

CHAPTER:13 ESP-01

PRACTICAL: 13B

AIM: Print a statement on Serial Terminal USING ESP-01.

ARDUINO CODE :

```
/******
```

```
* Author: Shreejicharan
```

```
* Title: Print a statement on Serial Terminal.
```

```
* Date: 27/05/2017
```

```
* Time: 6:00
```

```
* Email: shreejicharanelectronics@gmail.com
```

```
*****/
```

```
/*Using UART for Serial Print:Print a statement on Serial Terminal
```

```
*
```

```
*/
```

```
void setup()
```

```
{
```

```
  Serial.begin(9600);
```

```
}
```

```
void loop()
```

```
{
```

```
  Serial.println("Hello ESP8266");
```

```
  delay(500);
```

```
}
```

SIMULATION:

CHAPTER:13 ESP-01

PRACTICAL: 13A

AIM: Using ADC for analog sensing for ESP-01.

ARDUINO CODE:

```
/******
```

```
* Author: Shreejicharan
```

```
* Title: Using ADC for analog sensing.
```

```
* Date: 27/05/2017
```

```
* Time: 6:00
```

```
* Email: shreejicharanelectronics@gmail.com
```

```
*****/
```

```
/*Using ADC for analog sensing: Use POT as an analog input to ESP8266 and print its value  
on serial terminal * */
```

```
#define SENSOR A0
```

```
void setup()
```

```
{
```

```
  Serial.begin(9600);
```

```
  pinMode(SENSOR,INPUT);
```

```
  delay(2000);
```

```
  Serial.println("ADC");
```

```
}
```

```
void loop()
```

```
{
```

```
  float value;
```

```
  value = analogRead(SENSOR);
```

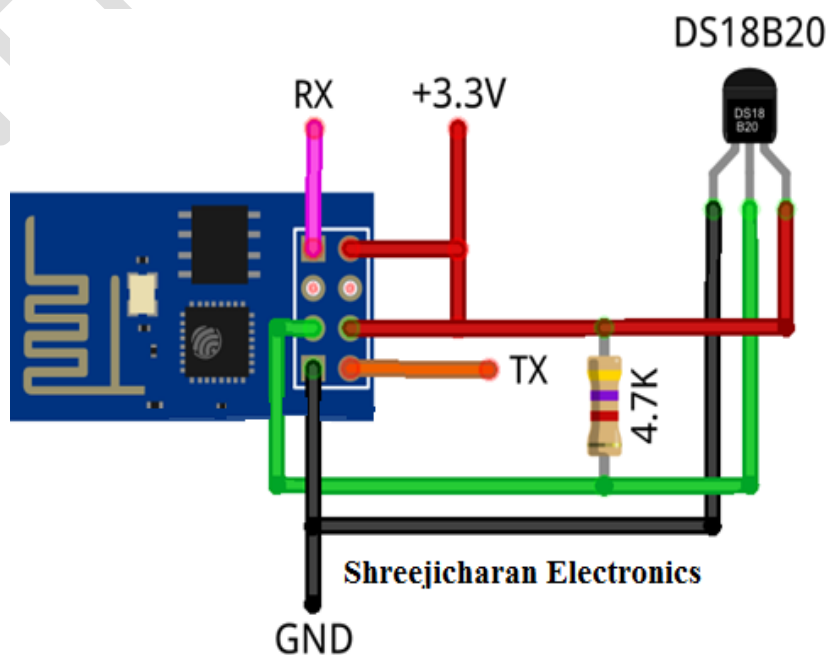
```
  Serial.print("value is:");
```

```
  Serial.println(value);
```

```
  delay(1000);
```

```
}
```

SIMULATION:



CHAPTER:13 ESP-01

PRACTICAL: 13A

AIM: Use I2C pins for communication with LCD and display characters on it.

ARDUINO CODE:

/*****

* Author: Shreejicharan

* Title: Use I2C pins for communication with LCD and display characters on it.

* Date: 27/05/2017

* Time: 6:00

* Email: shreejicharanelectronics@gmail.com

*****/

/*Using I2C communication: Use I2C pins for communication with LCD and display characters on it. */

#include <Wire.h>

#include <LiquidCrystal_I2C.h>

LiquidCrystal_I2C lcd(0x3F,16,2);

// set the LCD address to 0x3F for a 16 chars and 2 line display

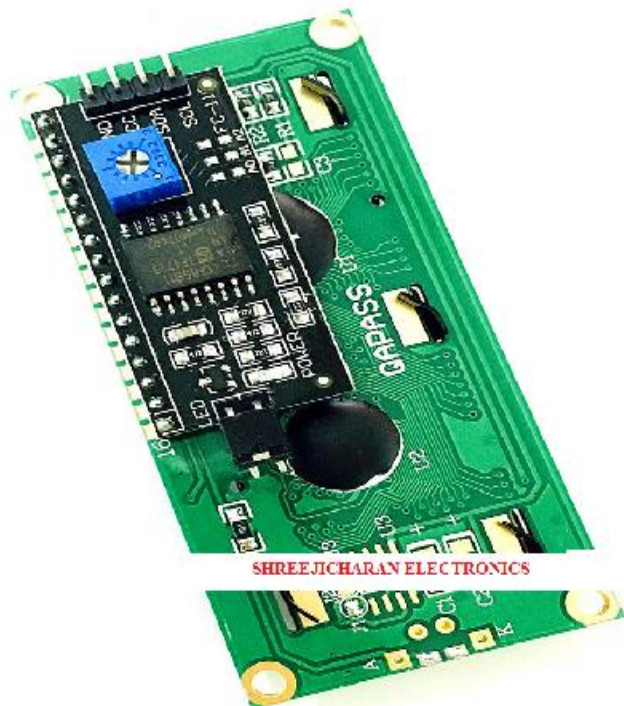
void setup()

```
{  
  lcd.init();           // initialize the lcd  
  // Print a message to the LCD.  
  lcd.backlight();  
  lcd.print("Hello, world!");  
}
```

void loop()

```
{  
}
```

SIMULATION:



CHAPTER:13 ESP-01

PRACTICAL: 13A

AIM: GPIO to change the brightness of LED using pulse width modulation.

ARDUINO CODE:

```
/******
```

```
* Author: Shreejicharan
```

```
* Title: Use GPIO to change the brightness of LED using pulse width modulation.
```

```
* Date: 28/05/2017
```

```
* Time: 7:00
```

```
* Email: shreejicharanelectronics@gmail.com
```

```
*****/
```

```
/*Using PWM:Use GPIO to change the brightness of LED using pulse width modulation * */
```

```
#define LED 2
```

```
#define analogPin A0
```

```
void setup()
```

```
{
```

```
  pinMode(LED,OUTPUT);
```

```
  pinMode(analogPin, INPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
  // Reverse Logic for the inbuilt LED
```

```
  for (int i=1023; i>600;i--){
```

```
    analogWrite(LED, i);
```

```
    delay(10);
```

```
  }
```

```
}
```

SIMULATION:

