

# DRIP MONITOR

# **TEAM HEARTBEAT**

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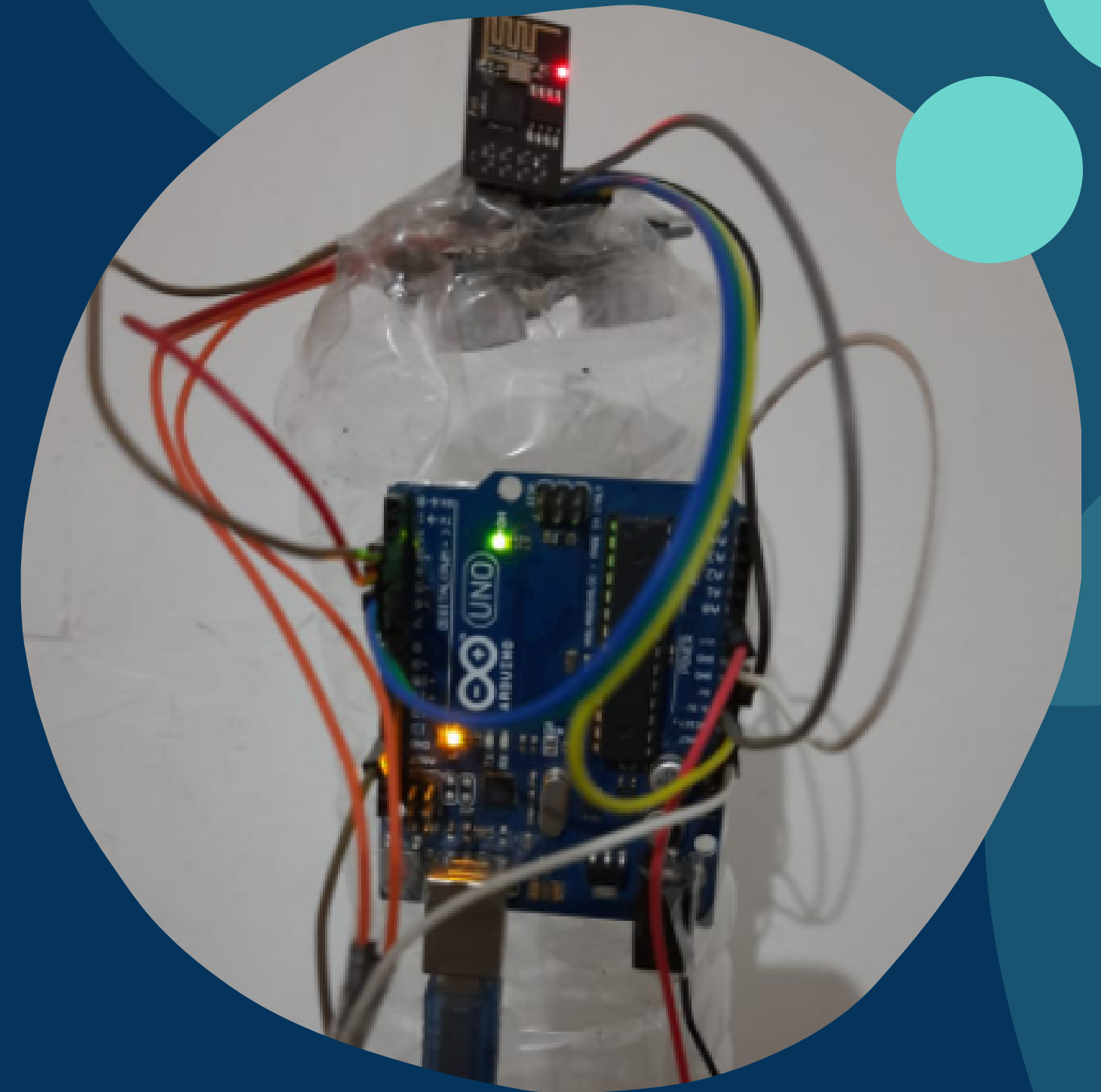
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# THE DRIP MONITOR

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

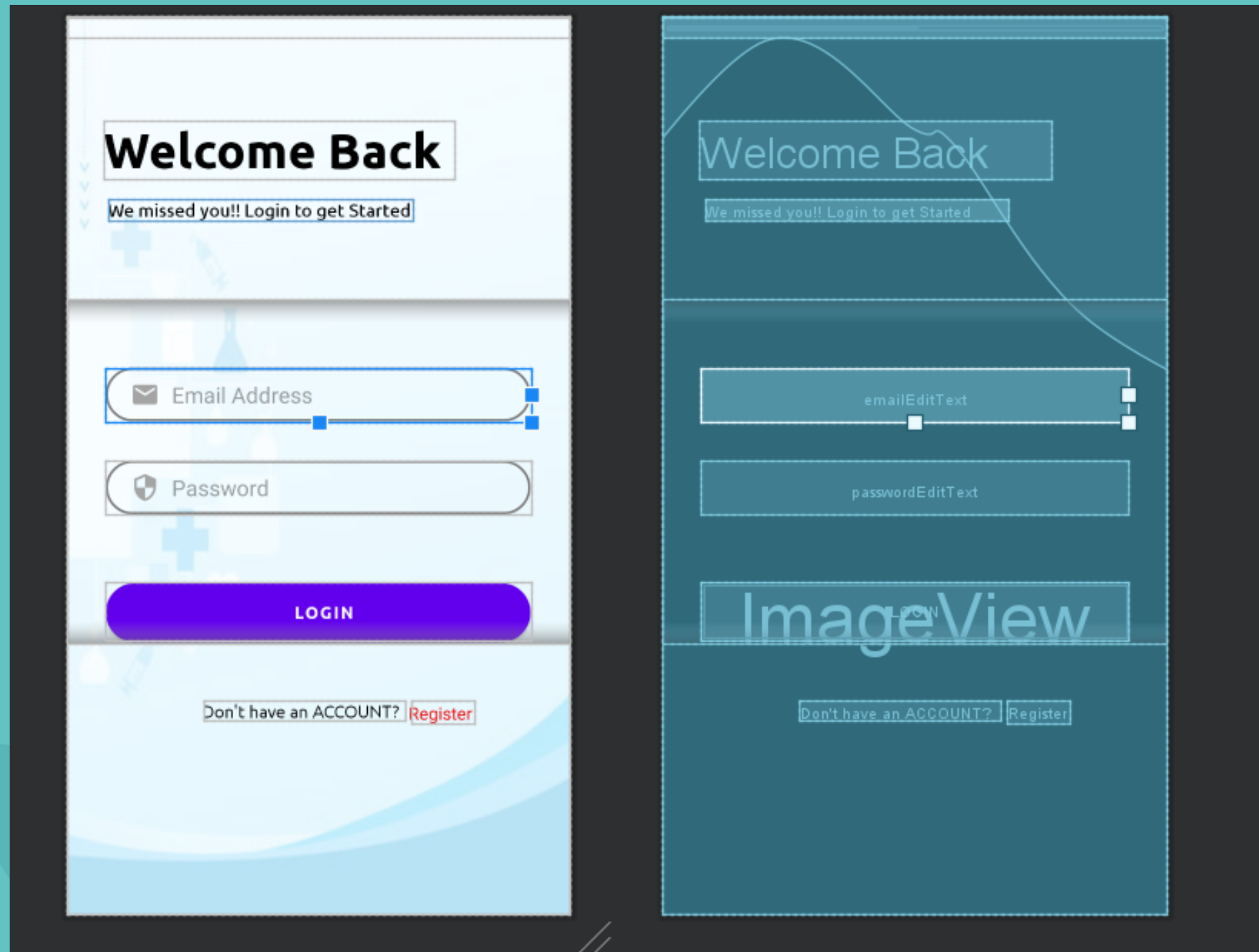
Light source

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!!**

The image displays two versions of a 'Create Account' registration page side-by-side. The left version is a high-fidelity design, and the right version is a low-fidelity wireframe.

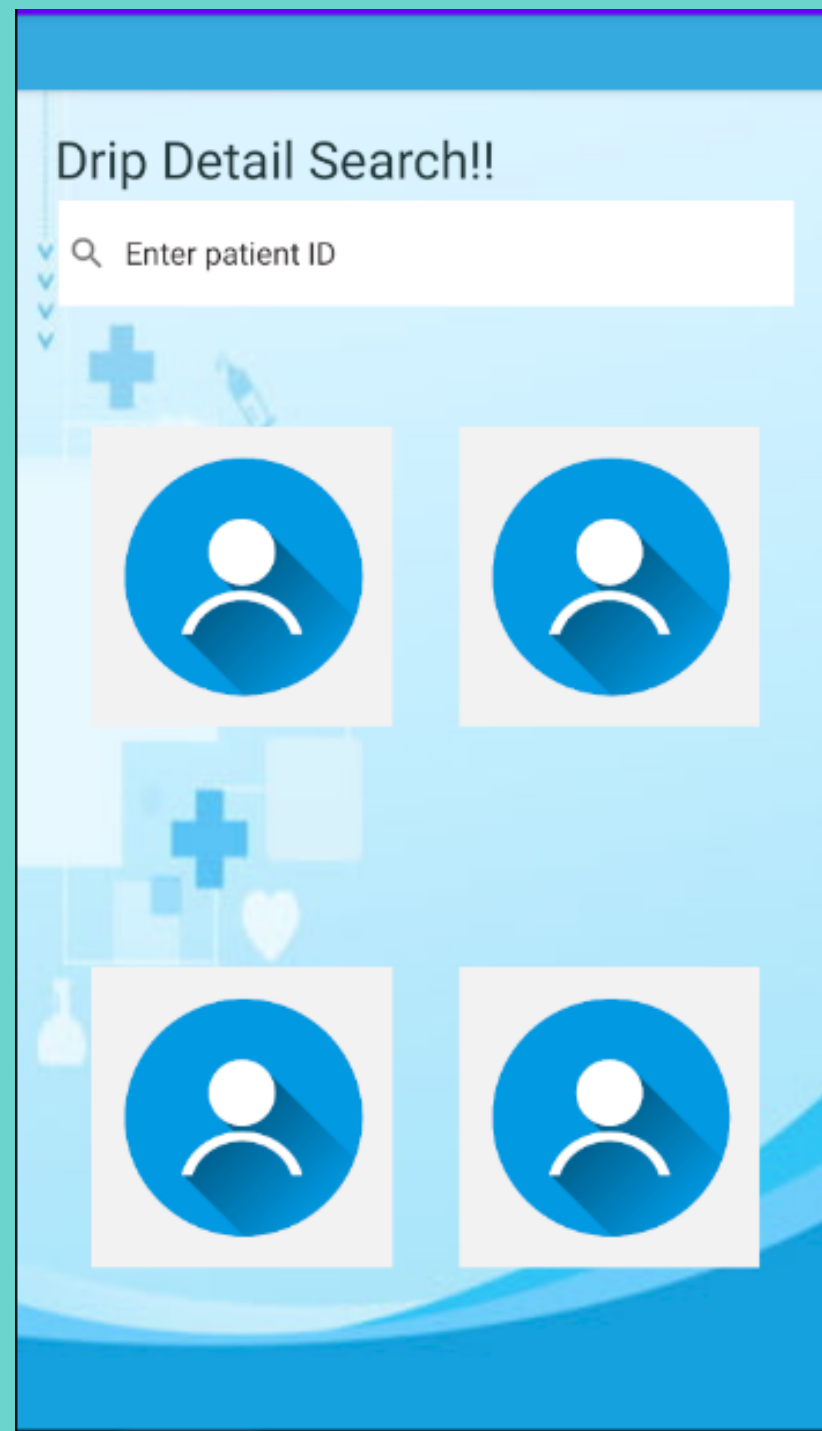
**High-fidelity Design (Left):**

- Title:** Create Account
- Subtitle:** Register to stay connected!!
- Form Fields:**
  - Username (with user icon)
  - Email Address (with envelope icon)
  - Password (with shield icon)
  - Confirm Password (with shield icon)
- Buttons:** A large purple button labeled REGISTER.
- Footer:** Already have an ACCOUNT? [Login](#)

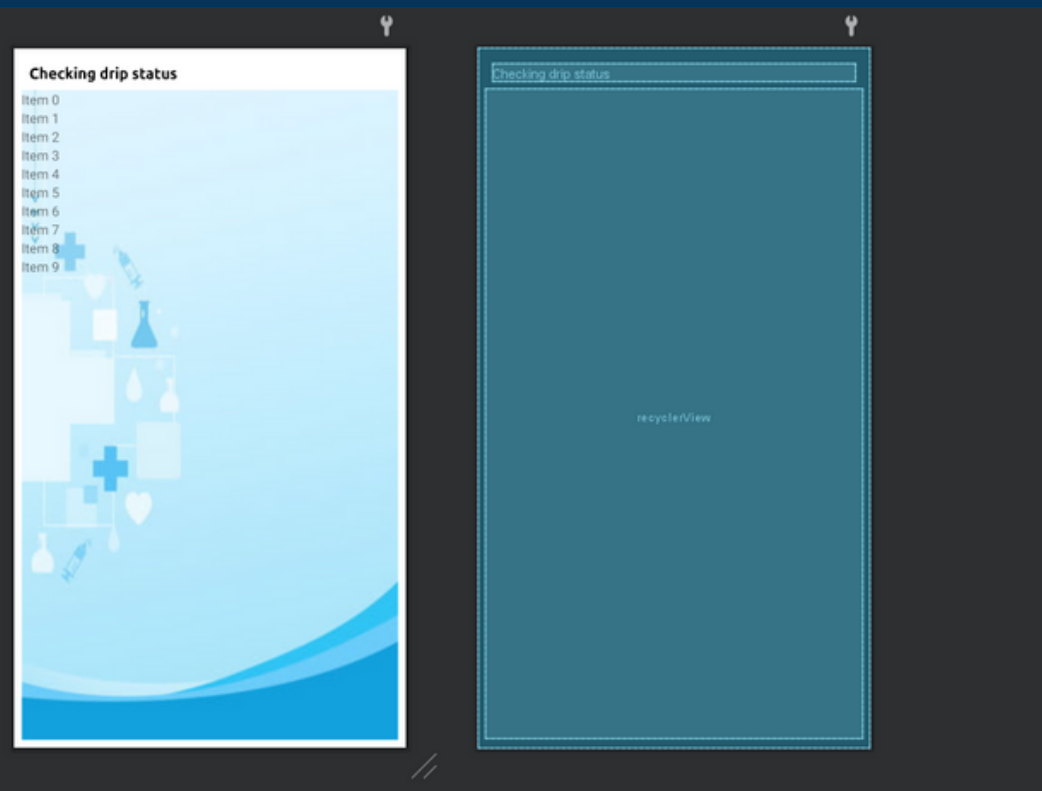
**Low-fidelity Wireframe (Right):**

- Title:** Create Account
- Subtitle:** Register to stay connected!!
- Form Fields:**
  - userName
  - emailREditText
  - passwordREditText
  - confirmPasswordEditText
- Buttons:** A button labeled REGISTER.
- Footer:** Already have an ACCOUNT? [Login](#)

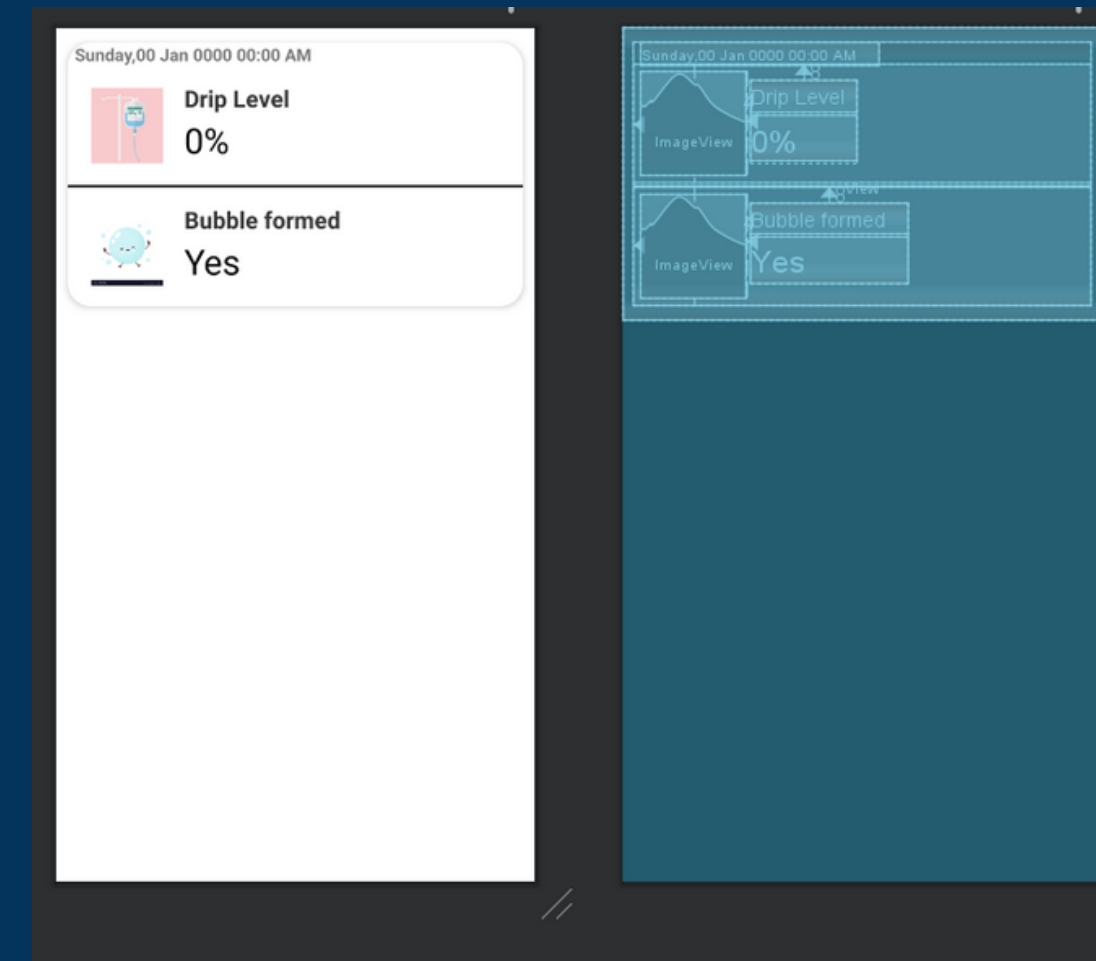




Under the MainActivity this is the homepage where we can find patient id and we have used gridlayout to display patient image and by clicking on that image it will show the drip detail of that particular patient by taking us to new\_activity.



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.