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THE NATIONAL COLLEGE
Autonomous
Jayanagar, Bangalore-560070

Project Report on
Ethereum Blockchain based
eVoting for Bike Application

BY

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20NCJB450

Under the guidance of

Prof Varadaraj R

eVoting for Bike project report submitted in partial fulfilment of the
requirements of

VI Semester BCA, THE NATIONAL COLLEGE JAYANAGAR

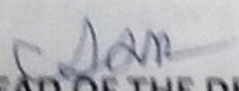


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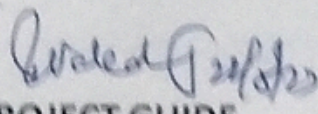
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CERTIFICATE

This is to certify the project report titled "eVoting for Bike" is a work done by **Prasanna Kumar B** of THE NATIONAL COLLEGE Jayanagar Bengaluru in partial fulfilment of the requirements of VI Semester BCA during the year 2022-2023.


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PROJECT GUIDE

Examiners:

1. 

2.

Examination Centre

National College, Jayanagar

Date of Examination:

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I) Project Goal (Problem Statement)

To design, develop and verify the "eVoting for Bike Application" having the following features:

- a) Display the front-end of the Application on the default Browser
- b) Setup the "Admin" related info and start the eVoting process
- c) Add 3 bikes for eVoting
- d) Register 4 Voters
- e) As an "Admin" approve all the 4 Voters
- f) Perform eVoting for Bikes using 4 Voters account
- g) As an "Admin" close the eVoting Process
- h) Verify the result of eVoting

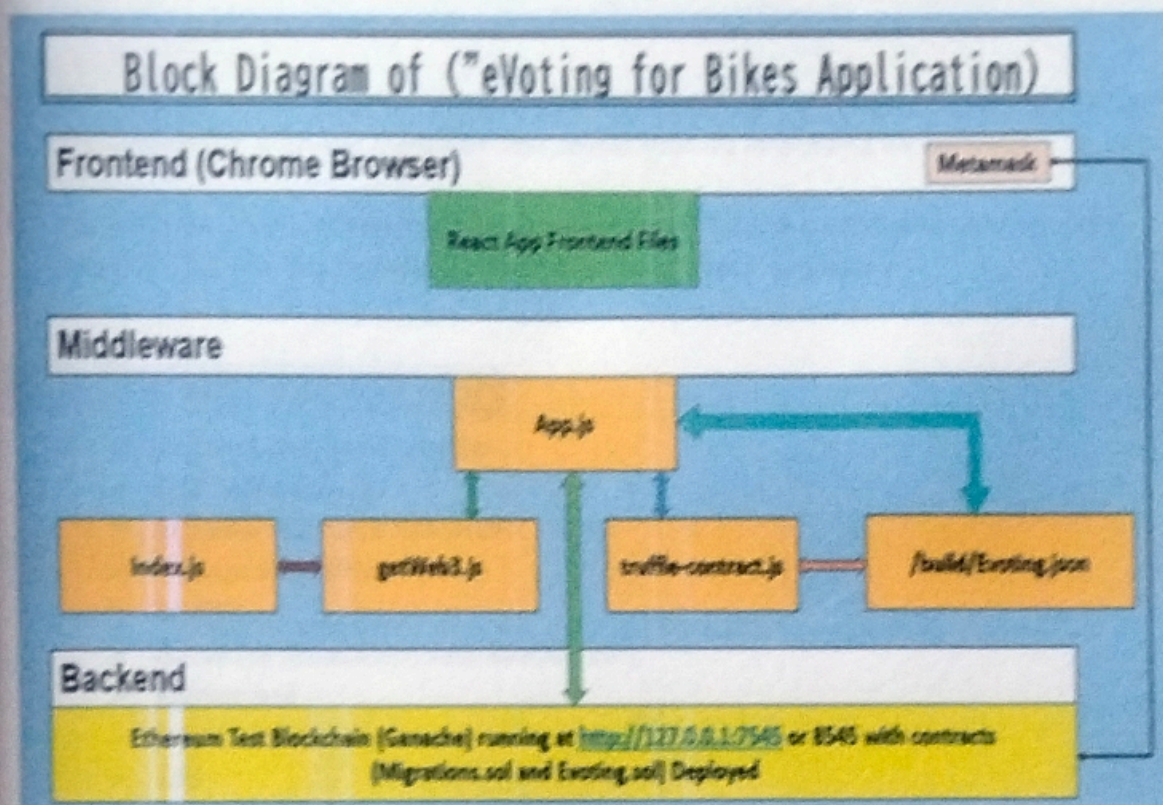
II) Solution Proposed

We will design, develop, implement and verify the Ethereum Blockchain based solution namely "eVoting for Bikes Application" which will be executed in a Windows System. The proposed Solution will meet all the features specified in the Problem statement

III) Input Data

SL.NO	BIKE MODEL	MODEL YEAR
1	RI5 V4	2023
2	MT 15	2020
3	ZAY ZR	2019

IV) Project/ Solution (eVoting for Bikes Application) Design



High Level:

- 1) Create / provide the following in the Windows System:
 - a) Create and set the Ethereum Blockchain environment in the Windows system
 - b) Create the Project folders and files using "Truffle" in the Windows System
 - c) Write the Solidity program "Evoting.sol" capturing the main logic of the solution
 - d) Write the required frontend, middleware and other required files for the solution
 - e) Provide the Solution data using .JSON file

Details:

- a) Set-up the Ethereum Blockchain environment in the Windows System by installing NodeJS, NPM, Truffle, Ganache and Metamask
- b) By using Truffle, setup the project folder and required files in the Windows System.
- c) Write a Solidity language program namely "Evoting.sol" in which we will implement the main logic of the Solution.

- d) Write the middleware program using JavaScript and Web3.js
- e) Start the Ethereum Test Blockchain "Ganache" and sign-in to the Metamask. Connect the Metamask with the Ganache Test Blockchain by importing an account
- f) We will also create a frontend (React App based) for the solution so that you can interact with the Blockchain application through your browser.

V) Tools/ Technologies Used

- a) List of Tools and Technologies
 - O/S: Windows 10
 - Browser: Chrome Browser
 - Nodejs and NPM
 - Truffle
 - Ganache (Ethereum Test Blockchain)
 - Metamask
 - HTML
 - CSS
 - JavaScript
 - Web3.js
 - Front-end Tools:
 - HTML, CSS
 - Development Server (lite-server)
- b) Backend:
 - Ethereum based Test Blockchain linked with Metamask
- c) Middleware:
 - JavaScript with Web3.js

VI) Install the Tools required for the Ethereum Based Blockchain Project in Windows System

(For the detailed instructions, please refer "Appendix-A" document of this Project Report)

VII) Setup the Ethereum Blockchain based Project "eVoting for Books Application" in the Windows System

(For the detailed instructions, please refer "Appendix-B" document of this Project Report)