**Experimental design:**

* Think about the instructions I will need to provide the user with
* Create a demo scene with no forces initially for the user to interact with first
* What messages will be shown
* UI where the user can put their ID to login

Process:

* Come up with a message script that explains the process of my study
  + Demo will be shown, focus on the target (blue bubble), focus on the endEffector which is what they will be controlling (white ball) using the haptic device
  + Include instructions on how the game will work, i.e 15 seconds intervals x20 x3 different forces; no force, attractive, repelling
  + Try move as close to the target as possible
  + Either attractive, repelling or no forces will be applied to the haptic device
  + Use of the haptic button to move through the messages, demo and then one last message after the demo that will say the game is starting on the next button press
  + When repelling forces are applied, use the button on the delta device to turn forces on and off
* Experimental design
  + Game will last 15 seconds before resetting to the original position (i.e 0, 0, 0)
  + This will happen 20 times, so the there will be 20 trials lasting 15 seconds
  + 2 groups performing pre testing, training and post training
  + Training will either involve haptic force feedback or not
  + For the repelling force, it will get stronger/max distance on repelling will increase as the trials go i.e trial 1 will be lowest force and trial 20 has highest force
  + There will be 20 trials at attractive, repelling and no forces, so 60 trials total
  + There will be a break in between different force transitions
* Data will be collected on a csv file and analysed comparing the accuracy of the user when different forces are applied

What I’m testing:

* Do a pre test, a training exercise (forces applied Attractive or Repelling or no forces), and then a post test. Tests are with no forces
* Do a comparison of the accuracy of following the target when trained with the attractive or repelling forces or ?no forces?

Analysis

* Compared user accuracy when trained on no force, repelling, or attractive forces
* Compare if user improves accuracy over the repetition of completing the tasks