Blinking LED code:

```
void setup()
{
  pinMode(12, OUTPUT);
}

void loop()
{
  digitalWrite(12, HIGH);
  delay(1000);// Wait for 1000 millisecond(s)
  digitalWrite(12, LOW);
  delay(1000);// Wait for 1000 millisecond(s)
}
```

Morse code visualizer code:

```
void setup()
{
  pinMode(12, OUTPUT);
  Serial.begin(9600);
}

void loop()
{
  char ch = Serial.read();
        if(ch == '.'){
  digitalWrite(12, HIGH);
  delay(50); // Wait for 1000 millisecond(s)
  digitalWrite(12, LOW);
  delay(1000); // Wait for 1000 millisecond(s)
  }
  else if(ch == '-'){
  digitalWrite(12, HIGH);
  delay(1000); // Wait for 1000 millisecond(s)
  digitalWrite(12, LOW);
  delay(1000); // Wait for 1000 millisecond(s)
  }
}
```

Automatic brightness lamp code:

```
float brightness;
void setup()
{
  pinMode(11, OUTPUT);
  pinMode(A0, INPUT);
  Serial.begin(9600);
}

void loop()
{
  int a = analogRead(A0);
  Serial.println(a);
  brightness = map(a, 4, 448, 255, 0);
  analogWrite(11,brightness);
}
```

Motor driver code:

```
#define ena 5
#define enb 6
#define lb 8
#define lf 9
#define rb 10
#define rf 11
#define del 50

void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);
  pinMode(ena, OUTPUT);
  pinMode(enb, OUTPUT);
  pinMode(lf, OUTPUT);
  pinMode(lb, OUTPUT);
  pinMode(rf, OUTPUT);
  pinMode(rb, OUTPUT);
  analogWrite(ena, 255);
  analogWrite(enb, 255);
}

void loop() {
  // put your main code here, to run repeatedly:
if (Serial.available()>0){
        char cg = Serial.read();
```

```
if (cg == 'f'){
  digitalWrite(lf, HIGH);
  digitalWrite(lb, LOW);
  digitalWrite(rf, HIGH);
  digitalWrite(rb, LOW);
  delay(del);
          digitalWrite(lf, LOW);
  digitalWrite(lb, LOW);
  digitalWrite(rf, LOW);
  digitalWrite(rb, LOW);
}
if (cg == 'b'){
  digitalWrite(lf, LOW);
  digitalWrite(lb, HIGH);
  digitalWrite(rf, LOW);
  digitalWrite(rb, HIGH);
  delay(del);
          digitalWrite(lf, LOW);
  digitalWrite(lb, LOW);
  digitalWrite(rf, LOW);
  digitalWrite(rb, LOW);
}
if (cg == 'l'){
  digitalWrite(lf, LOW);
  digitalWrite(lb, HIGH);
  digitalWrite(rf, HIGH);
  digitalWrite(rb, LOW);
  delay(del);
          digitalWrite(lf, LOW);
  digitalWrite(lb, LOW);
  digitalWrite(rf, LOW);
  digitalWrite(rb, LOW);
}
if (cg == 'r'){
  digitalWrite(lf, HIGH);
  digitalWrite(lb, LOW);
  digitalWrite(rf, LOW);
  digitalWrite(rb, HIGH);
  delay(del);
          digitalWrite(lf, LOW);
  digitalWrite(lb, LOW);
  digitalWrite(rf, LOW);
  digitalWrite(rb, LOW);
}
if (cg == 's'){
  digitalWrite(lf, LOW);
  digitalWrite(lb, LOW);
  digitalWrite(rf, LOW);
```

```
  digitalWrite(rb, LOW);
  delay(del);
}
}
}
```

Pyserial code (same as the one in the slides):

```
import serial

ser = serial.Serial('PORT', baudrate = 9600, timeout = 1)

i = ""
while i != 'done':
        i = input()
        ser.write(i.encode())
```