Practical – 15

AIM: What is IOT Cloud? What are the features of Arduino IOT Cloud? Connect ESP8266 to Arduino Cloud IOT.

What is the IoT Cloud?

- The Arduino IoT Cloud is a platform that allows anyone to create IoT projects, with a user friendly interface, and an all in one solution for configuration, writing code, uploading and visualization.
- An IoT cloud is an extensive internet-based network that stores data from IoT devices and applications. This includes the underlying infrastructure, servers, and storage needed for real-time operations and processing of data. An IoT cloud also encompasses the services and standards necessary for connecting, monitoring, and securing different IoT devices and their applications.

What are the features of the Arduino IoT cloud?

- Below is a list of Arduino IoT Cloud features:

    Data Monitoring - learn how to easily monitor your Arduino's sensor values through a dashboard.

    Variable enabling communication between devices with minimal coding.

    Scheduler - schedule jobs to go on/off for a specific amount of time (seconds, minutes, hours).

    Over-The-Air (OTA) Uploads - upload code to devices not connected to your

    computer. Webhooks - integrate your project with another service, such as IFTTT.

    Amazon Alexa Support - make your project voice controlled with the Amazon Alexa integration.

    Dashboard Sharing - share your data with other people around the world.

    Synchronisation - variable synchronisation allows you to sync variables across

    devices.
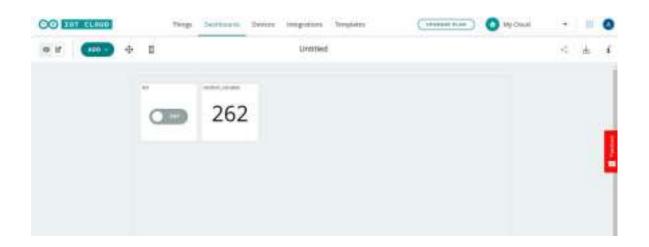
CODE:

```
#include "thingProperties.h" int LED = D1;

void setup() { pinMode(LED, OUTPUT);

Serial.begin(9600);

delay(1500);

initProperties();
```

```
ArduinoCloud.begin(ArduinoIoTPreferredConnection);

        setDebugMessageLevel(2);

        ArduinoCloud.printDebugInfo();

        }


        void loop() { ArduinoCloud.update();

        // Your code here

        random_value = random(0, 500); delay(500);

        }

        void onLedSwitchChange() {

        // Do something if(led_switch){ digitalWrite(LED, HIGH);

        }

        else{

        digitalWrite(LED, LOW);

        }

        }
```

OUTPUT: