[It may be helpful to look at problem definitions from previous years:
https://www.healthhack.com.au/brisbane-problems-2019
https://www.healthhack.com.au/brisbane-problems2018
https://www.healthhack.com.au/brisbane2017problems]

Problem owner name
Vivian and Eugene

Problem title
Vision Impaired Friendly Medical Forms

What is the problem you want to solve?
Decrease barriers for blind or vision impaired people in medical practices. In particular, we want to ease the process of filling out medical forms in clinics.

Why do you want to solve this problem?
The limitations of current systems in place to cater for people with sight impairments became clear for us when a patient with dyslexia attended the public dental clinic. The patient became frustrated and upset when filling out medical history forms as no alternatives or systems were in place to support her condition. Although her medical history was taken down verbally later, this did not provide a sense of independence for the patient and caused a delay in her appointment. She reported feeling disempowered by the experience.

Overall, the current systems are ineffective in maintaining patient autonomy for those who are blind or visually impaired when filling out forms and medical history crucial to their appointments and treatment plans. This often discourages patient attendance and compliance.

What do you envision as the ideal solution for this problem?
Forms, Administrative Documents - Medical History Forms, Consent Forms, Initial Patient Form

- text to voice, voice to text, speech recognition
- Increase text size/colour
- Streamlined AI interactive process for filling out forms similar to https://www.typeform.com/

What sort of Open Source solution do you think can be created in 48 hours, by a small team of developers, designers and data analysts?
A list of tools are provided below through this links:
https://www.goodfirms.co/blog/best-free-open-source-speech-recognition-software
https://blog.api.rakuten.net/top-10-best-speech-recognition-apis-google-speech-ibm-watson-speechapi-and-others/
https://archer-soft.com/blog/10-best-healthcare-data-sets-examples
https://opendata.stackexchange.com/questions/6568/medical-terminology-in-patient-medical-records-public-data-sets

Whilst solutions that assist with speech recognition or medical terminology exist, they have not been integrated in a way to assist with blind or vision impaired people under a medical history context. We hope over the weekend to build an app with some basic forms (templates will be provided) that may be filled out by speech to text or have options for selecting text size and changing colour to accommodate all visual impairments.

Are there datasets or people with domain knowledge that you will be bringing to work with? What/who are they?
Vivian Dao is a dental student and dental assistant whilst Eugene Dragut is a medical student and medical administration officer. Both will provide example forms from their practices that may be used as a basis over the Hack to develop blind and vision impaired friendly versions of.
Vivian Dao may also provide assistance with graphic design skills.

What are the current solutions for handling this problem?
Currently there are minimal solutions that are widely prevalent in terms of training and technology available to support visually impaired people in filling out medical forms. Often the responsibility on support is delegated to available receptionists who are often untrained and unprepared for this.

Summary:
Develop Vision Impaired Friendly Medical Forms

Currently, there are limited systems in place in the public health system that cater to people with sight impairments. For example, a patient attended the public dental clinic and was upset to be filling out medical history forms. The clinicians found out much later that they suffered from dyslexia, which prevented them from accurately filling out the forms. The medical history was then taken verbally but the appointment ended up running late.

Overall, the current systems are ineffective in maintaining patient autonomy for those blind or visually impaired when filling out forms and medical history crucial to their appointments and treatment plans. Often the responsibility on support is delegated to available receptionists who are often untrained and unprepared for this. Although technology is currently in place such as speech to text recognition software or medical terminology databases, these have not been utilised to assist with the taking of medical history for vision impaired peoples. This in effect, makes them reliant on the current system which is flawed and often discourages patient attendance and compliance.

We hope over the weekend to develop an app with some basic medical forms (templates will be provided) that may be filled out by speech to text or have options for selecting text size and changing colour to accommodate a range of visual impairments.