# NOD (No Need Of Doctor)

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# Introduction

Every year many peoples die because of heart attack. only in India 3,75,000 persons die every year! there are many drug that calm down heart and prevent heart attack like nitroglycerin, ACE inhibitors, Beta blockers and ...! but they have to be injected to the body immediately. when an old lady sleeps at home and suddenly heart attack happens, she is really in a bad situation, because there is no doctor at home to help her and give her drug. and if she is hospitalized, it takes time for nurses to hear the alarm and go to patient's room, take her drug and inject that to the her body!. There is an accurate amount of drug that has to be given to the patient who suffers from heart attack but there are many chances that the doctor/nurse may not give an accurate amount of drug to the patient. So, to overcome these problems we have brought a solution.

# Abstract

In this project we are going to work on one of the most common problems in most of the government and private hospitals of the country that is the examination and management of the physiological data of the patients that visiting hospitals and the admitted patients. If hundred patients are visiting or admitted a hospital then doctor has to spend at least 1 minute to check heartbeats Pulse and temperature of each and every patient and these 100 minutes are creating a lot more pressure on the doctor, isn't it better if this data can be made available to the doctor even before the patient came to sit next to him by using some of the basic sensors and a small microprocessor and if a admitted patient is suffering from heart diseases he or she should be kept in great care there may be a situation when suddenly a patient gets heartattack and there is no immediate action taken and at that time our solution may come to action. The devise will be simple, affordable and easy to uses and can remove the stethoscope, thermometer and the annoying procedure of basic examination by just putting finger on a sensor. There is a better management of data with the help of cloud and hospitals get benefited from this in many ways.

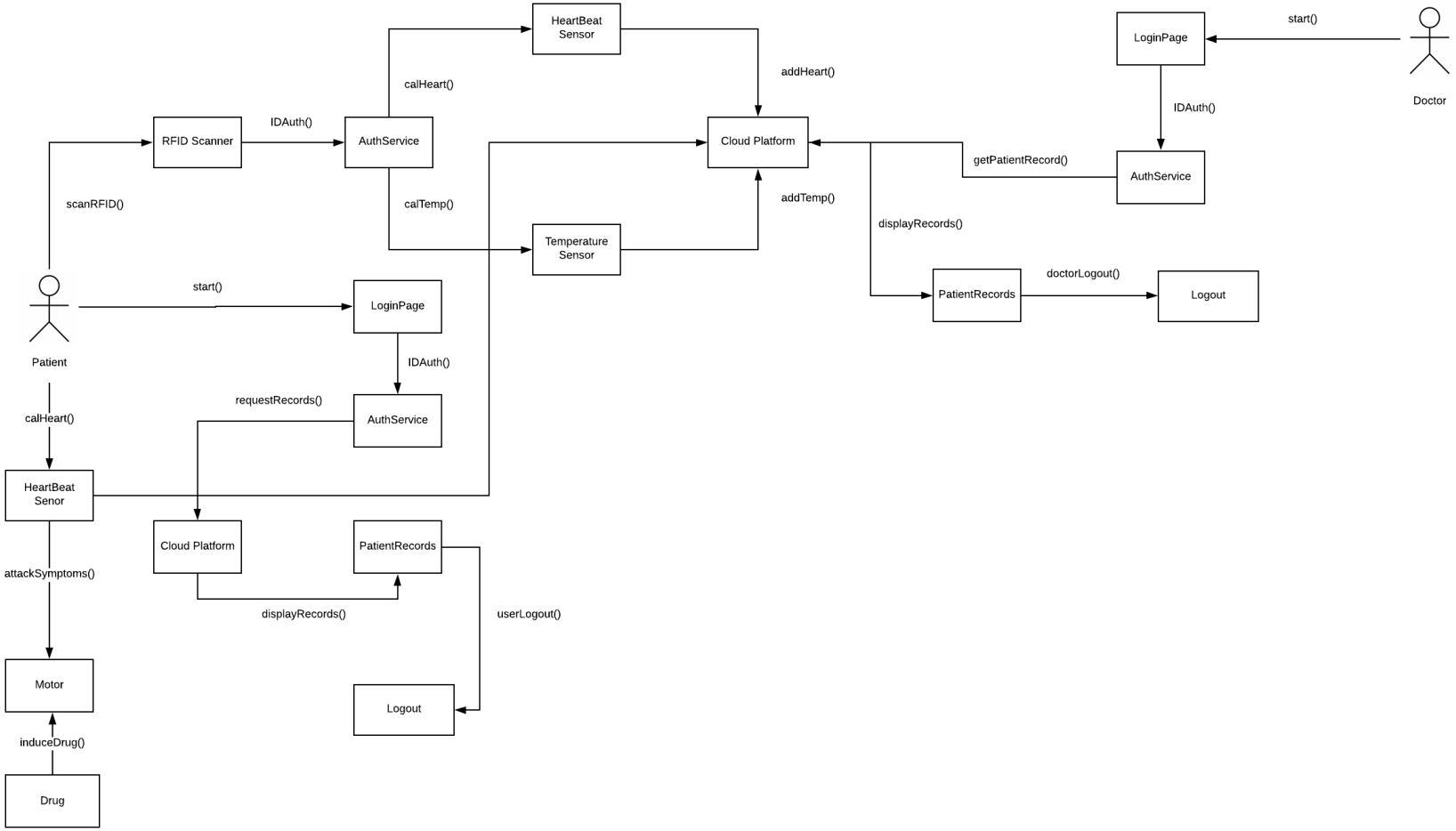
# Solution

- The first stage of heart attack is sudden change in heart beat rate. Suddenly it goes too high or too low.
- At this stage we detect it and predict heart attack by help of a microcontroller and a heart rate sensor.
- The microcontroller will inject drug to body, by controlling vale or pump that are placed at the middle of drug hose.
- Now controlling heart attack is faster easier and predictable.
- Coming to the handling of physiological data where a patient has to place his arm on a device.
- The device will be available at the doctor as the patient places his palm on the device his heartbeat rate, blood pressure, temperature and ECG graph.
- The calculated and the collected data is sent to the doctor through cloud.

# Requirements

- Hardware Requirements:-
  - Arduino
  - Step Up motor
  - Heart Beat Sensor
  - Temperature Sensor
  - Blood Pressure Sensor
  - DC Drive
- Software Requirements:-
  - Google Firebase
  - Arduino Compiler
  - Android Studio
  - Notepad++

# Communication Diagram



# Scope of the Project

- The project model aims at the development of a device that can automate the examination process of the treatment and help doctors to treat their patients quickly. The device can find its importance in the government hospitals where hundreds of patients wait for their turn in the line for treatment. It can also be useful for the patients because they can access there vital information on their phone, and governments and educational institutes will benefited because they have the real time information of patients health to make the better decisions and policies of health care for their citizens.
- This is the thought that the device is designed in such a way that it can be used by the smallest hospitals, clinics or dispensaries of the remote village of the country so most of the people can make use of it. To make it possible the cost factor and reliability is the biggest issue and can be reviewed again and again.