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THE NATIONAL COLLEGE
Autonomous
Jayanagar, Bangalore-560070

PROJECT REPORT
ON
HYPERLEDGER FABRIC BLOCKCHAIN BASED CBFTIG APPLICATION

BY

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Under the guidance of

Prof. VARADARAJ

CBFTIG project report submitted in partial fulfilment of the requirements of

VI Semester BCA, THE NATIONAL COLLEGE JAYANAGAR

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CERTIFICATE

This is to certify the project report titled "CBFTIG Application" is a work done by Talari Narsimha **of THE NATIONAL COLLEGE, Jayanagar, Bengaluru, in partial fulfilment of the requirements of VI Semester BCA during the year 2022-2023.**

HEAD OF THE DEPARTMENT

Head, Dept. of Comp. Science
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19/8/23

PROJECT GUIDE

Examiners:

1.

2.

Examination Centre

The National College,
Jayanagar.

Date of Examination: 22/8/23

ACKNOWLEDGEMENT

CBFTIG Application is the project of many hands from the team. Our tribute for the successful completion of the project goes to all those who helped through their constant guidance and encouragement. The satisfaction that accompanies the success would be incomplete without thanking the person who made it.

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I) Project Goal (Problem Statement)

To design, develop and verify the Hyperledger Fabric based Blockchain application namely "CBFTW Application" having the following features:

1) **Query from the Banks Network's data that is available as part of the Blockchain (Reading bulk data from the Blockchain)**
2) **Query any one of the Banks Network's data that is available as part of the Blockchain (Reading individual record or data from the Blockchain)**
3) **Add a new Bank, Customer, Forex Value data and verify that these values get added successfully into the Blockchain (Writing new records into the blockchain and its verification)**
4) **Pay from any one of the Banks' Customer Account to any other Bank's Customer Account across the available Banks in the network effectively using the applicable Forex rates without any Third-party involvement (Cross Border Funds Transfer across the World (CBFTW)). Further verifying the successful transfer of the fund across the Customer accounts.**

Note: These verifications need to be done both in Command Line Interface (CLI) mode and also using browser based front-end mode.

II) Solution Proposed

1) **We will design, develop, implement and verify the Hyperledger Fabric based Blockchain network namely "CBFTW Application" in an Ubuntu O/S based EC2 Instance in AWS.**

2) **We will write the required Blockchain configuration and other files so as to bring-up the Blockchain network**

3) **We will write a Golang program namely "banks.go" in which we will implement the main logic of the Solution.**

4) **In the banks.go program, we will design the below given Data structures:**