## **SMORPHI** Direction Motor1 Motor2 Motor3 Motor4 Forward robot.MoveForw robot.MoveForwa robot.MoveForw robot.MoveForwa ard(50) rd(50) ard(50) rd(50) Moves the robot Moves the robot Moves the robot Moves the robot straight forward at straight forward at straight forward straight forward at speed 50 speed 50 at speed 50 speed 50 **Backward** robot.MoveBack robot.MoveBackw robot.MoveBack robot.MoveBackw ward(50) ard(50) ward(50) ard(50) Moves the robot Moves the robot Moves the robot Moves the robot straight backward straight backward straight backward straight backward at speed 50 at speed 50 at speed 50 at speed 50 robot.MoveRight( robot.MoveRight( robot.MoveRight( Right robot.MoveRight( 50) 50) 50) 50) Moves the robot Moves the robot Moves the robot Moves the robot straight forward straight forward straight backward straight backward at speed 50 at speed 50 at speed 50 at speed 50 Left robot.MoveLeft(5 robot.MoveLeft(5 robot.MoveLeft(5 robot.MoveLeft(5 0) 0) 0) 0) Moves the robot Moves the robot Moves the robot Moves the robot straight forward at straight backward straight forward at straight backward at speed 50 speed 50 at speed 50 speed 50 Diagonal robot.MoveDiag Stop robot.MoveDiag Stop (upRight) UpRight(80) UpRight(80) Moves the robot Moves the robot forward at speed forward at speed 80 80

robot.MoveDiagD

Moves the robot

ownRight(80)

backward at

speed 80

Stop

robot.MoveDiagD

Moves the robot

ownRight(80)

backward at

speed 80

Diagonal(d

own right)

Stop

Diagonal(U pLeft)	Stop	robot.MoveDiagU pLeft(80) Moves the robot forward at speed 80	Stop	robot.MoveDiagU pLeft(80) Moves the robot forward at speed 80
Diagonal(D ownLeft)	robot.MoveDiagD ownLeft(80) Moves the robot backward at speed 80	Stop	robot.MoveDiagD ownLeft(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
                      // Pause for 1 second
 delay(1000);
// Move Backward
 robot.MoveBackward(80); // Speed = 80%
 delay(5000);
                      // Move for 5 seconds
 robot.MoveBackward(0);
                            // Stop
                      // Pause for 1 second
 delay(1000);
 // 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\%
                      // Move for 5 seconds
 delay(5000);
 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
                       // Pause for 1 second
 delay(1000);
// 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);
}
```