

SPRINT DELIVERY – 4

COMPLETE PROJECT FLOW AND DELIVERY

USER APP:

An application is developed for the user to enter his medicine details like the name of medicine, date till which to be taken and time to take for reminder

This application is developed using the MIT app developer which is a free open-source platform to create our own applications.

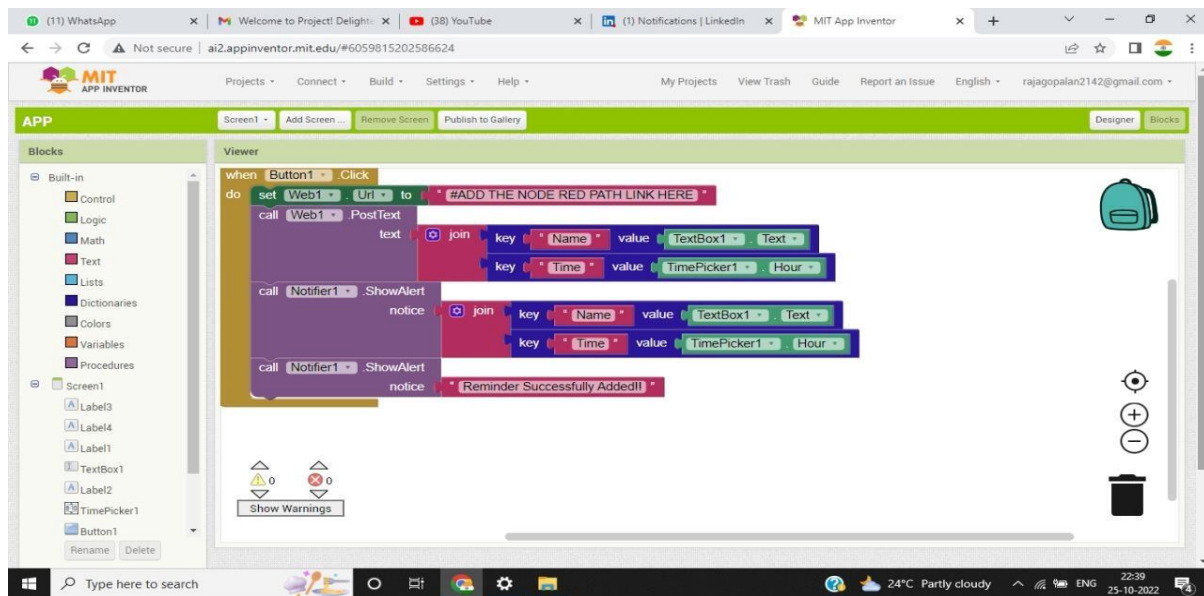


Fig 2. BLOCK DESIGN OF APPLICATION

WEB APPLICATION FOR STORING INFORMATION:

Another most optimal method to store the user's medicine details is by creating the web application that is hosted inside the cloud using the form node which is available in the node-red application.

This web application is highly efficient compared to MIT app because web UI is created within the service and easier to connect it to the cloudant as all services are available in the IBM Cloud. Hence project proceeded with web application itself.

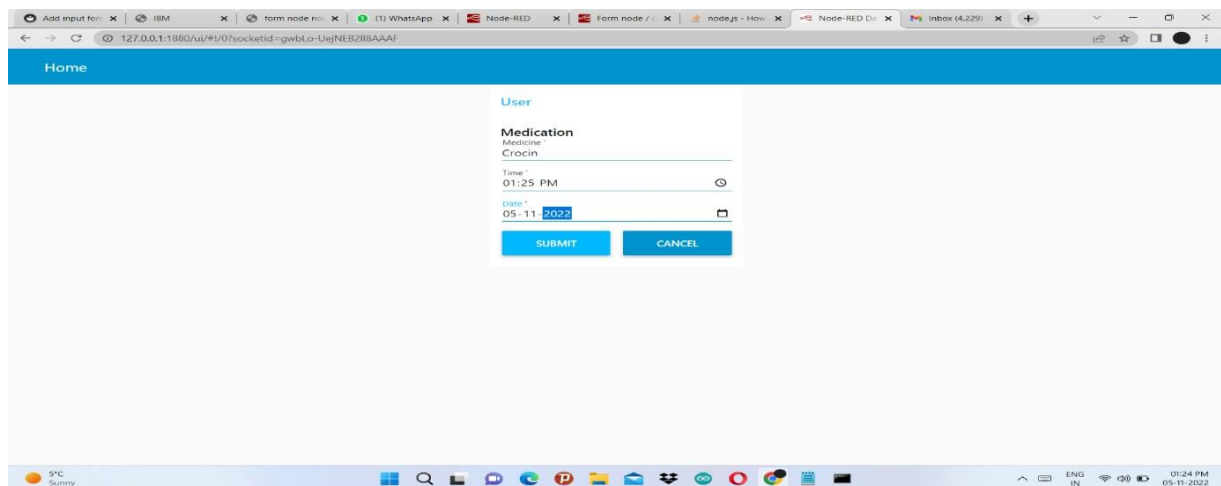
The image shows a web browser window displaying a web application. The browser's address bar shows a URL starting with '127.0.0.1:1880/ui/#/07socketid=gwblor-UvjNEB2BAAAF'. The application has a blue header bar with the word 'Home' on the left. The main content area is white and contains a form titled 'User' in blue. Below the title, there is a section labeled 'Medication' in bold. Under 'Medication', there is a text input field containing 'Crocin'. Below this, there is a 'Time' label followed by a text input field containing '01:25 PM' and a clock icon. Below the time field, there is a 'Date' label followed by a date picker showing '05-11-2022'. At the bottom of the form, there are two blue buttons: 'SUBMIT' and 'CANCEL'. The browser's taskbar at the bottom shows various application icons and system status information, including '5°C Sunny' and the time '01:24 PM 05-11-2022'.

Fig 3. THE WEB LAYOUT FOR USER

The details entered by the user need to be stored somewhere for future access so that a reminder alert can be triggered when the exact time comes. The data is stored within the **Cloudant – Database** which is an instance that was created in the IBM cloud.

LIST OF CREDENTIALS AVAILABLE:

1. API Key
2. Host Name
3. URL
4. Password
5. Username

DATABASE:

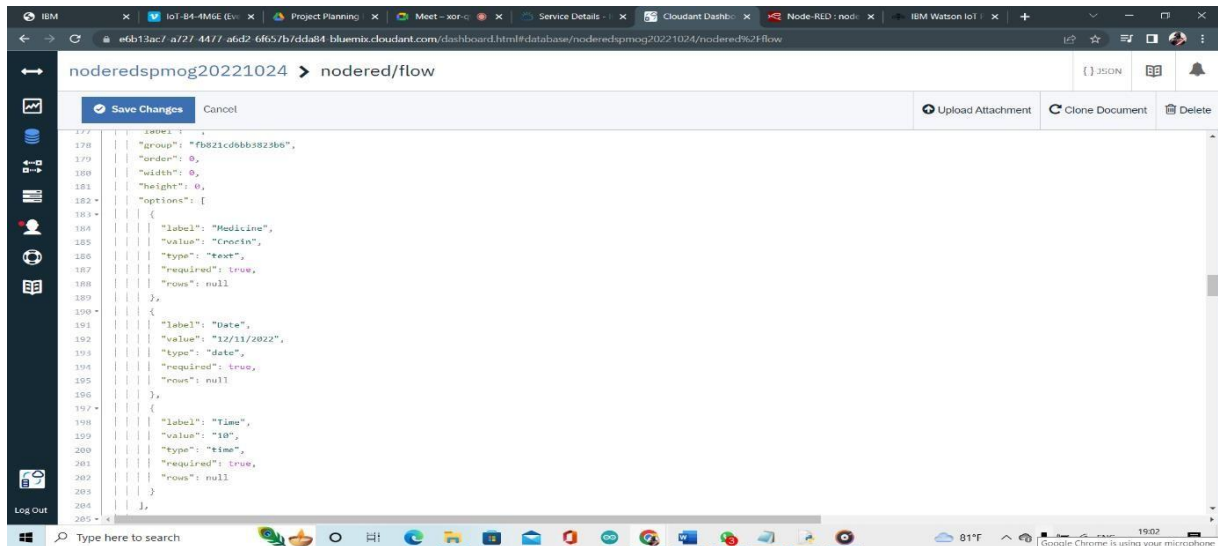


Fig 5. DATA AVAILABILITY INSIDE DATABASE

The above figure is the proof that the user entered details are available inside the database. JSON is a language supported in database which indicates the stored data such as:

- Medicine Name
- Date till which that medicine to be taken
- Time to take

NODE – RED FLOW:

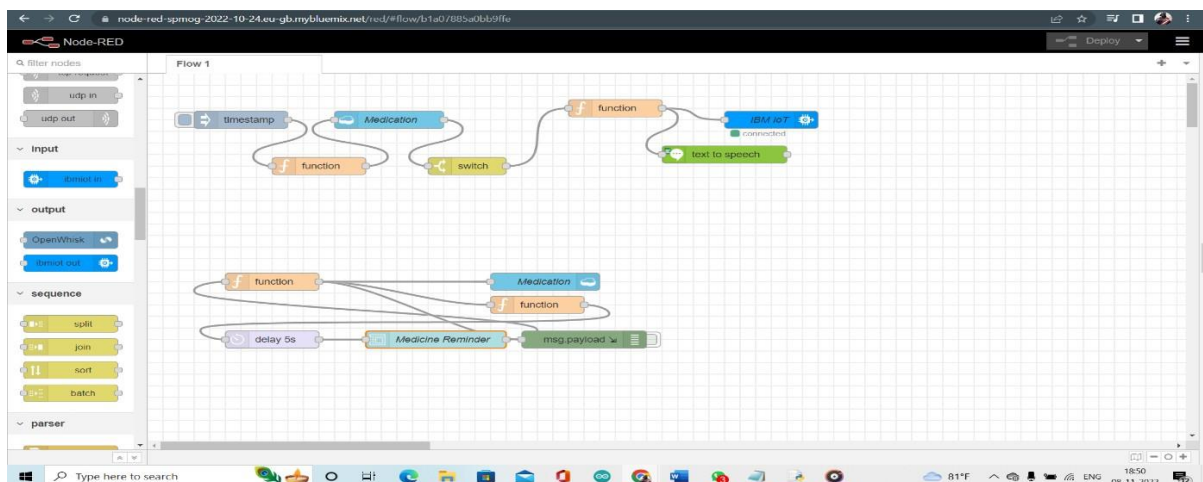


Fig 6. DESIGNED NODE-RED FLOW OF PROJECT

Node-Red application has various nodes that acts as APIs for each service used in the project. These nodes calls any instance and instigates the data flow throughout from service-to-service.

CLOUD QUERY TO RETRIEVE DATA:

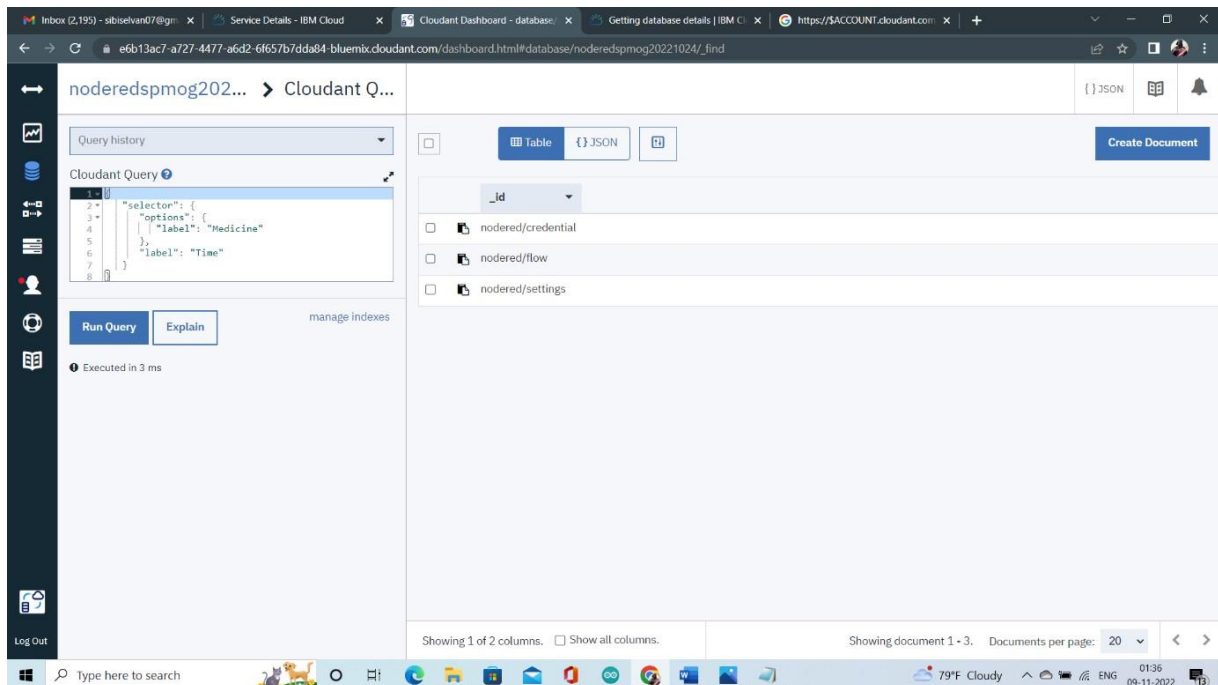


Fig 7. RUN QUERY TO GET DATA OUT THROUGH CLOUDANT OUT NODE

FUNCTION NODE:

This node is used for the purpose of comparison with time in order to make a decision on which medicine to remind the user. Later the selective medicine is sent to switch node that sends medicine name alone to the output.

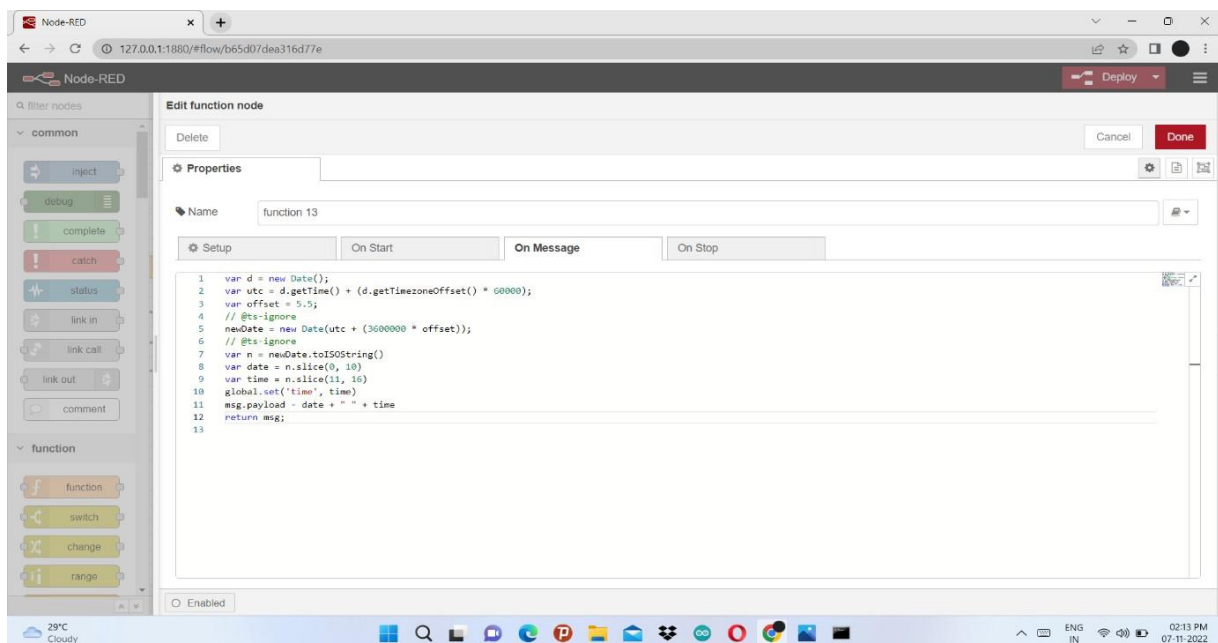


Fig 8. CODE WRITTEN IN FUNCTION NODE

IBM WATSON IoT PLATFORM:

The medicine name after selection is sent to the IBM Watson out node which serves as the output device to alert the user.

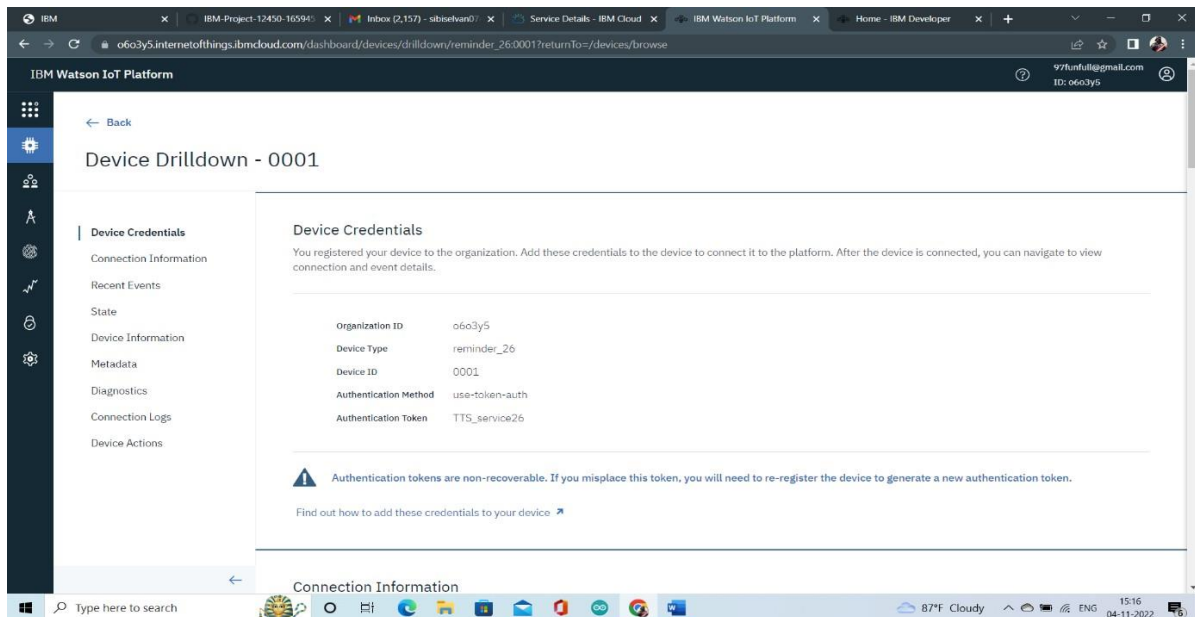


Fig 9. DEVICE CREATION IN IBM IoT WATSON PLATFORM

CONNECTION: Device Connected

CREDENTIALS: Generated

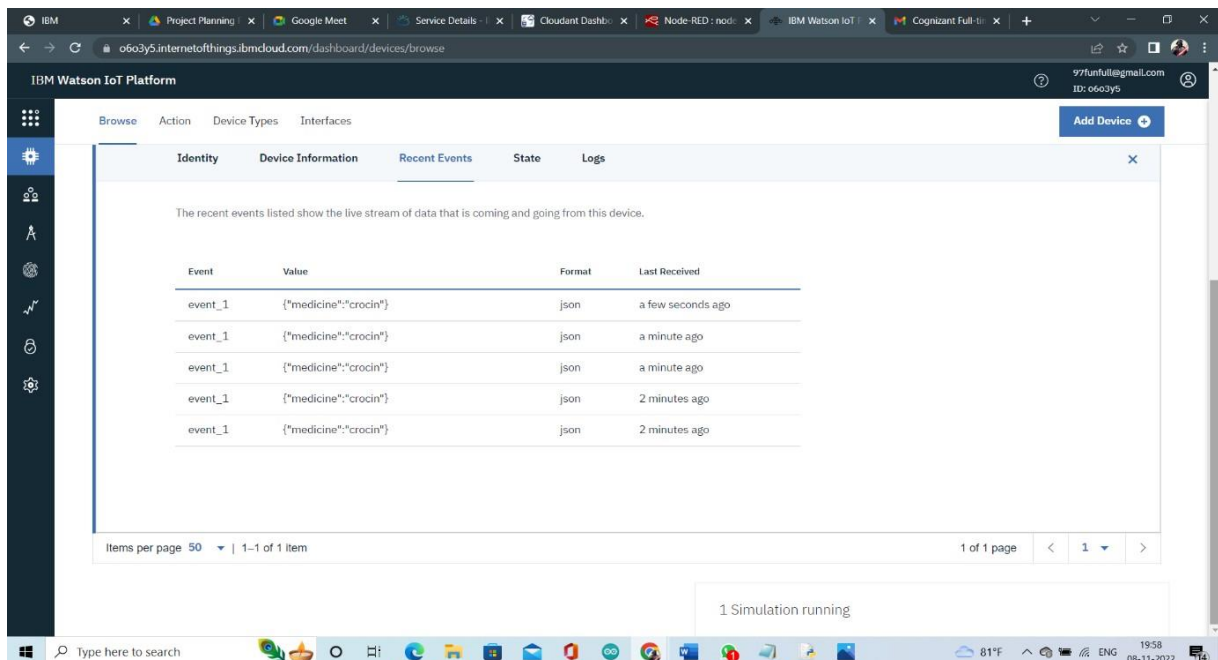


Fig 10. DATA ARRIVED AT IBM WATSON IoT PLATFORM

Upon decision made in the function node with split node only the medicine name data is sent to IBM once time mentioned in function matches with time set by the user through web application. At that instant medicine information is obtained by IoT Watson Platform

TEXT-TO-SPEECH SERVICE:

The value reaching IBM IoT Watson is value format which is a text based representation this needs to be conveyed to user as a voice message that will alert the user to take medicine.

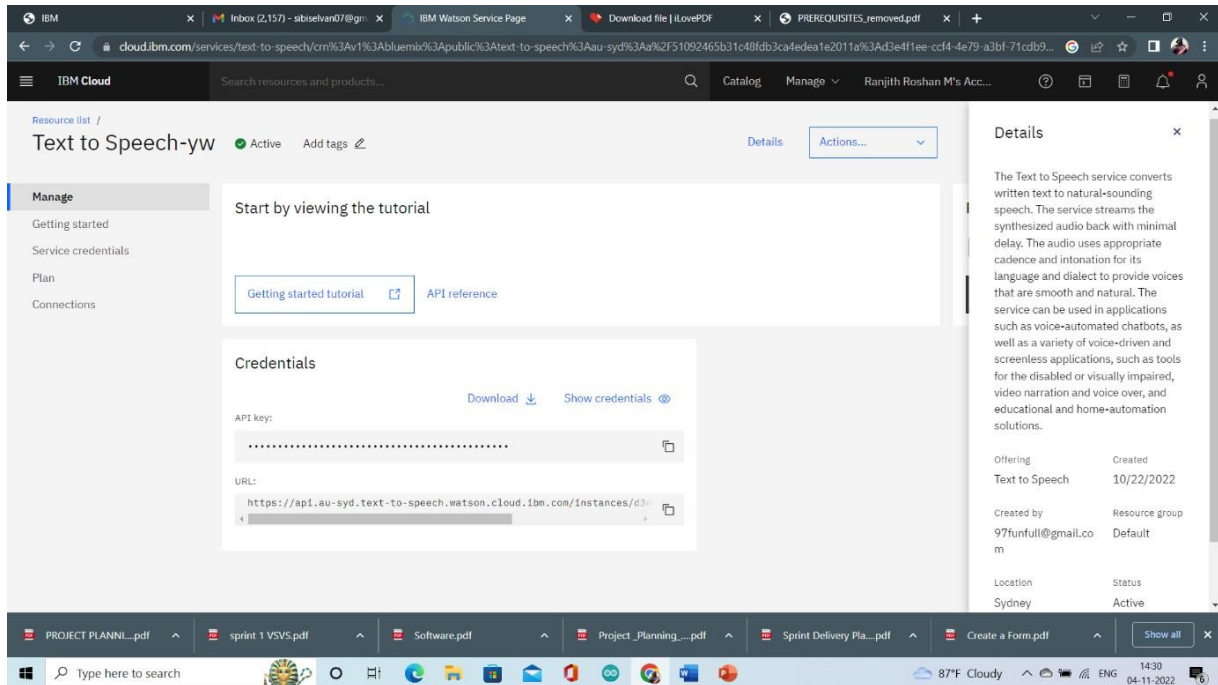


Fig 11. TTS SERVICE CREATION

CREDENTIALS:

API KEY: AVAILABLE

URL: AVAILABLE

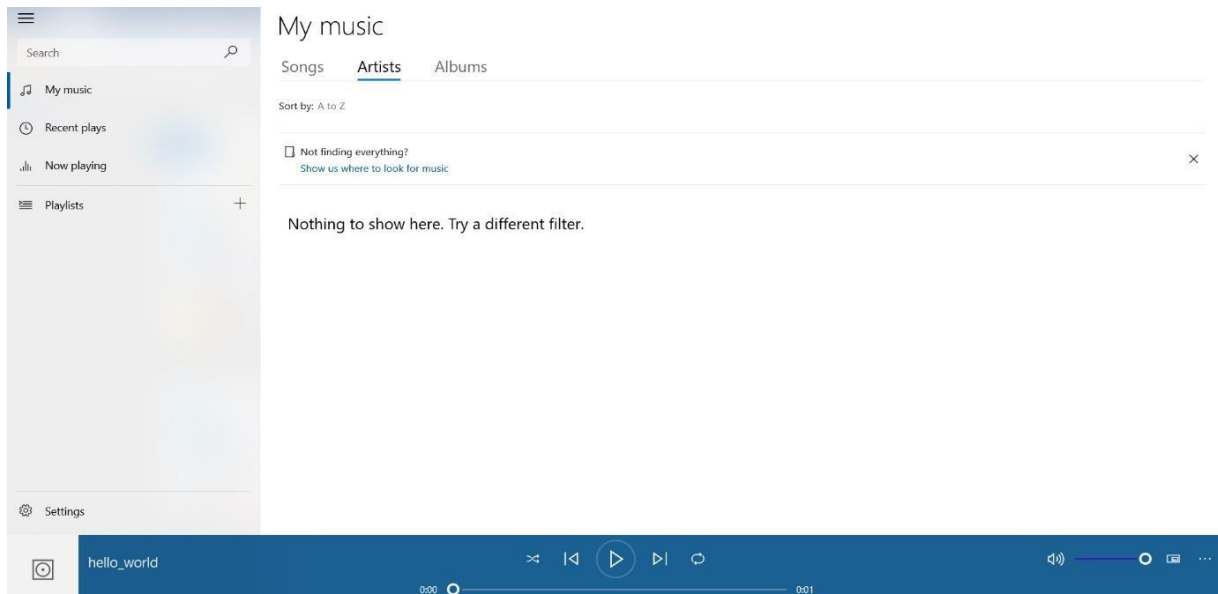


Fig 12. AUDIO OUTPUT

Text to Speech conversion is performed on the medicine name and hence automatically the medicine name is announced aloud through device speaker.