Week 3

Friday

week 4

Tuesday

Friday

figure out what parts we need/take measurements + work on project plan

week 5

Tuesday

build mechanism

Friday

build mechanism

week 6

Tuesday

build mechanism + begin code for servos

Friday

test code on one string if work multiply

week 7

Tuesday

multiply

Friday

fretting the string

week 8

Tuesday

fretting the string

Friday

fretting the string

week 9

Tuesday

fretting the string + code (possibly roughly the last hour)(make video presentation)

Friday

(make video presentation) multiply the fretting of the strings

week 10

Tuesday

multiply the fretting of the strings

Friday

multiply the fretting of the strings

week 11

Tuesday

turn midi into music

Friday

turn midi into music + voice control

week 12

Tuesday

voice control

Friday

webpage

week 13

Tuesday

Friday

week 14

Tuesday

Friday

**High priority**

* pick a microcontroller(needs to be able to control a lot of servos) and programming language(make sure that if we need to change controllers we can still use the same language)
* pick the parts we will need
  + make measurements of what is needed (how big/ small do things need to be)(how much power do we need for fretting a string/ picking a string)
  + servos(what kind(digital) / how much torgue is needed? ([3kg/cm minimum](https://makezine.com/article/craft/music/how-i-built-a-guitar-picking-robot/#:~:text=string.%20I%E2%80%99ve%20found-,that,-3kg/cm%20of) for picking for frets less needed probably)(speed))(how many)
* picking one string
  + build the mechanism
    - frame for the servos
    - securing the servos
    - attaching the frame to the guitar
    - adapting the servo to pick a string
    - how to power the servo(s)
  + write the code to move the servo
    - know how much to move the servo
    - how fast
* scaling picking to more strings
  + adapting the structure of what we did for one string to multiple strings
  + changing the code to move multiple servos individually
* fretting one string
  + design for pushing down on strings on the fretboard
    - frame
    - attaching frame to guitar
    - securing the servos in place
    - wiring for the servos
  + code for pushing down on the strings in different places
* scaling fretting to more strings
  + adapting the structure for one string to multiple strings
  + adapting code to multiple strings
* code to turn midi into music
  + turn midi into a pattern to move each servo
* website
* voice control

**low priority**