Connections:

1st Stepper Driver and 1st Stepper motor:

Red wire of motor to 2B of driver

Blue wire of motor to 1B of driver

Green wire of motor to 1A of driver

Yellow wire of motor to 2A of driver

VMOT of driver to positive of 12V adapter

Ground of driver to negative of 12V adapter

DIR pin of driver to Wiring Pi 27 which is pin 36

STEP pin of driver to WiringPi 25 which is pin 37

GND of driver to GND of Raspberry pi which is pin 6

RESET and SLP pins to 5V of Raspberry pi which is pin 2

Also, connect a 25V 100micro farad resistor to the VMOT and GND pins. Positive end of resistor to VMOT and negative to GND.

2nd Stepper Driver and 2nd Stepper motor:

Red wire of motor to 2B of driver

Blue wire of motor to 1B of driver

Green wire of motor to 1A of driver

Yellow wire of motor to 2A of driver

VMOT of driver to positive of 12V adapter

Ground of driver to negative of 12V adapter

DIR pin of driver to Wiring Pi 28 which is pin 38

STEP pin of driver to WiringPi 23 which is pin 33

GND of driver to GND of Raspberry pi which is pin 14

RESET and SLP pins to 5V of Raspberry pi which is pin 4

Also, connect a 25V 220micro farad resistor to the VMOT and GND pins. Positive end of resistor to VMOT and negative to GND.

Code: This the same code mentioned in the presentation file

// Define pin connections & motor's steps per revolution

#include <stdio.h>

#include <wiringPi.h>

const int dirPin1 = 27;

const int stepPin1 = 25;

const int stepsPerRevolution1 = 200;

const int dirPin2 = 28;

const int stepPin2 = 23;

const int stepsPerRevolution2 = 200;

int main(void)

{

wiringPiSetup();

pinMode(stepPin1, OUTPUT);

pinMode(dirPin1, OUTPUT);

pinMode(stepPin2, OUTPUT);

pinMode(dirPin2, OUTPUT);

// Set motor direction clockwise

digitalWrite(dirPin1, HIGH);

// Spin motor slowly

for(int x = 0; x < stepsPerRevolution1; x++)

{

digitalWrite(stepPin1, HIGH);

delayMicroseconds(2000);

digitalWrite(stepPin1, LOW);

delayMicroseconds(2000);

}

delay(1000); // Wait a second

// Set motor direction counterclockwise

digitalWrite(dirPin1, LOW);

// Spin motor quickly

for(int x = 0; x < stepsPerRevolution1; x++)

{

digitalWrite(stepPin1, HIGH);

delayMicroseconds(1000);

digitalWrite(stepPin1, LOW);

delayMicroseconds(1000);

}

delay(1000); // Wait a second

// Set motor direction clockwise

digitalWrite(dirPin2, HIGH);

// Spin motor slowly

for(int y = 0; y < stepsPerRevolution2; y++)

{

digitalWrite(stepPin2, HIGH);

delayMicroseconds(2000);

digitalWrite(stepPin2, LOW);

delayMicroseconds(2000);

}

delay(1000); // Wait a second

// Set motor direction counterclockwise

digitalWrite(dirPin2, LOW);

// Spin motor quickly

for(int y = 0; y < stepsPerRevolution1; y++)

{

digitalWrite(stepPin2, HIGH);

delayMicroseconds(1000);

digitalWrite(stepPin2, LOW);

delayMicroseconds(1000);

}

delay(1000); // Wait a second

}

Open terminal and run the below commands:

cd /home

cd pi

ls

gcc steppertesting.c -o out -lwiringPi

./out

OUTPUT: Stepper motor 1 rotates on which we are planning the place the disk with medicine boxes and later the 2nd stepper motor rotates to which a stick would be attached for dispensing the medicine boxes.