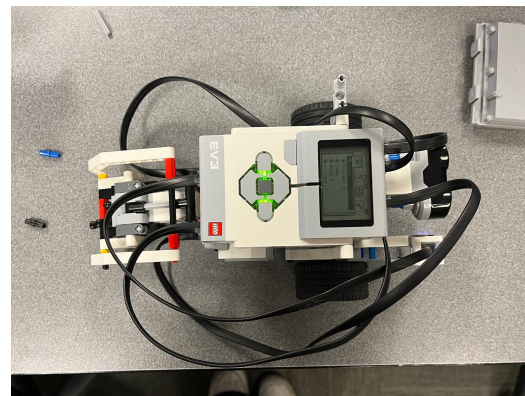
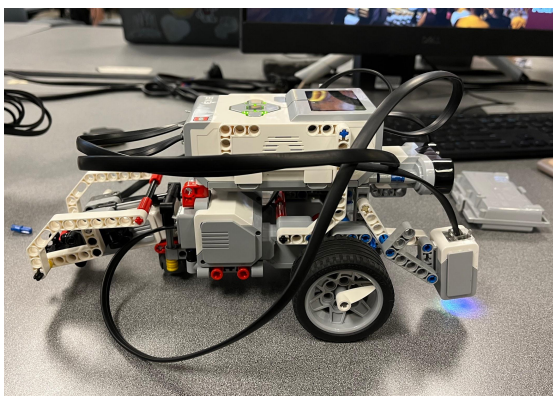
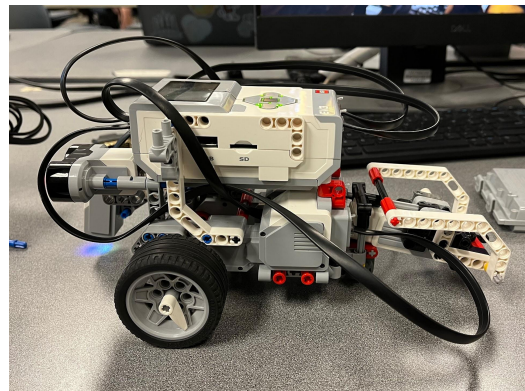
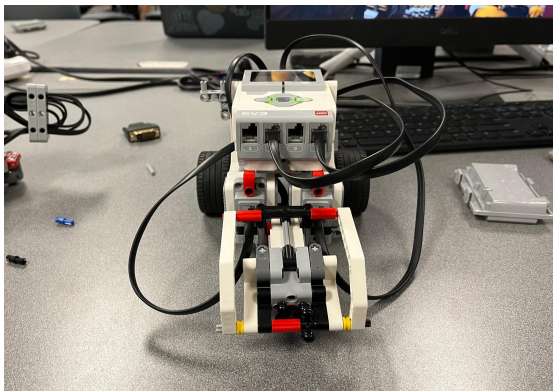
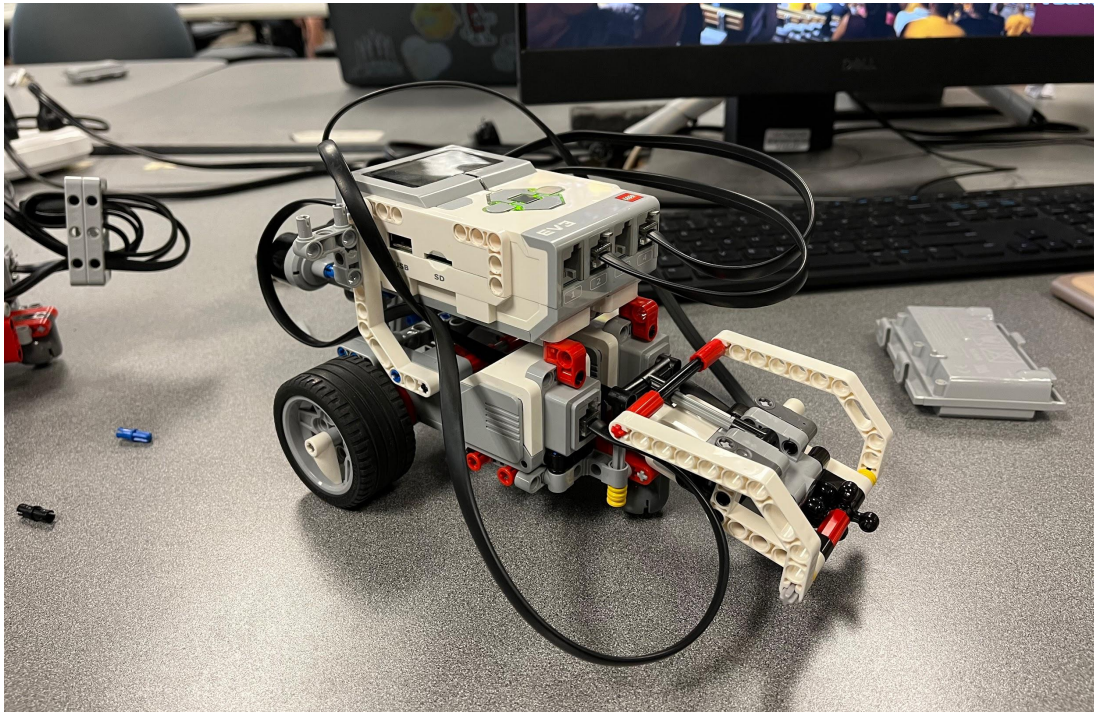


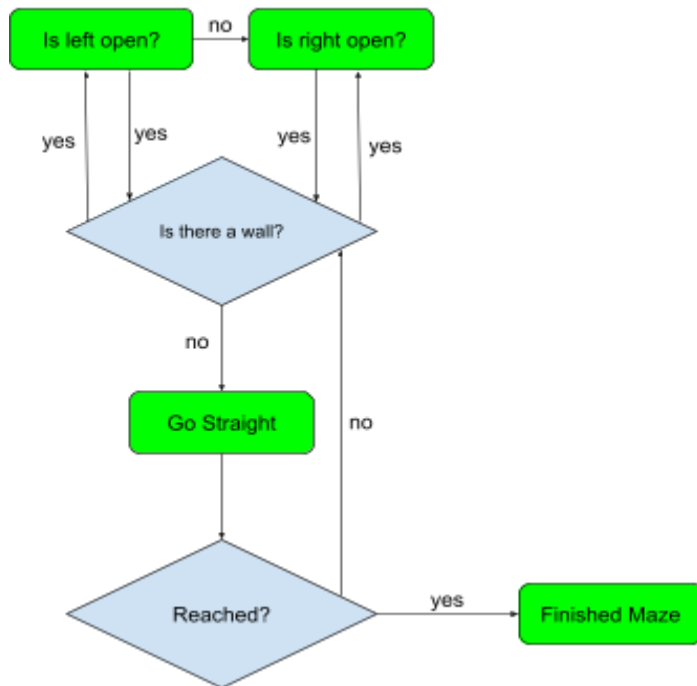
Team 8: Dina Lad, Sachi Sayal, Shubhi Srivastava

Final Design:



Behavior: Our robot is equipped with a distance sensor and a color sensor. The color sensor makes the car pause on red, switch to manual mode on blue, and completely stop on yellow. The car is programmed to make a left turn every time it sees a wall, and then another 180 degree turn if it sees another wall after the first one. Our lifting mechanism is all manual. We have designed a wide lever that will lift the wheelchair up on command. The car runs at a speed of 40.

Diagram:



Youtube link: <https://youtu.be/mbGhdJKH0Nw>

Code:

MAIN CODE

```

while 1
    count = 0;
    distance = brick.UltrasonicDist(4);
    %
    brick.SetColorMode(2,2)
    color = brick.ColorCode(2);
    disp(distance);
    disp(color);
    %
    if ((color == 1) || (color == 4))
    brick.MoveMotor('A',51);
    brick.MoveMotor('D',50);
    %
    pause (0.1);
    %
    end
    if (color == 5)

```

```

brick.StopAllMotors;
pause(2);
brick.MoveMotor('A',41);
brick.MoveMotor('D',40);
end
if ((color == 2) || (color == 4))
    brick.StopAllMotors;
    run('keyboardctrl.m');
end
if ((distance <= 35) && (count == 0))
    brick.StopMotor('AD');
    pause(1);
    brick.MoveMotor('A',-50);
    brick.MoveMotor('D',50);
    %distance = brick.UltrasonicDist(4);
    pause(0.4);
    brick.StopMotor('AD');
    pause(2);
    distance = 30;
    pause(2);
    distance = brick.UltrasonicDist(4);

    count = count + 1;

end
if ((count == 1) && (distance < 36))
    brick.StopMotor('AD');
    pause(1);
    brick.MoveMotor('A',-50);
    brick.MoveMotor('D',50);
    pause(0.93);
    count = 0;
    %
    distance = 35;
    %
    pause(1)
    distance = brick.UltrasonicDist(4);
end
end

```

KEYBOARD CODE

```

global key
InitKeyboard();
while 1
    pause(0.1);
    switch key
        case 'uparrow'
            brick.MoveMotor('AD',20);
        case 'downarrow'
            brick.MoveMotor('AD',-20);
        case 'rightarrow'

```

```
        brick.MoveMotor('A',20);
        brick.MoveMotor('D',-20);
    case 'leftarrow'
        brick.MoveMotor('A',-20);
        brick.MoveMotor('D',20);
    case 'w'
        brick.MoveMotor('B',5);
    case 's'
        brick.MoveMotor('B',-5);
    case 'a'
        brick.StopAllMotors;
    case 'q'
        run('fsedcode.m');
end

end

CloseKeyboard();
```