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Assignment: Deliverable 6

purpose: To control a 4WD Car

Class: MakeCourse EEL4935.003S17

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```
//constants won't change. They're used here to set pin numbers:
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int LeftA = 5; // read the input on digital pin 5:
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int LeftB = 6; // read the input on digital pin 6:
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int rightA = 9; // read the input on digital pin 9:
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int rightB = 10; // read the input on digital pin 10:
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int acc = 255; // speed of the actuator:
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int state = 'g'; // initial state 103
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void setup()
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```
{  
  Serial.begin(9600); // initialize serial communication at 9600 bits per second:  
  pinMode(rightA, OUTPUT); // initialize the right A pin as an output  
  pinMode(rightB, OUTPUT); // initialize the right B pin as an output  
  pinMode(LeftA, OUTPUT); // initialize the left A pin as an output  
  pinMode(LeftB, OUTPUT); // initialize the left A pin as an output  
}
```

```
void loop()
```

```
{  
  if (Serial.available() > 0)  
  {  
    state = Serial.read();  
  }  
  if (state == 'a') //  
  {  
    // To move/accelerate the 4WD Car Forward  
    Serial.println(state);  
    analogWrite(rightB, 0); //right rear wheel no movement  
    analogWrite(LeftB, 0); //left rear wheel no movement  
    analogWrite(rightA, acc); //right front wheel accelerate  
    analogWrite(LeftA, acc); //left front wheel accelerate  
  }  
  if (state == 'b')  
  {  
    // To turn the 4WD Car left  
    Serial.println(state);  
    analogWrite(rightB, 0); //right rear wheel no movement  
    analogWrite(LeftB, acc); //left rear wheel accelerate  
  }  
}
```

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    analogWrite(LeftA, 0); //left rear front no movement
    analogWrite(rightA, acc); //right front wheel accelerate
}
if (state == 'c')
{ // To Stop the 4WD Car
    Serial.println(state);
    analogWrite(rightB, 0); //right rear wheel no movement
    analogWrite(LeftB, 0); //left rear wheel no movement
    analogWrite(rightA, 0); //right front wheel no movement
    analogWrite(LeftA, 0); //left front wheel no movement
}
if (state == 'd')
{
    // To turn the 4WD Car right
    Serial.println(state);
    analogWrite(rightB, acc); //right rear wheel accelerate
    analogWrite(LeftB, 0); //left rear wheel no movement
    analogWrite(rightA, 0); //right front wheel no movement
    analogWrite(LeftA, acc); //left front wheel accelerate
}
if (state == 'e')
{
    // To Reverse the 4WD Car
    Serial.println(state);
    analogWrite(rightA, 0); //right front wheel no movement
    analogWrite(LeftA, 0); //left front wheel no movement
    analogWrite(rightB, acc); //right rear wheel accelerate
    analogWrite(LeftB, acc); //left rear wheel accelerate
}
}

```