SMORPHI

Direction	Motor1	Motor2	Motor3	Motor4
Forward	robot.MoveForward(50) Moves the robot straight forward at speed 50	robot.MoveForward(50) Moves the robot straight forward at speed 50	robot.MoveForward(50) Moves the robot straight forward at speed 50	robot.MoveForward(50) Moves the robot straight forward at speed 50
Backward	robot.MoveBackward(50) Moves the robot straight backward at speed 50	robot.MoveBackward(50) Moves the robot straight backward at speed 50	robot.MoveBackward(50) Moves the robot straight backward at speed 50	robot.MoveBackward(50) Moves the robot straight backward at speed 50
Right	robot.MoveRight(50) Moves the robot straight forward at speed 50	robot.MoveRight(50) Moves the robot straight backward at speed 50	robot.MoveRight(50) Moves the robot straight forward at speed 50	robot.MoveRight(50) Moves the robot straight backward at speed 50
Left	robot.MoveLeft(50) Moves the robot straight backward at speed 50	robot.MoveLeft(50) Moves the robot straight forward at speed 50	robot.MoveLeft(50) Moves the robot straight backward at speed 50	robot.MoveLeft(50) Moves the robot straight forward at speed 50
Diagonal (upRight)	robot.MoveDiagUpRight(80) Moves the robot forward at speed 80	Stop	robot.MoveDiagUpRight(80) Moves the robot forward at speed 80	Stop
Diagonal(down right)	Stop	robot.MoveDiagDownRight(80) Moves the robot backward at speed 80	Stop	robot.MoveDiagDownRight(80) Moves the robot backward at speed 80

Diagonal(UpLeft)	Stop	robot.MoveDiagUpLeft(80) Moves the robot forward at speed 80	Stop	robot.MoveDiagUpLeft(80) Moves the robot forward at speed 80
Diagonal(DownLeft)	robot.MoveDiagDownLeft(80) Moves the robot backward at speed 80	Stop	robot.MoveDiagDownLeft(80) Moves the robot backward at speed 80	Stop

Code for Directions:

```
#include <smorphi_single.h>
Smorphi_single robot;
void setup() {
  Serial.begin(115200);
  robot.BeginSmorphi_single();
}
void loop() {
  // Move Forward
  robot.MoveForward(80);    // Speed = 80%
  delay(5000);              // Move for 5 seconds
  robot.MoveForward(0);     // Stop
  delay(1000);              // Pause for 1 second
// Move Backward
  robot.MoveBackward(80);   // Speed = 80%
  delay(5000);              // Move for 5 seconds
  robot.MoveBackward(0);    // Stop
  delay(1000);              // Pause for 1 second
  // Move Left
  robot.MoveLeft(80);       // Speed = 80%
  delay(5000);              // Move for 5 seconds
  robot.MoveLeft(0);        // Stop
  delay(1000);              // Pause for 1 second
// Move Right
  robot.MoveRight(80);      // Speed = 80%
  delay(5000);              // Move for 5 seconds
  robot.MoveRight(0);       // Stop
```

```
 delay(1000);              // Pause for 1 second
  // Move Diagonal Up Right
   robot.MoveDiagUpRight(80);  // Speed = 80%
   delay(5000);              // Move for 5 seconds
   robot.MoveDiagUpRight(0);    // Stop
   delay(1000);              // Pause for 1 second
 // Move Diagonal Down Right
   robot.MoveDiagDownRight(80);  // Speed = 80%
   delay(5000);               // Move for 5 seconds
   robot.MoveDiagDownRight(0);    // Stop
   delay(1000);               // Pause for 1 second
 // Move Diagonal Up Left
   robot.MoveDiagUpLeft(80);    // Speed = 80%
   delay(5000);              // Move for 5 seconds
   robot.MoveDiagUpLeft(0);      // Stop
   delay(1000);              // Pause for 1 second
  // Move Diagonal Down Left
   robot.MoveDiagDownLeft(80);  // Speed = 80%
   delay(5000);              // Move for 5 seconds
   robot.MoveDiagDownLeft(0);    // Stop
   delay(1000);              // Pause for 1 second
 }
```

IR Sensor(smorphi)

```
#include <smorphi_single.h>
Smorphi_single robot;
#define IR_PIN 16  // IR sensor connected to ESPIO16(Sensor 1 in smorphi board)
void setup() {
  Serial.begin(115200);
  robot.BeginSmorphi_single();
  pinMode(IR_PIN, INPUT);
}
void loop() {
  int IRValue = digitalRead(IR_PIN);

  if (IRValue == HIGH) {
    robot.MoveForward(80);
    } else {
    robot.MoveForward(0);
      }
delay(10);
}
```