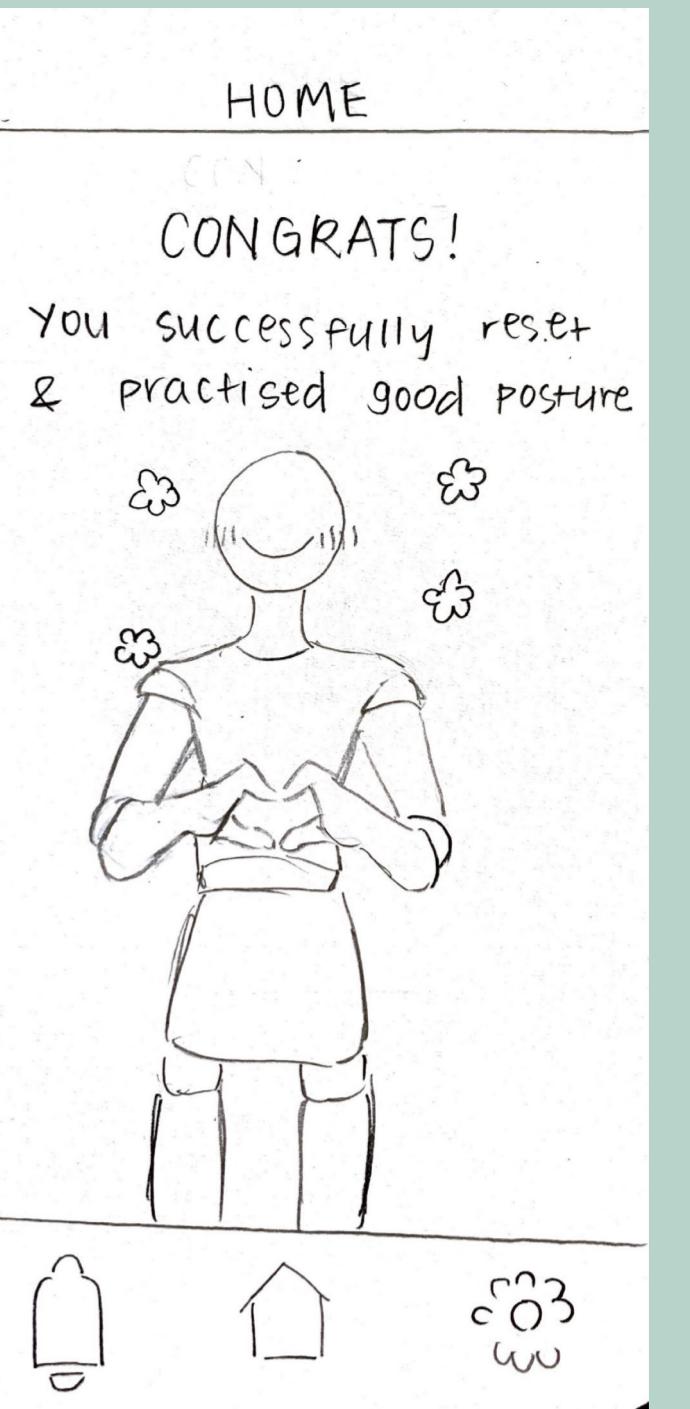
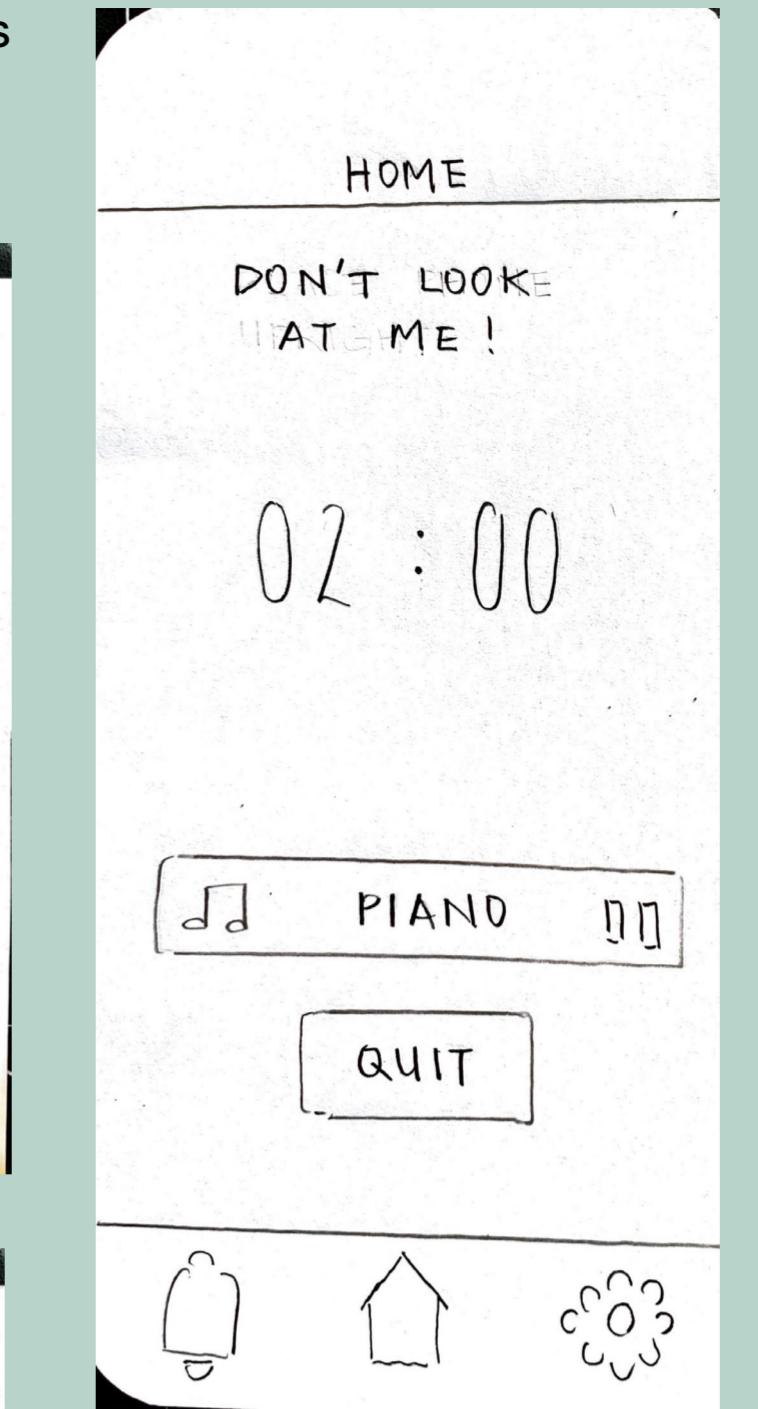
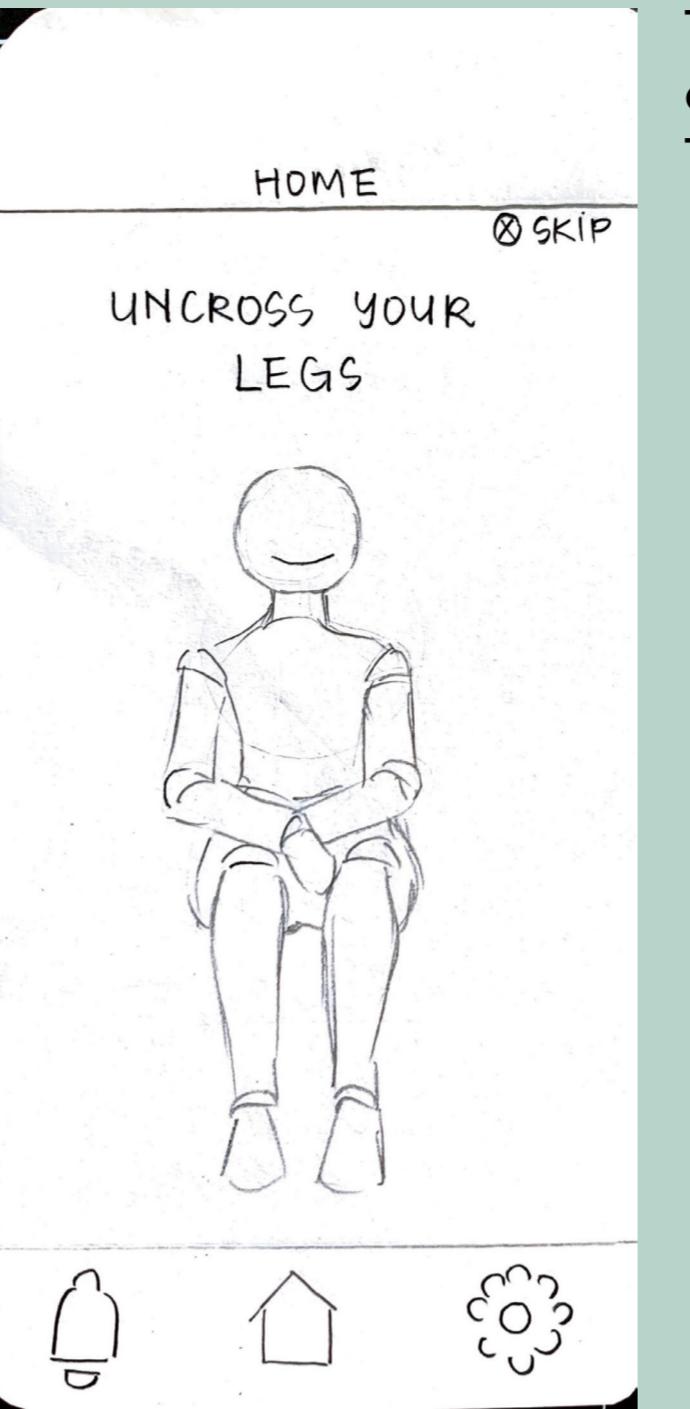
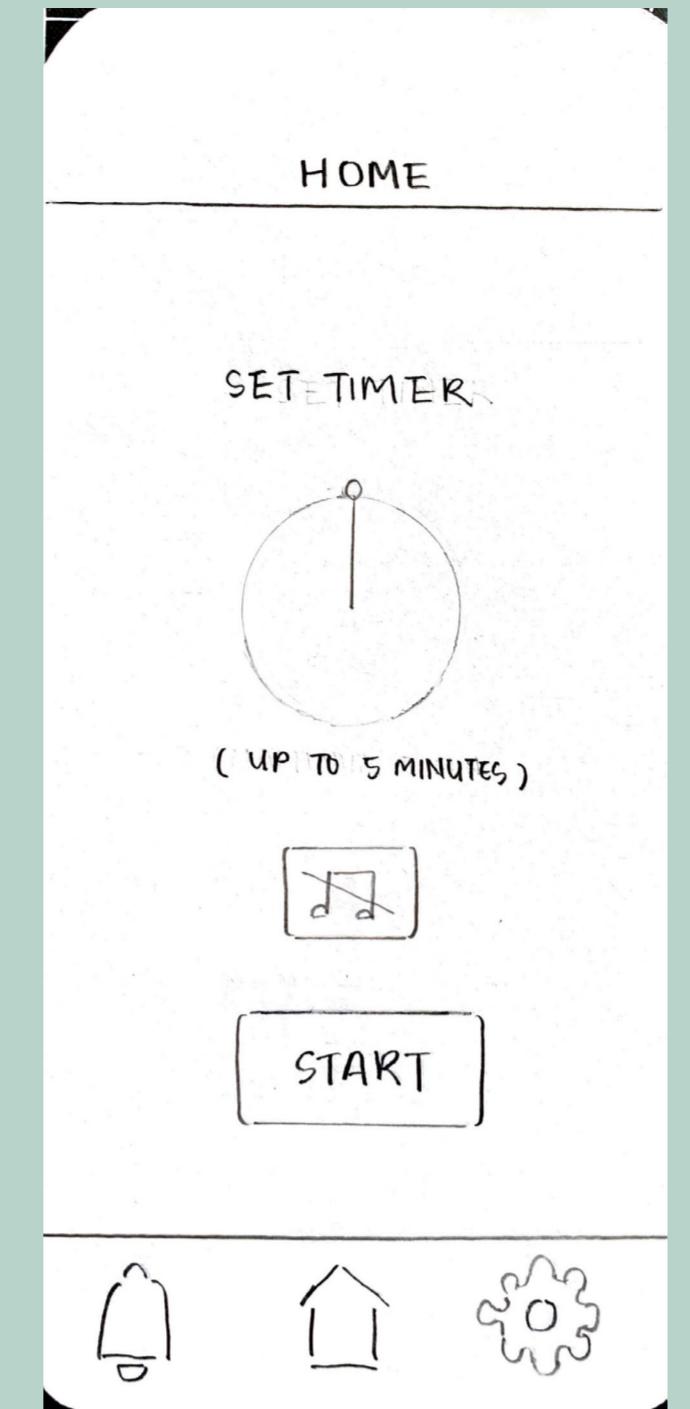
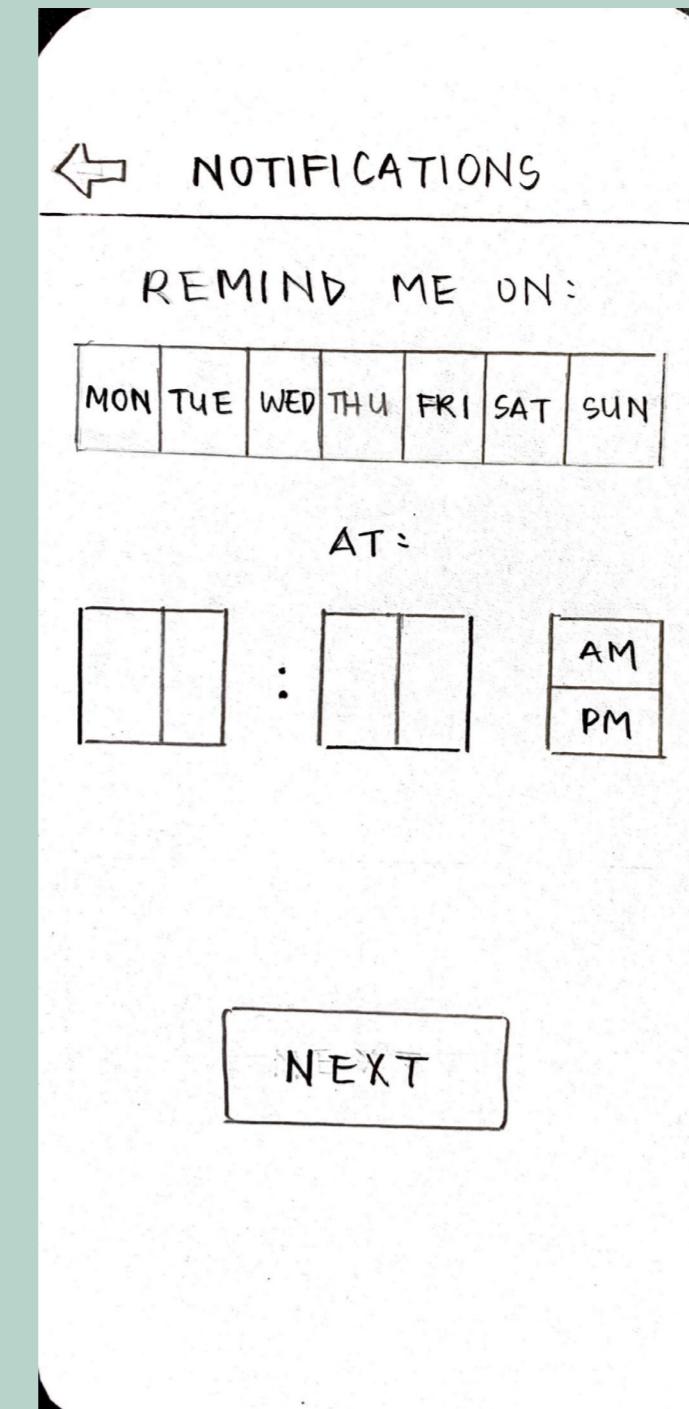
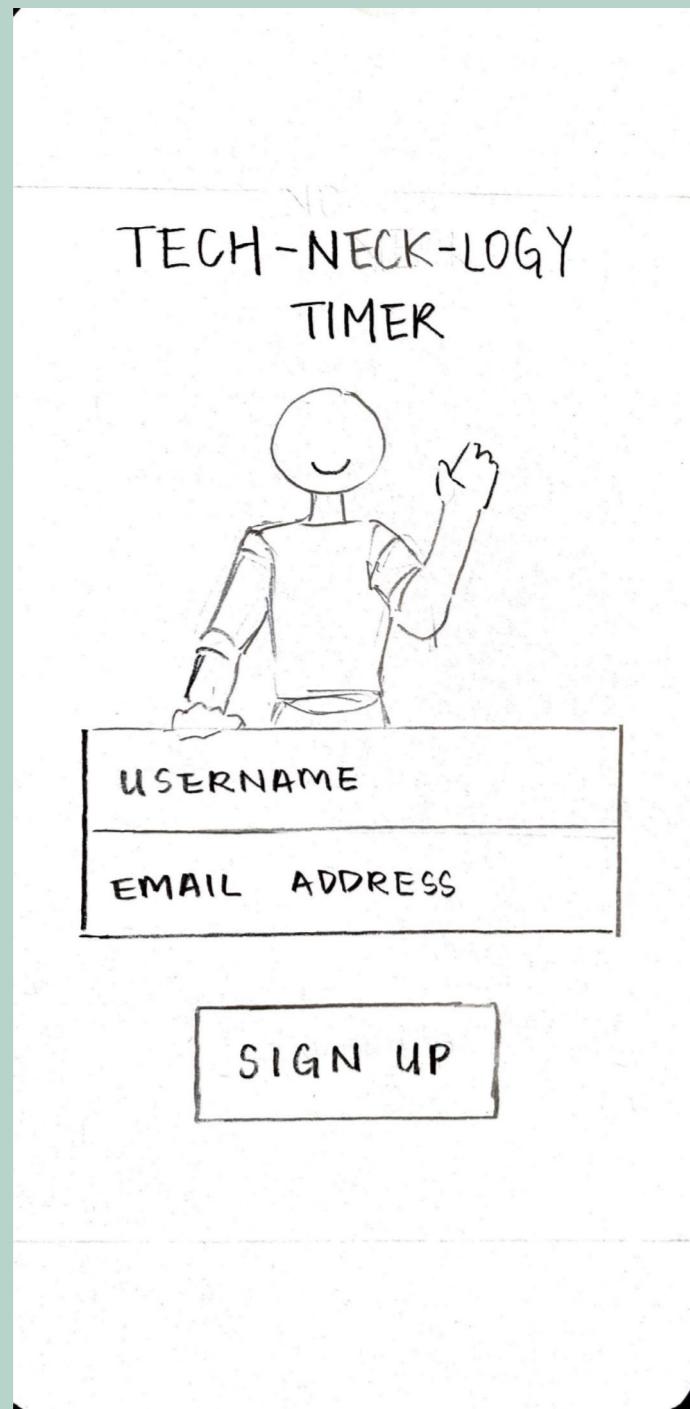
Idea 5 incorporates music with posture. It will play a song in the genre that the user enjoys and in that duration, they must maintain good posture. For this idea, I would need to inform users of the song durations, as they will be timed for that amount. Additionally, I would need to define what good posture is, and ensure the music feature does not distract the user from the goals of the task.

Ultimately, I decided to incorporate elements of both ideas 3 and 5, and addressed the considerations. The product would have a timer feature that has a range of 1 to 5 minutes, allowing us of idea 3, where users can choose how long they would like to practise their posture. However, it is limited to 5 minutes to cater to the schedules of most people and make it easier to accomplish. Further, the meaning of good posture has been addressed with instructions on how users can correct the alignment of their limbs, when they start the timer. To keep it engaging, users can play background music or sounds, such as piano and rain, while the timer runs.

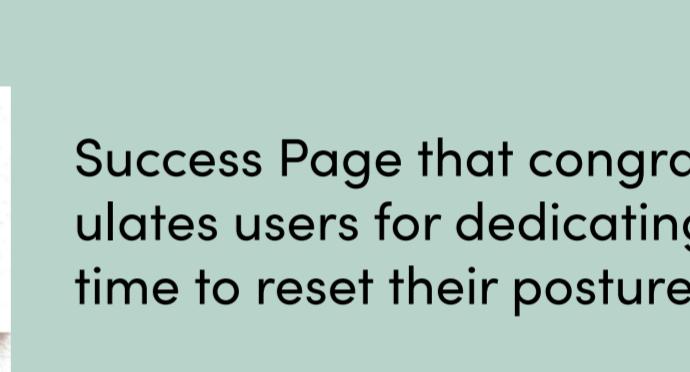
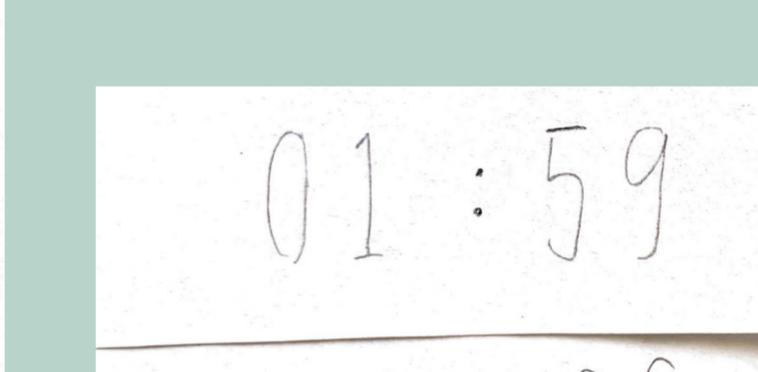
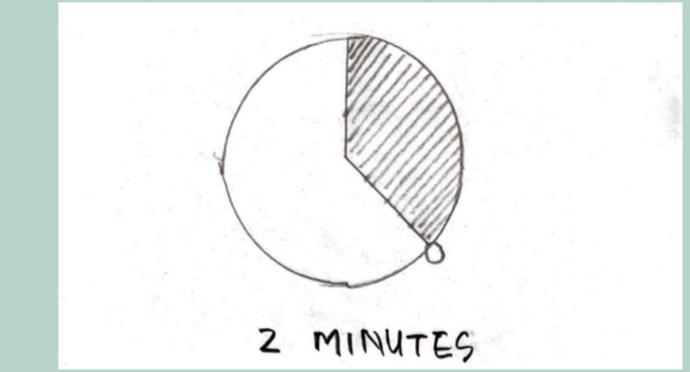
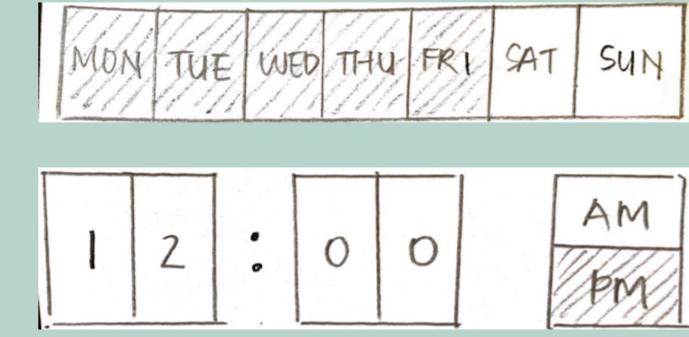


High-fidelity wireflow of the product.

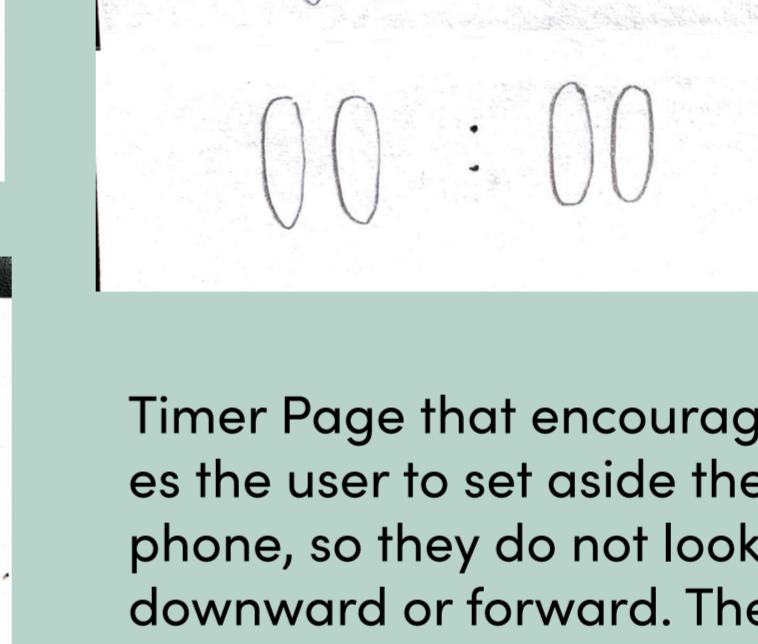
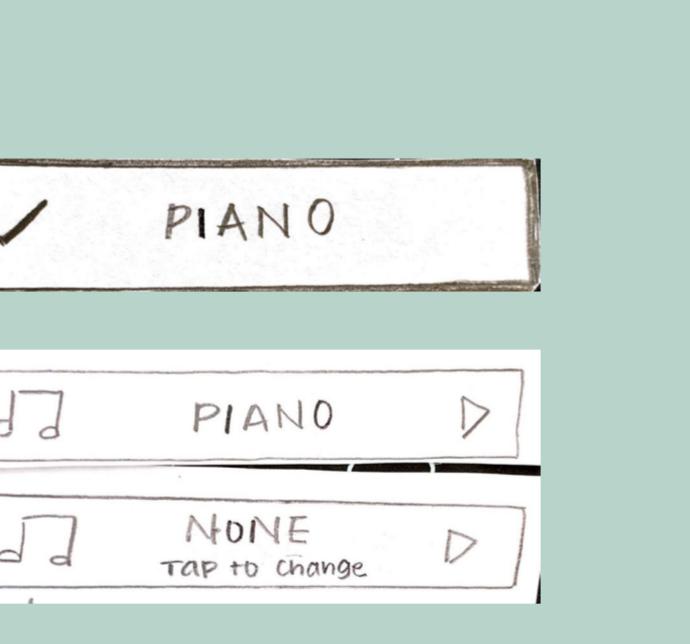
**Test scenario:**  
Your back is hunching over when you study. You want to spend 2 minutes resetting your posture to the sound of piano. You want to do this every school day at 12 PM.



Login Page with the state change, text entry, for user-name and email address.



Notifications Page with the state changes, checkbox and text entry, for when users want to be reminded to practise posture.



Timer Page that encourages the user to set aside their phone, so they do not look downward or forward. They can maintain their posture in this duration.

# Paper Prototype

## **Test Scenario (video: <https://youtu.be/4WHQGrQAasY>):**

You have an assignment that is due in 3 days. You are required to write a highly detailed report in 5000 words, with reference to 40 online sources such as websites and journal articles. As a result, you have been spending your time at school, staring at the screen to study and write about the materials, without sufficient breaks.

Your back is hunching over when you study. You want to spend 2 minutes resetting your posture to the sound of the piano. You want to do this every school day at 12:00pm.

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