



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.org.in/spp.html or https://kscst.karnataka.gov.in/en

FORMAT FOR STUDENT PROJECT PROPOSAL FOR THE 48th SERIES OF STUDENT PROJECT PROGRAMME

(Handwritten proposals will not be accepted, please fill all the details in this MS word file, insert images / diagrams wherever necessary. Convert to pdf file, get it approved from the project guide / head of the department and principal of your institution. Keep ready the scanned pdf file of 1) Declaration and Endorsement 2) details of processing fees made and fill-up the Google Form.

<https://forms.gle/ks2WxWB4ei1hgv9D9>

1.	Name of the College: Sri Venkateshwara College of Engineering
2.	Project Title: Smart wireless water meter with Web DB
3.	Branch: Electronics and Communication Engineering
4.	<p>Theme (as per KSCST poster): (The project proposals shall mandatorily be from one of the broad themes / areas. Visit website www.kscst.org.in/spp.html)</p> <p>Water and Environment Engineering, Transportation Engineering, Industrial and System Engineering</p>
5.	<p>Name(s) of project guide(s):</p> <p>1. Name: Mrs. Swetha S Kulkarni Email id: swetha.sk_ece@svcengg.edu.in Contact No.: 7829184777</p> <p>2. Name: Dr. Deepti Raj Email id: deeptiraj_ece@svcengg.edu.in Contact No.: 9986762618</p>
6.	<p>Name of Team Members (Strictly not more than four students in a batch): (Type names in Capital Letters as provided in your college) (Please paste the latest passport size photograph adjacent to your respective names)</p>

Name: HARSHAN S

Email id: harshansgowda555@gmail.com

USN No.: 1VE21EC032

Mobile No: 8217224151



Name: K SANTOSH

USN No.: 1VE21EC037

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Name: MANOJ KUMAR C S

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Name: SANDEEPKUMAR S

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Email id: sandeep6361460@gmail.com

Mobile No.: 8123571317



7. Team Leader of the Project:

Name: K SANTOSH

USN No.: 1VE21EC052

Email id: santu22570@gmail.com

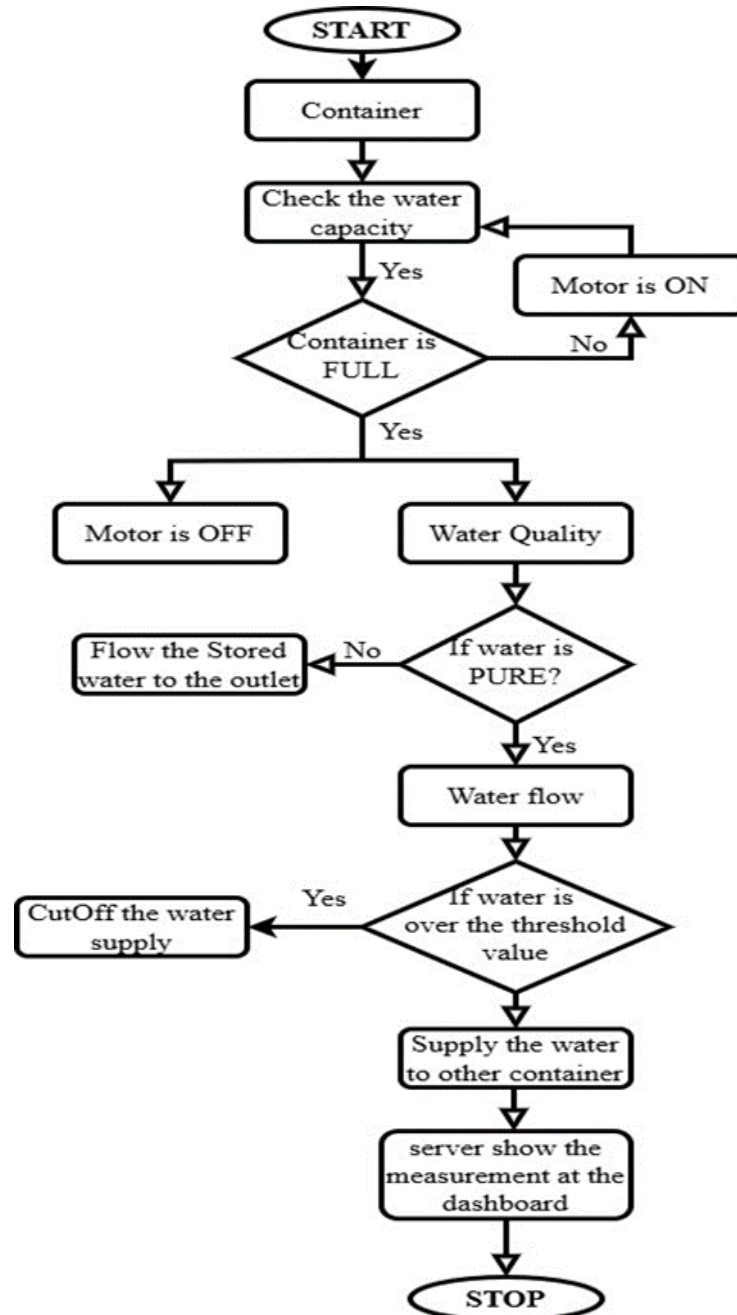
Mobile No.: 9380622570

8.	Processing Fee Details (Through Online Payment only): (processing fee of Rs. 1180/-) Please furnish the payment details in the format provided in the last page of the proposal.	
	DETAILS OF PROCESSING FEES MADE THROUGH NEFT / UPI PAYMENT	
	<p>(Note: Include this page in the softcopy of the student project proposal. The student team shall furnish the details in the Google Form. It is informed to the students to 1) keep ready the softcopy of the project proposal and other documents and 2) Furnish the payment made details as processing fees and 3) update the details in the Google Form on the same day of payment made to KSCST by NEFT / UPI payment).</p>	
	1. TITLE OF THE PROJECT	: Smart wireless water meter with Web DB.
	2. NAME OF THE TEAM LEADER	: K SANTOSH
	3. EMAIL ID	: santu22570@gmail.com
	4. CONTACT MOBILE NO.	: 9380622570
	PAYMENT MADE DETAILS	
	5. BANK REF. NO. / UTR NO. / UPI No. (12 digits)	: 436375234404
	6. TRANSACTION ID	: 20241228090121488963683065856000
7. NAME OF THE SENDER / ACCOUNT HOLDER and CONTACT NUMBER	: K SANTOSH (9380622570)	
8. NAME OF THE BANK	: State Of India, Kampli	
9. PROCESSING FEES	: Rs. 1,180/- (Inclusive of 18% GST)	
10. DATE OF PAYMENT MADE	: 28/12/2024	
11. TIME	: 9:01 AM	
12. MODE OF PAYMENT MADE (NEFT / UPI, PLEASE SPECIFY)	: 9380622570@naviaxis	
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> Mr. K SANTOSH (Team Leader) </div> <div style="text-align: center;"> Dr. DEEPTI RAJ (Project Guide) </div> </div>		

9.	Date of commencement of the Project: 04/11/2024
10.	Probable date of completion of the project: 30/05/2025
11.	Scope / Objectives of the project: <ul style="list-style-type: none"> ➤ To design a system that continuously monitors water usage in real-time. ➤ To provide precise, automated tracing of water usage in real-time. ➤ To determine the water quality of precised container for the usage of water. ➤ To provide a web dashboard that is easy for users to navigate, showing detailed usage statistics.
12.	Methodology: <p>The Smart Wireless Water Meter system uses sensors to monitor flow rates, tank levels, and water quality, sending real-time data to a microcontroller and a web database via IoT protocols. Accessible through ThingSpeak, users can view live data, receive alerts, and track trends. Automated controls manage pumps based on tank levels, while contamination sensors ensure water safety, optimizing water management and resource conservation.</p> <p>Block diagram</p> <p>The diagram shows a Smart Water Meter System using an ESP32. It includes sensors like FS400 for flow rate, Ultrasonic for tank level, and TDS for water quality. A Relay controls the pump, and data is sent to a Cloud Server for remote monitoring.</p> <pre> graph TD FS400[FS400 Sensor] --> ESP32[ESP 32] TDS[TDS Sensor] --> ESP32 Container[Container] --> TDS ESP32 --> Relay[Relay] Relay --> US[Ultra Sonic Sensor] US --> WT[Water Tank] ESP32 --> CS[Cloud Server] style CS fill:none,stroke:none </pre>

Flow diagram

This flowchart outlines an automated water management system. It controls water flow based on container capacity, water quality, and threshold levels. The system starts by filling a container, checks purity, and directs water accordingly while displaying data on a dashboard.



Software

ThingSpeak IoT

ThingSpeak is an open-source Internet of Things (IoT) platform for collecting, analyzing, and visualizing sensor data. It allows users to send and receive data from devices, store it in the cloud, and display it on custom dashboards. ThingSpeak supports integration with MATLAB for advanced data analysis and visualization.



13. Expected Outcome of the project:

The goal of the suggested system is to completely transform water management by providing a scalable and intuitive solution to important problems. It promotes long-term environmental goals, reduces waste, and improves water usage efficiency by incorporating cutting-edge technologies. The system uses real-time monitoring to give users the most recent information, facilitating proactive reactions to possible problems and well-informed decision-making. Operations are streamlined by automation features, which decrease manual involvement and increase overall dependability. The platform also guarantees smooth data accessibility, giving stakeholders practical insights to maximize consumption trends and uphold safe water usage procedures. In addition to encouraging environmental preservation, this all-encompassing strategy helps to build a more intelligent and sustainable future for the management of water resources.

**14. Is the project proposed relevant to the Industry / Society or Institution?
Yes / No: No**

If yes, please provide details of the industry / institution and contact details:

(**Note:** Preference will be given to those projects relevant to the industry / institution. Hence be specific in giving detailed information). Is the industry extending support - technology / funds / use the final product, please specify.

**15. Can the product or process developed in the project be taken up for filing a Patent?
Yes / No: No**

Prior Art search done?

Yes/No:

Note: If your answer is "Yes", you may contact Patent Information Centre of KSCST. For more details, email: pic@kscst.org.in

16. Budget details (break-up details should be given):

Note: KSCST will provide nominal grant support for carrying out the project by students if selected by the project selection committee.

Budget	Amount
a) Materials / Consumables (Please specify)	5,750.00
i. Water Meter	1500/-
ii. ESP32 WiFi-Module	400/-
iii. FS400 Sensor	400/-
iv. TDS Sensor + Arduino	1450/-
v. Relay (2)	400/-
vi. Ultrasonic Sensor	300/-
vii. Resistors	50/-
viii. DC Motor	50/-
ix. Water Level Sensor	300/-
x. Container (2)	150/-
xi. Tap	150/-
xii. Pipe	200/-
xiii. Glue Gun	400/-
b) Labor (Describe)	0.00
c) Travel (Describe)	0.00
d) Miscellaneous (Please specify)	0.00
Total	5,750.00

17. Any other technical details (Please specify):

-

18.	<p>SPP Coordinator (Identified by the college):</p> <p>Note: To be identified by the principal of the institution. The project proposals must be submitted to KSCST through SPP coordinator designated by the principal.</p> <p>Name: Dr.Poornima G R Email id:deanacademics@svcengg.edu.in Contact No.:9886753829</p>
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Name of the Project Guide:

Mrs. Swetha S Kulkarni

Email id: swetha.sk_ece@svcengg.edu.in

Contact No.: 7829184777

Dr. Deepti Raj

Email id: deeptiraj_ece@svcengg.edu.in

Contact No.: 9986762618

Name of the HOD:

Dr.Jijesh J J

Email id: hodec@svcengg.edu.in

Contact No.: 9916090956

DECLARATION

We, the project team hereby declare that the details enclosed in the project proposal "Smart wireless water meter with Web DB" Electronics and Communication, Sri Venkateshwara College of Engineering are true and correct to the best of our knowledge and belief. We undertake to inform the Karnataka State Council for Science and Technology (KSCST) of any changes to the project title or team members' names immediately through our project guide or the SPP Coordinator of our institution.

Additionally, we declare that the project work is original and not a result of copying or purchasing. We are committed to completing the project independently, with support from our faculty and project guide, while utilizing the facilities provided by the college. We will not engage in plagiarism and pledge to be sincere and dedicated in executing and completing the project as proposed.

We understand that if any of the above information is found to be false, untrue, or misleading, we may be held liable. We authorize the sharing of the project information contained in this proposal with KSCST, Bengaluru.

We acknowledge that the project team must exhibit and demonstrate the project, participate in the mid-term evaluation of sanctioned projects, and engage with experts. Additionally, we must exhibit the project at the Annual State-Level Poster Presentation and Exhibition, if selected. Should our team fail to participate in the mid-term evaluation or the Annual Exhibition (if selected), we understand that the supported project funds will be returned to KSCST.

We also enclose the endorsement form for KSCST, Bengaluru.

Name of the students with USN No.

Signature with date

- | | |
|--------------------|--------------|
| 1. HARSHAN S | (1VE21EC032) |
| 2. K SANTOSH | (1VE21EC037) |
| 3. MANOJ KUMAR C S | (1VE21EC052) |
| 4. SANDEEPKUMAR S | (1VE21EC078) |

Name of the Project Guide:

Name of the HOD:

Mrs. Swetha S Kulkarni

Dr. Deepti Raj

Dr. Jijesh J J

Email id: swetha.sk_ece@svcengg.edu.in

Email id: deeptiraj_ece@svcengg.edu.in

Email id: hodec@svcengg.edu.in

Contact No.: 7829184777

Contact No.: 9986762618

Contact No.: 9916090956

ENDORSEMENT

This is to certify that 1) Mr.HARSHAN S (1VE21EC032), 2) Mr.K SANTOSH (1VE21EC037), 3) Mr.MANOJ KUMAR C S (1VE21EC052) 4) Mr.SANDEEPKUMAR S (1VE21EC078), are bonafide student(s) of Department of Electronics and Communication, in the degree program of our institution. If the project proposal submitted by these students under the 48th 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 mid-term evaluation of project and in the Annual State-Level Poster Presentation and Exhibition (if selected). If the student team fails to send the completed project report or fails to attend the evaluation in mid-term evaluation of sanctioned projects or fails to attend the Annual State-Level Poster Presentation and Exhibition (if selected), the supported project amount will be returned to KSCST.

Dr. DEEPTI RAJ (Guide)

Assistant Professor,

Dept. E&CE, SVCE,

Bengaluru

Dr.JIJESH J J

Professor & HoD

Dept. E&CE, SVCE,

Bengaluru

Dr.NAGESWARA GUPTHA M

Principal,

SVCE, Bengaluru

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Email:hodec@svcengg.edu.in

Email :principal@svcengg.edu.in

Contact No. : 9986762618

Contact No. : 9916090956

Contact No. :9843255706

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Mr. K SANTOSH
(Team Leader)

Dr. DEEPTI RAJ
(Project Guide)

KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science campus, Bengaluru

48th SERIES OF STUDENT PROJECT PROGRAMME (SPP)

(Note: This page is for information about bank details of KSCST to the student team and college / institution and not to include this page in the project proposal softcopy)

BANK ACCOUNT DETAILS OF KSCST

Name and address of the Institution	Karnataka State Council for Science and Technology, IISc Campus, Bangalore -560012
Account holder's name / Designation	Secretary, Karnataka State Council for Science and Technology
Bank Account No. & Name of the bank	Current A/C No. 0683201000024 Canara Bank, IISc Campus Branch, Bangalore-560012
IFSC Code	CNRB0000683
MICR Code	560015023
Bank Branch Address	Canara Bank, Indian Institute of Science, Bangalore-560012

BANK DETAILS

Name of the Agency	Karnataka State Council for Science and Technology IISc Campus, Bangalore - 560012
Account holder's name / Designation	Secretary , Karnataka State Council for Science and Technology
Bank Account No. & Name of the bank	Current A/C No. 0683201000024 Canara Bank IISc Campus Branch Bangalore-560012
IFSC Code	CNRB0000683
MICR Code	560015023
Bank Branch Address	Canara Bank Indian Institute of Science Bangalore-560012



केनरा बैंक Canara Bank

भारत सरकार का उपक्रम

A Government of India Undertaking

सिंडिकेट Syndicate

KARNATAKA STATE COUNCIL FOR SCIENCE



0683201000024@cnrb

BHIM
BHARAT INTERFACE FOR MONEY

UPI
UNIFIED PAYMENTS INTERFACE



भारत 2023 INDIA

वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE