WIND TWIN: A DIGITAL TWIN FOR WIND TURBINE

A Main project report submitted in the partial fulfillment of the requirement for the award of the degree for VIII semester.

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

MEENUGU SIVAJI (20135A0514)

MD FIROZ KHAN (20135A0516)

B.V.S.S.L GAYATHRI (19131A05P1)

MATCHA SAIRAM (20135A0513)

Under the esteemed guidance of

Dr.D.N.D. Harini

(Associate Professor and Head of the Department)

Department of Computer Science and Engineering

GAYATRI VIDYA PARISHAD COLLEGE OF ENGINEERING (AUTONOMOUS)

(Affiliated to JNTU, Kakinada, AP)

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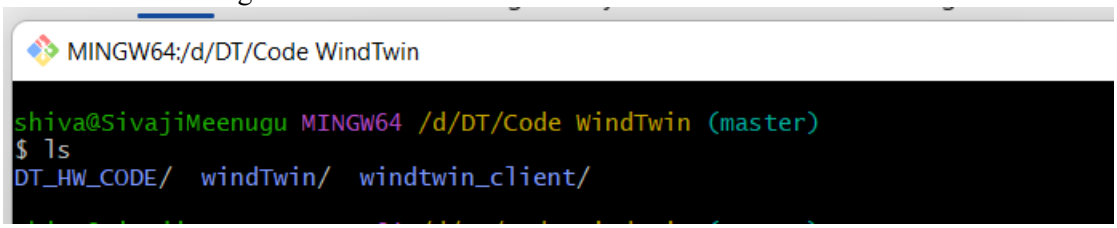
Project Execution Procedure

1. Clone the Github repository by using following command:

```
git clone https://github.com/shivajimeenugu/Code-WindTwin.git
```

2. After clone we will get tree folder



3. Connect your Windtwin Hardware to your laptop using a USB cable.

4. Then go to windtwin_client/ folder

```
D:\DT\Code WindTwin>cd windtwin_client

D:\DT\Code WindTwin\windtwin_client>
```

5. Start the windtwin client by running the command **iex -S mix .** This will start the Elixir interactive shell and load project.

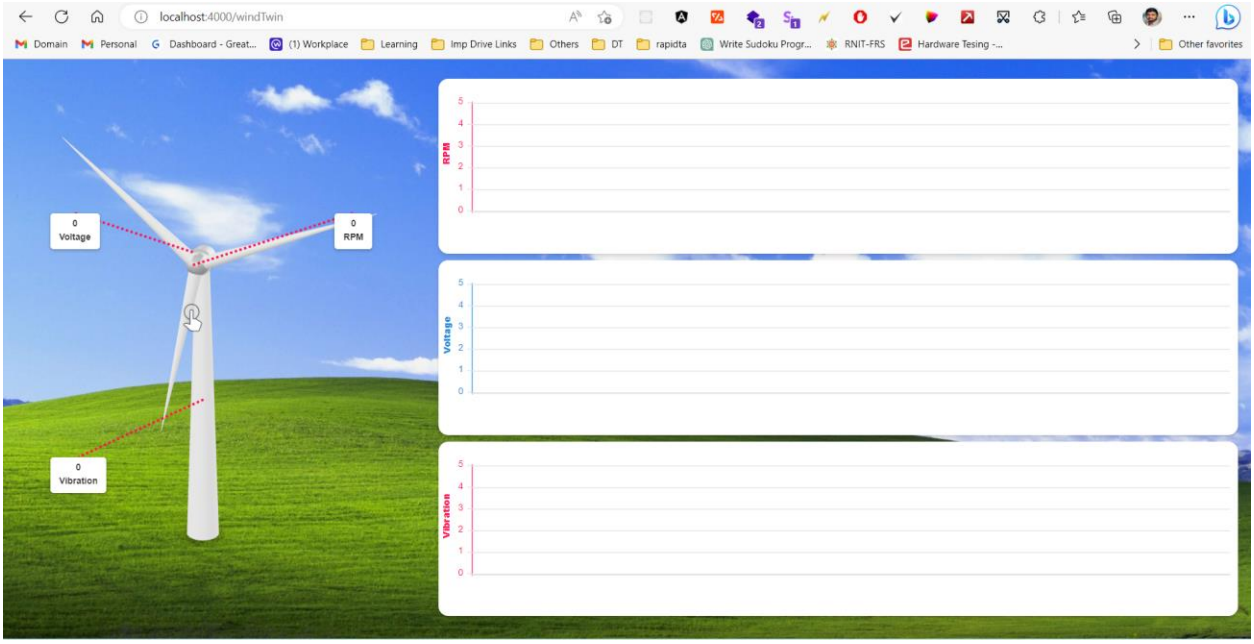
```
D:\DT\Code WindTwin\windtwin_client>iex -S mix
Interactive Elixir (1.12.2) - press Ctrl+C to exit (type h() ENTER for help)
iex(1)>
```

6. Before continue to next step, first we need to start the Windtwin Server by running the command **mix phx.server**

```
D:\DT\Code WindTwin\windTwin>mix phx.server
[warn] Phoenix is unable to create symlinks. Phoenix' code reloader will run considerably fas
ter if symlinks are allowed. On Windows, the lack of symlinks may even cause empty assets to
be served. Luckily, you can address this issue by starting your Windows terminal at least onc
e with "Run as Administrator" and then running your Phoenix application.
[info] Running WindTwinWeb.Endpoint with cowboy 2.9.0 at 0.0.0.0:4000 (http)
[info] Access WindTwinWeb.Endpoint at http://localhost:4000
[watch] build finished, watching for changes...
```

Project Execution Procedure

7. Now we can access the dashboard from http://localhost:4000



8. Then we need to start the windtwin_client, open the elixir shell which we kept aside in step 5

9. In the Elixir shell, call the WindtwinClient.start/0 function to start the client application. This will establish a connection with the Windtwin Hardware through the serial port.

```
Interactive Elixir (1.12.2) - press Ctrl+C to exit (type h() ENTER for help)
iex(1)> WindtwinClient.start
Database connection established
Starting Connction With Hardware..
Getting Data..
-
0.00,0.00,5.916398115971124
-
0.00,0.00,5.847167405390978
-
0.00,0.00,5.8942486091669615
-
0.00,0.00,5.871175350813498
-
```

Project Execution Procedure

10. The execution procedure for the Windtwin has been completed successfully. All the steps outlined in the procedure have been executed without any issues, and we can observe the real time data in dashboard