

```

//Pro-Logic AMT Interface for the autonomous car
int inPin=2; // GEAR
int inPin2=3; // GEAR
int inPin3=A0;
int inPin4=A1;
int inPin5=A2; //definng input pins
int inPin6=A3;
int inPin7=A4;

int outPin=5; //GEAR
int outPin2=6; //GEAR
int outPin3=7;
int outPin8=8;
int outPin4=9;
int outPin5=10; //defining output pins
int outPin6=11;
int outPin7=12;

int state = LOW;
int reading;
int previous = LOW;
int state2= LOW;
int reading2;
int previous2=LOW;
int state3= LOW;
int reading3;
int previous3=LOW;
int state4= LOW;
int reading4;
int previous4=LOW;
int state5= LOW;
int reading5;
int previous5=LOW;
int state6= LOW;
int reading6;
int previous6=LOW;
int ledState = HIGH;
int buttonState;
int lastButtonState = LOW;
int val=0;

```

```

long lastDebounceTime = 0;
long debounceDelay = 100;

```

```

long time = 0;
long debounce = 500;

```

```

void setup()
{
  pinMode(inPin, INPUT);
  pinMode(inPin2, INPUT);
  pinMode(inPin3, INPUT);
  pinMode(inPin4, INPUT); //setting inputs
  pinMode(inPin5, INPUT);
  pinMode(inPin6, INPUT);
  pinMode(inPin7, INPUT);
  pinMode(outPin, OUTPUT);
  pinMode(outPin2, OUTPUT);
  pinMode(outPin3, OUTPUT);
  pinMode(outPin4, OUTPUT); //setting outputs
  pinMode(outPin5, OUTPUT);
  pinMode(outPin6, OUTPUT);
  pinMode(outPin7, OUTPUT);
  pinMode(outPin8, OUTPUT);
}

```

```

void loop()
//Begin Pro-Logic algorithm
{
  reading = digitalRead(inPin); //read input from Joystick
  if (digitalRead(inPin) == HIGH && millis() - time > debounce) //carry out a test
  state2 = LOW;
  if (digitalRead(outPin2) == LOW && reading == HIGH && previous == LOW && millis() - time >
  debounce) {
    if (state == HIGH) //control loop
    state = LOW; //carry out the appropriate output
  else
    state = HIGH;
    time = millis();
  }
  delay(10);
  digitalWrite(outPin, state);
  previous = reading;

  reading2=digitalRead(inPin2);
  if (digitalRead(inPin2) == HIGH && millis() - time > debounce)
  state=LOW;
  if (digitalRead(outPin) ==LOW && reading2 == HIGH && previous2 == LOW && millis() - time >
  debounce){
    if (state2 == HIGH)
    state2 = LOW;
  else
    state2 = HIGH;
    time = millis();
  }
  delay(10);
  digitalWrite(outPin2, state2);
  previous2=reading2;

  if (digitalRead(inPin3) == HIGH && millis() - time > debounce)
  if (state3=LOW);
  if (digitalRead(outPin3) == LOW && digitalRead(inPin3) == HIGH && previous3 == LOW && millis() -
  time > debounce){
    if (state3 == HIGH)
    state3 = LOW;
  else
    state3 = HIGH;
    time = millis();
  }
  delay(10);
  digitalWrite(outPin3, state3);
  previous3=digitalRead(inPin3);

  reading4=digitalRead(inPin4);
  if (digitalRead(inPin4) == HIGH && millis() - time > debounce)
  state4=LOW;
  if (digitalRead(outPin4) == LOW && reading4 == HIGH && previous4 == LOW && millis() - time >
  debounce){
    if (state4 == HIGH)
    state4 = LOW;
  else
    state4 = HIGH;
    time = millis();
  }
  delay(10);
  digitalWrite(outPin4, state4);
  previous4=reading4;

  reading5=digitalRead(inPin5);
  if (digitalRead(inPin5) == HIGH && millis() - time > debounce)
  state5=LOW;
  if (digitalRead(outPin5) ==LOW && reading5 == HIGH && previous5 == LOW && millis() - time >
  debounce){
    if (state5 == HIGH)

```

```

state5 = LOW;
else
state5 = HIGH;
time = millis();
}
delay(10);
digitalWrite(outPin5, state5);
previous5=reading5;

reading6=digitalRead(inPin6);
if (digitalRead(inPin6) == HIGH && millis() - time > debounce)
state6=LOW;
if (digitalRead(outPin6) ==LOW && reading6 == HIGH && previous6 == LOW && millis() - time >
debounce){
if (state6 == HIGH)
state6 = LOW;
else
state6 = HIGH;
time = millis();
}
delay(10);
digitalWrite(outPin6, state6);
previous6=reading6;

val = digitalRead(inPin7); //check state of input
if (val == LOW) {
digitalWrite(outPin7, LOW);
} else {
digitalWrite(outPin7, HIGH);
}
}

```