The main objective of this project is to design and build an IoT based cloud messenger that will allow two persons to communicate each other by sending messages and several emojis over a messenger widget created on the Arduino IoT cloud dashboard.

The messenger is internet connected so that the persons can send or receive messages from anywhere in the world. The working of the messenger is so simple, we have to create a messenger widget on the dashboard of Arduino IoT cloud and write corresponding sketch for the application. Once the program is installed, there is an application available on both play store and app store called “Arduino IoT remote”, people can login to the created dashboard from the application and access the messenger widget. The next step is to send/receive messages.

We build this project on NodeMCU - is an open-source software and hardware development environment built around an inexpensive System-on-a-Chip (SoC) called the ESP8266. The ESP8266, designed and manufactured by Espressif Systems, contains the crucial elements of a computer: CPU, RAM, networking (Wi-Fi), and even a modern operating system and SDK. That makes it an excellent choice for Internet of Things (IoT) projects of all kinds.

The main component used in this project is:

* **NodeMCU** is a low-cost open source IoT platform. It initially included firmware which runs on the ESP8266 Wi-Fi SoC from Espressif Systems, and hardware which was based on the ESP-12 module. Later, support for the ESP32 32-bit MCU was added. It's an open-source firmware for which open-source prototyping board designs are available. The name "NodeMCU" combines "node" and "MCU" (micro-controller unit). The term "NodeMCU" strictly speaking refers to the firmware rather than the associated development kits.