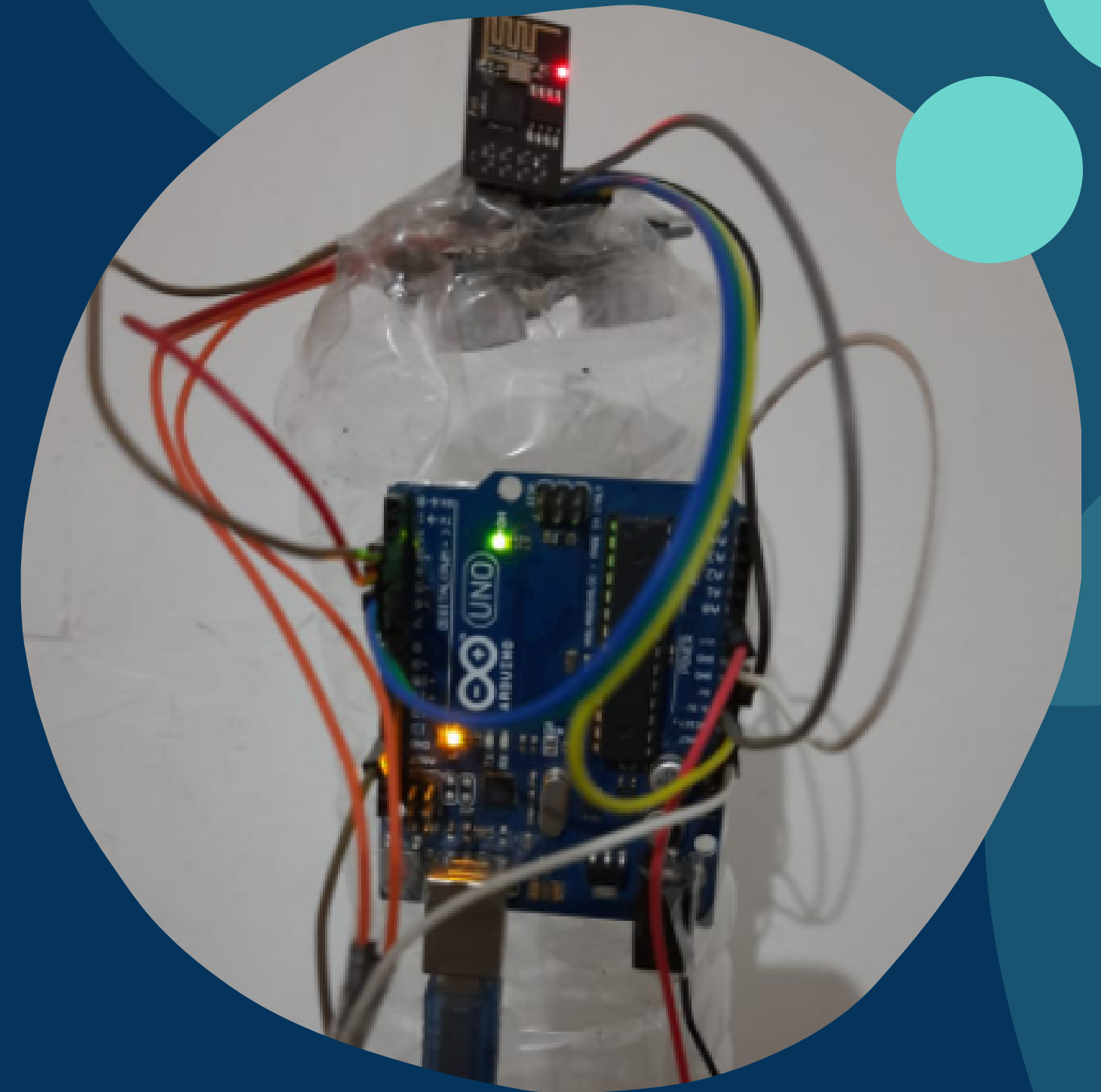# DRIP MONITOR

TEAM HEARTBEAT

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THE DRIP MONITOR

This project elaborates a way to efficiently monitor the drip level at hospitals, while also detecting any bubble formation in the liquid used; a process that is currently done manually by nurses when they periodically check the drip.

WHY USE IT?

THIS PROJECT GREATLY INCREASES THE EFFICIENCY OF THE HOSPITAL STAFF AS A WHOLE. THE PANDEMIC HAS LED TO A LOT OF HOSPITALS BEING COMPLETELY OCCUPIED, AND THE HOSTEL STAFF OVERWHELMED. BY NOT HAVING TO CONDUCT MANUAL ROUTINE CHECKS ON THE DRIP LEVELS AND DRIP CONDITIONS OF EVERY PATIENT, THE WORKLOAD OF THE HOSPITAL STAFF IS EXCEEDINGLY DIMINISHED. AUTOMATION IN SUCH ESSENTIAL TASKS IS THE NEXT STEP TOWARDS PROVIDING MORE EFFICIENT AND CONVENIENT HEALTHCARE.

HARDWARE COMPONENTS

Arduino Uno

HCSR-04 Ultrasonic sensor

Photo-resistor/light sensor

Light source

Esp8266-01 Wifi module

Hardware Arrangement

The Arduino Uno is connected to the ESP8266 module, and two sensors(HCSR04 and the LDR). The Ultrasonic sensor has been attached to the bottom of an inverted plastic bottle, which is acting as a drip for demonstration purposes. The LDR has been tucked away inside the bottlecap. The sensor data is fetched and calculated using the Arduino Uno. The calculated sensor values are conveyed to the Thingspeak website via the ESP8266 module.
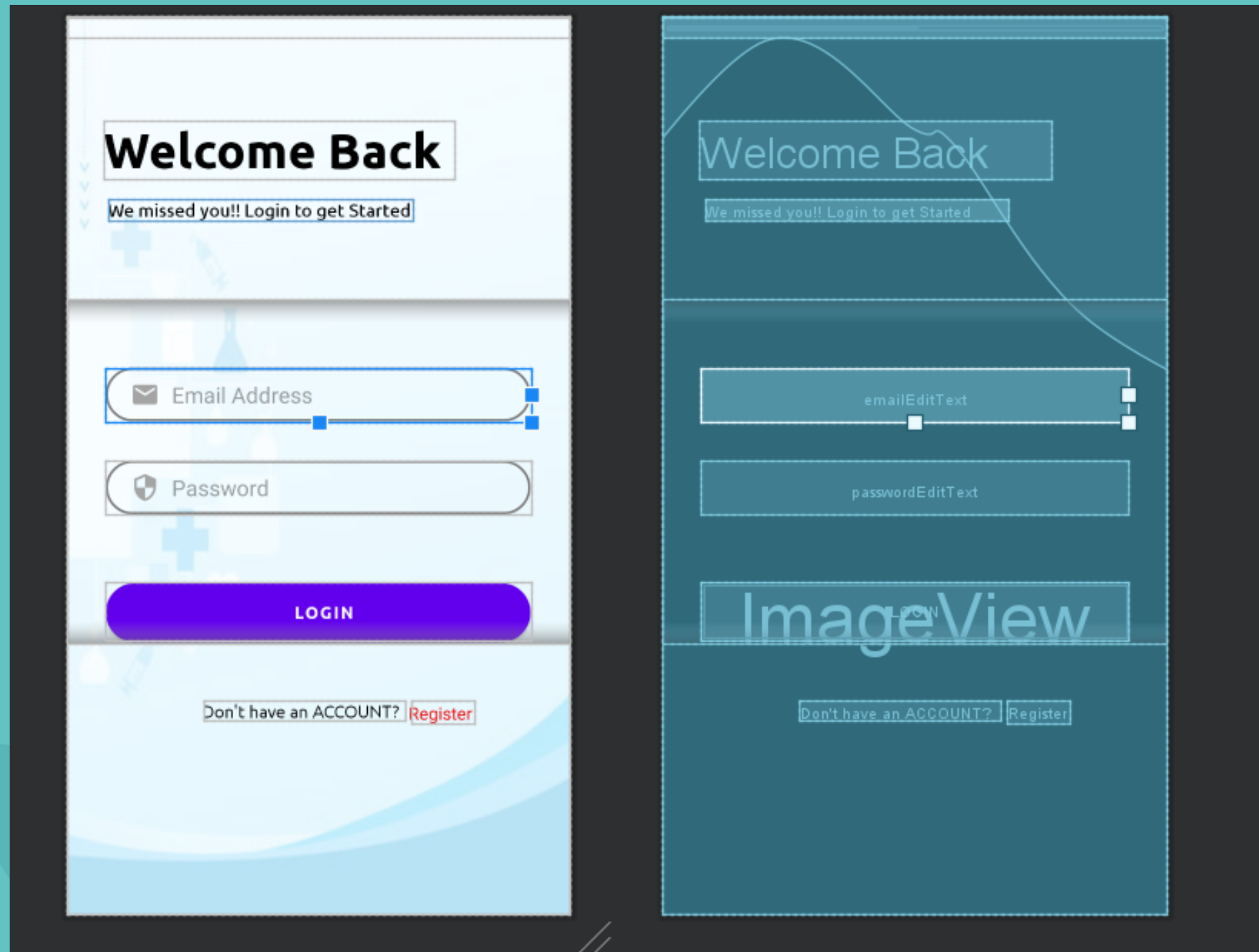
Under the Login Activity this is Login page to

get started!

Under the Register Activity this is Register page to

Stay Connected!!

Under the MainActivity this is the homepage where
we can find patient id
and we have used gridlayout to display patient
image and by
clicking on that image it will show the drip detail of that
particular patient by taking us to new_activity.
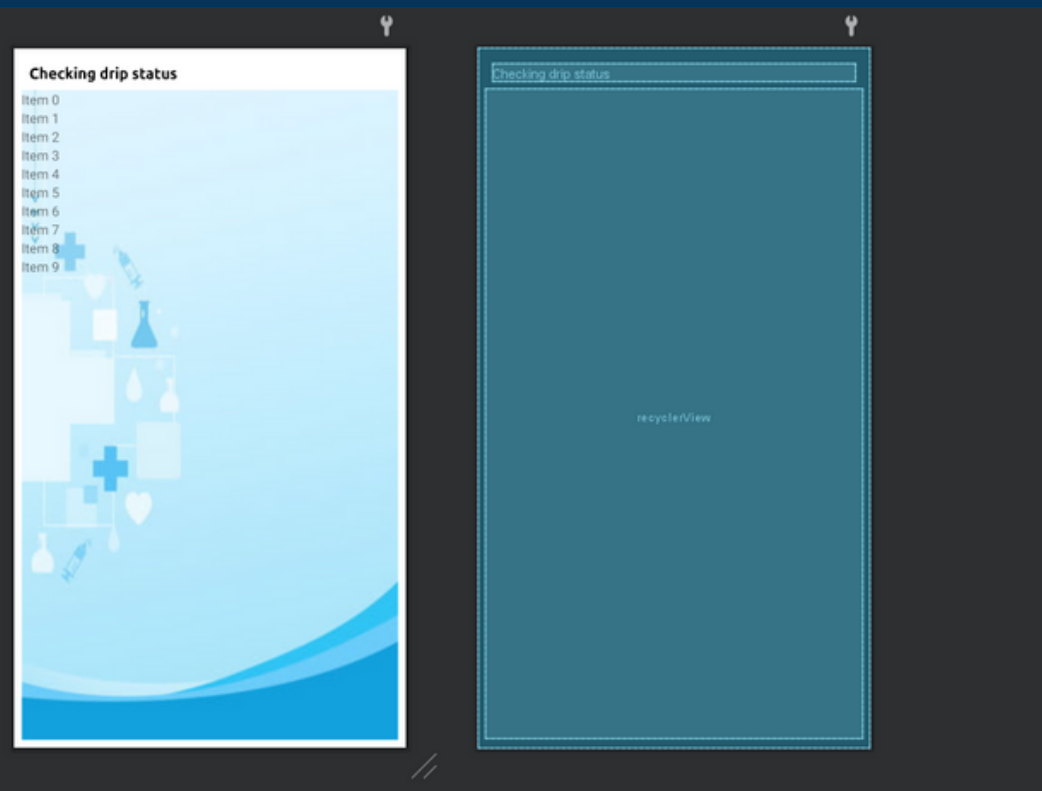
This is the new_activity where we used retrofit to fetch the data from API and it displays the drip level and we get to know that if the bubble is formed or not
and it also displays the date and time. In UI we used cardView and RecyclerView to display!
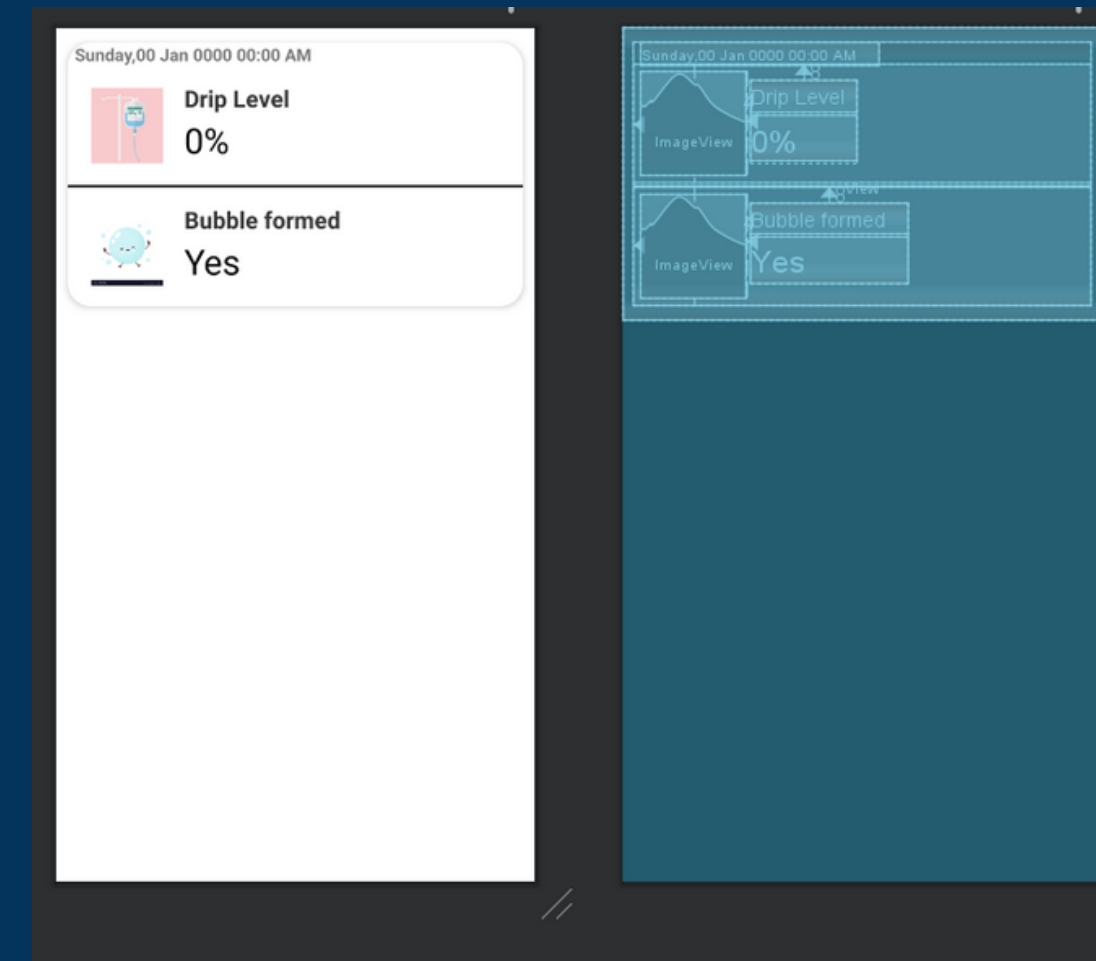
The proposed solution is going to help the hospital staff in a very fruitful manner through which they need not visit the patient's room repeatedly just for checking the drip count or to detect bubble formation. We have successfully solved this problem in a virtual format using IoT.