LAMPIRAN

LAMPIRAN A

SOURCE CODE PROGRAM

Berikut ini merupakan *source code* dari *arduino* yang digunakan untuk mengaktifkan perangkat keras agar dapat digunakan dan berjalan sesuai dengan fungsi yang diharapkan. Potongan *source code* dapat dilihat pada poin – poin berikut ini :

1. *Source Code* Mengaktifkan Pin Masukan dan Keluaran

```
1.    int ledPins[] = {
2.    2, 3, 5, 6, 7
3.    };
4.
5.    char serialPins[] = {
6.    A0, A1, A2, A3, A4
7.    };
8.
9. char statusPin = A5;
10.const int NUM_FIELD = 5;
11.
12.for (int thisPin = 0; thisPin < NUM_FIELD; thisPin++) {
13.    pinMode(serialPins[thisPin], INPUT);
14.    pinMode(ledPins[thisPin], OUTPUT);
15.    digitalWrite(ledPins[thisPin], LOW);
16.} 17.
18.pinMode(statusPin, OUTPUT);
19.digitalWrite(statusPin, LOW);
```

2.*Source Code* Konfigurasi *Ethernet Shield*

```
1.     #include <SPI.h>
2.     #include <EthernetV2_0.h>
3.     #define W5200_CS 10
4.     #define SDCARD_CS 4 5.
6. byte mac[] = { 0xAB, 0xBC, 0xCD, 0xDE, 0xEF, 0xFA};
7. byte ip[] = { 192, 168, 137, 111};
8. IPAddress server_web(192, 168, 0, 2);
9. String server_host = "192.168.0.2";
10.EthernetServer server(80);
11.EthernetClient client; 12.
13.if (Ethernet.begin(mac) == 0) {
14.    Ethernet.begin(mac, ip);
15.}
```

3. *Source Code* Mengirimkan dan Menerima Data dari *Service*

```
1.                    if (client.connect(server_web, 80))
2.                    {
3.                    digitalWrite(statusPin, HIGH);
4.                    client.print("POST /smart_home/api/get_post_data_smart_device
5.                    HTTP/1.1\r\n");
6.                    client.print("Host: " + server_host + "\r\n");
7.                    client.print("Connection: close\r\n");
8.                    client.print("Content-Type: application/x-www-form-
                      urlencoded\r\n");
9.                    client.print("Content-Length: ");
10.                   client.print(DatatoSend.length());
```

```
  client.print("\r\n\r\n");
  client.println(DatatoSend);
  client.println("\r\n");
  delay(300);
} else {
  digitalWrite(statusPin, HIGH);
  delay(150);
  digitalWrite(statusPin, LOW);
  delay(150);
}
```

1. *Source Code* Mengirimkan Data ke Perangakat Keras

```
1.                  $this->load->model('view_smart_device_m');
2.                  $data_post = $this->view_smart_device_m-
                    >array_from_post(array(
3.                  'mac_perangkat',
4.                  'ip_perangkat'
5.                  ));
6.
7.      $where = array(
8.      'mac_address' => $data_post['mac_perangkat']
9.      );
10.     $this->load->helper('xml');
11.     $data_smart_device = $this->view_smart_device_m->get_by($where); 12.
13.     $dom = xml_dom();
14.     $pin_perangkat = xml_add_child($dom, 'pin_perangkat');
15.     foreach ($data_smart_device as $smart_device) {
16.     $pin = xml_add_child($pin_perangkat, 'no_pin', ''); 17.
        xml_add_attribute($pin, 'data', $smart_device->no_pin);
18.
19.                 $status = xml_add_child($pin_perangkat, 'status_pin', '');

20.                 xml_add_attribute($status, 'data', $smart_device-
                    >value_pin);

21.                 }
22.                 xml_print($dom);
```

2. *Source Code* Mengirimkan Data ke Perangkat Lunak *Mobile*

```
1.      $this->load->model('view_furniture_m');
2.      $data_furniture = $this->view_furniture_m->get(); 3.
4. echo '{ "status" : "200", "data" : ', json_encode($data_furniture), '}';
```