







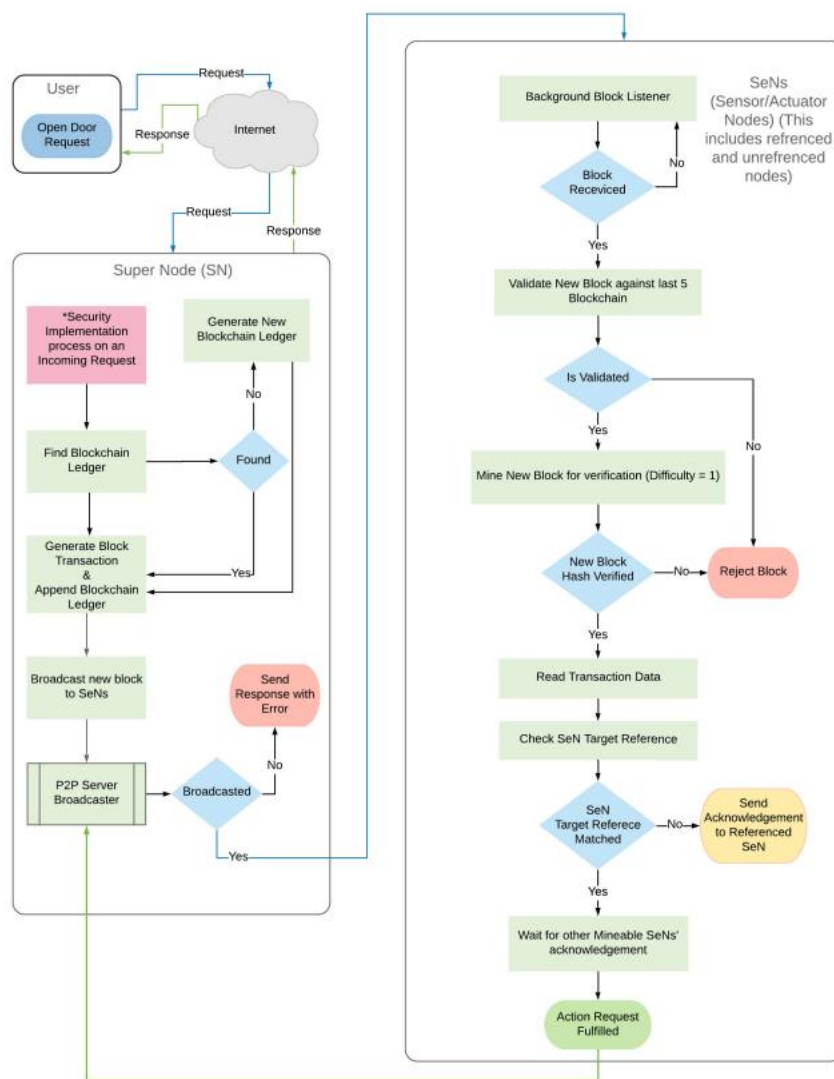
KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
Indian Institute of Science campus, Bengaluru

Telephone: 080 -23600978, 23341652 || Email: spp@kscst.org.in
 Website: www.kscst.iisc.ernet.in/spp.html or www.kscst.org.in/spp.html

46th SERIES OF STUDENT PROJECT PROGRAMME

1.	Name of the College: Vidyavardhaka College of Engineering
2.	Project Title: Blockchain in IoT Enabled Smart Home Network
3.	Branch: Information Science and Engineering
4.	Theme (as per KSCST poster): Cyber Security
5.	Name(s) of project guide(s): 1. Name: Prof. VIDYASHREE K P Email id: vidyashreekp@vvce.ac.in Contact No.: 9591813306
6.	Name of Team Members: <div> Name: MANOJ M USN No.: 4VV19IS045 Email id: manojmanjunath1425@gmail.com Mobile No: 9741626527 </div> <div>  </div> <div> Name: DARSHAN V USN No.: 4VV19IS019 Email id: darshanv18mar@gmail.com Mobile No.: 8861950654 </div> <div>  </div> <div> Name: MOHAN PRAKASH V USN No.: 4VV19IS050 Email id: mohanprakashv2000@gmail.com Mobile No.: 6363691863 </div> <div>  </div>

	<p>Name: BHARATH M USN No.: 4VV19IS013 Email id: marigowda2bharath@gmail.com Mobile No.: 9108081730</p> 
7.	<p>Team Leader of the Project: Name: Manoj M USN No.: 4VV19IS045 Email id: manojmanjunath1425@gmail.com Mobile No.: 9741626527</p>
8.	<p>Processing Fee Details: Mode of Payment: UPI, Phonepay UTR number: 303846776787 Transaction ID: T2302071055039010197867 Sender name: Manoj M Date of payment: 07-02-2023</p>
9.	<p>Date of commencement of the Project: November-2022</p>
10.	<p>Probable date of completion of the project: June-2023</p>
11.	<p>Scope / Objectives of the project:</p> <ul style="list-style-type: none"> • Design of a smart home architecture using Consortium Blockchain. • Designing a working prototype of a Smart Home Mobile App for the proposed architecture. • Implementing hardware design for a simple secure smart home architecture by utilizing commonly available IoT devices to evaluate.
12.	<p>Methodology:</p> <p>A simplistic model to implement consortium blockchain is created in which IoT devices act as the nodes. The pre-selected nodes (IoT devices) by the home owner are now participating in the block creation and consensus. The sensor nodes (SeNs) communicate with each other through a mesh network topology along with the super node (SN) which perform as a peer to peer (P2P) server to broadcast the blocks to other SeNs and participating in the mining.</p>



Flow chart

13.	<p>Expected Outcome of the project:</p> <p>Providing appropriate and simplified solutions for smart homes using Blockchain to reduce scalability and security issues and also improve confidentiality, integrity and availability.</p>
14.	<p>Is the project proposed relevant to the Industry / Society or Institution: Yes</p>
15.	<p>Can the product or process developed in the project be taken up for filing a Patent: No</p> <p>Prior Art search done: No</p>

16.	Budget details: <table border="1" data-bbox="308 203 1364 1245"> <thead> <tr> <th data-bbox="308 203 1031 282">Budget</th><th data-bbox="1031 203 1364 282">Amount</th></tr> </thead> <tbody> <tr> <td data-bbox="308 282 1031 882"> a) Materials / Consumables <ul style="list-style-type: none"> Bread Board → 3 X 120 = 360 Jump wires → 1 X 300 = 300 ESP32 → 5 X 650 = 3250 LCD Screen → 1 X 400 = 400 Relay (4 Channel) → 1 X 300 = 300 Fan → 1 X 200 = 200 LED's → 1 X 50 = 50 Temp Sensor → 1 X 300 = 300 Buzzer → 1 X 200 = 200 </td><td data-bbox="1031 282 1364 882">5360.00</td></tr> <tr> <td data-bbox="308 882 1031 958">b) Labor</td><td data-bbox="1031 882 1364 958">1000.00</td></tr> <tr> <td data-bbox="308 958 1031 1034">c) Travel</td><td data-bbox="1031 958 1364 1034">1000.00</td></tr> <tr> <td data-bbox="308 1034 1031 1169"> e) Miscellaneous <ul style="list-style-type: none"> Blockchain Platform </td><td data-bbox="1031 1034 1364 1169">3000.00</td></tr> <tr> <td data-bbox="308 1169 1031 1245">Total</td><td data-bbox="1031 1169 1364 1245">10,360.00</td></tr> </tbody> </table>	Budget	Amount	a) Materials / Consumables <ul style="list-style-type: none"> Bread Board → 3 X 120 = 360 Jump wires → 1 X 300 = 300 ESP32 → 5 X 650 = 3250 LCD Screen → 1 X 400 = 400 Relay (4 Channel) → 1 X 300 = 300 Fan → 1 X 200 = 200 LED's → 1 X 50 = 50 Temp Sensor → 1 X 300 = 300 Buzzer → 1 X 200 = 200 	5360.00	b) Labor	1000.00	c) Travel	1000.00	e) Miscellaneous <ul style="list-style-type: none"> Blockchain Platform 	3000.00	Total	10,360.00
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Total	10,360.00												
17.	Any other technical details: No												
18.	SPP Coordinator: Name: Dr. G B KRISHNAPPA Email id: gkb@vvce.ac.in Contact No.: 9243528200												

Name of the Project Guide: Prof. Vidyashree K P
Email id: vidyashreekp@vvce.ac.in
Contact No.: 9591813306

Name of the HOD: Dr. A B Rajendra
Email id: abrajendra@vvce.ac.in
Contact No.: 9480204423

DECLARATION

We, the project team hereby declare that the details enclosed in the project proposal (Title of the Project: **Blockchain in IoT Enabled Smart Home Network**, Branch: **Information Science and Engineering**, College: **Vidyavardhaka College of Engineering**) are true and correct to the best of our knowledge and belief and we undertake to inform KSCST of any changes there in the project title, students name will be intimated immediately through project guide. In case any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it. We hereby authorize sharing of the project information with this project proposal with the Karnataka State Council for Science and Technology, Bengaluru.

We are aware that the project team must exhibit / demonstrate the project in the nodal centre and interact regarding project with the experts and to exhibit the project in the State Level Seminar and Exhibition (if selected). If the student team fails to attend the evaluation in nodal centre or fails to attend the State Level Seminar and Exhibition, the supported project amount will be returned to KSCST.

We also hereby, enclose the endorsement form to KSCST, Bengaluru.

Name of the students with USN No.

Signature with date

1. Manoj M (4VV19IS045)

2. Darshan V (4VV19IS019)

3. Mohan Prakash V (4VV19IS050)

4. Bharath M (4VV19IS013)

(Name & Signature of Project Guide with Seal)

Email id: vidyashreekp@vvce.ac.in

Contact No.: 9591813306

(Name & Signature of HOD with Seal)

Email id: abrajendra@vvce.ac.in

Contact No.: 9480204423

ENDORSEMENT

This is to certify that 1) Mr. Manoj M, 2) Mr. Darshan V 3) Mr. Mohan Prakash V, 4) Mr. Bharath M, are bonafide student(s) of Department of Information Science and Engineering the degree program of our institution. If the project proposal submitted by these students under the 46th series of Student Project Programme is selected by KSCST, we will provide the requisite laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps to see that the project team will exhibit / demonstrate their project in the nodal centre and in the State Level Seminar and Exhibition (if selected). If the student team fails to send the completed project report or fails to attend the evaluation in nodal centre or fails to attend the State Level Seminar and Exhibition, the supported project amount will be returned to KSCST.

**(Name & Signature of
Project Guide with Seal)**

Email id: vidyashreekp@vvce.ac.in

Contact No.: 9591813306

(Signature of HOD with Seal)

Email id: abrajendra@vvce.ac.in

Contact No.: 9480204423

**(Signature of the Principal
with Seal)**

Email id: principal@vvce.ac.in

Contact No.: 9945650016

DETAILS OF PROCESSING FEES MADE THROUGH NEFT / UPI PAYMENT

1. TITLE OF THE PROJECT	:	Blockchain in IoT Enabled Smart Home Network
2. NAME OF THE TEAM LEADER	:	Manoj M
3. EMAIL ID	:	manojmanjunath1424@gmail.com
4. CONTACT MOBILE NO.	:	9741626527

PAYMENT MADE DETAILS

5. BANK REF. NO. / UTR NO. / UPI No. (12 digits)	:	303846776787
6. TRANSACTION ID	:	T2302071055039010197867
7. NAME OF THE SENDER / ACCOUNT HOLDER and CONTACT NUMBER	:	Manoj M 9741626527
8. NAME OF THE BANK	:	State Bank of India
9. PROCESSING FEES	:	Rs. 1000/-
10. DATE OF PAYMENT MADE	:	07-02-2023
11. TIME	:	10:55 am
12. MODE OF PAYMENT MADE (NEFT / UPI, PLEASE SPECIFY)	:	UPI, Phonepay

(Name & Signature of
the team leader)

(Name & Signature of
Project Guide or HOD with Seal)