

**FORMAT FOR STUDENT PROJECT PROPOSAL FOR THE**

**42ndSERIES OF STUDENT PROJECT PROGRAMME**

**STREAM C : PROJECT PROPOSAL FOR STUDENT PROJECT PROGRAMME**

***(Hand written proposals will not be accepted, please fill all the details in this MS word file as per the following format. Kindly take a photocopy of completely filled project proposal and Demand Draft for filling up the Google Forms.)***

<https://goo.gl/forms/UsilS6ODB0BZL2QC3>

***For details please Contact email:*** [spp@kscst.iisc.ernet.in](mailto:spp@kscst.iisc.ernet.in)***and visit*** <http://www.kscst.iisc.ernet.in/spp.html>  
***Telephone : 080 23600978, 080 23341652 Extn.25***

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|  | **Name of the College :K.S. Institute Of Technology**  **No. 14, Raghuvanahalli , Kanakapura Road,Bangalore-560 109** |
|  | **Project Title :**  **Smart Garbage Management System Using IOT and GSM** |
|  | **Branch:**  **COMPUTER SCIENCE AND ENGINEERING** |
|  | **Broad Theme / Category (as per KSCST poster) :**  **Societal** |
|  | **Name(s) of project guide(s) :**   1. **Name : Prof. Ashwini**   **Email id :ashwini@ksit.edu.in**  **Contact No :+91 9980208865** |
|  | **Name of Team Members (Strictly not more than four students in a batch):** **(Please paste the latest passport size photograph adjacent to your respective names)**   1. **Name : Mr. SATHISH SRINIVAS**   **USN No. : 1KS15CS089**  **Email id :** [**gta.sathish@gmail.com**](mailto:gta.sathish@gmail.com)  **Mobile No. : +91 9538999934**   1. **Name : Mr. SHASHWATH GM**   **USN No. : 1KS15CS092**  **Email id :** [**gmshashwathgowda@gmail.com**](mailto:gmshashwathgowda@gmail.com)  **Mobile No. :+91 9481212935**   1. **Name : Ms. SHRAVYA MS**   **USN No. : 1KS15CS096**  **Email id :** [**shravyams31@gmail.com**](mailto:shravyams@gmail.com)  **Mobile No. : +91 9066338864**   1. **Name : Ms. SPANDANA MANJUNATH**   **USN No. : 1KS15CS0103**  **Email id :** [**spandu1811@gmail.com**](mailto:spandu1811@gmail.com)  **Mobile No. : +91 9008297897** |
|  | **Team Leader of the Project**  **Name : Mr. SATHISH SRINIVAS**  **USN No. :1KS15CS089**  **Email id :gta.sathish@gmail.com**  **Mobile No. : +91 9538999934** |
|  | **Processing Fee Details (Demand Draft should be drawn from Canara Bank / State Bank of India only):**  **(processing fee of Rs. 1000/- drawn in favour of Secretary, KSCST, Bangalore – 12)**  **Demand Draft No. :137457**  **Date : 28/01/2019**  **Bank name : Canara Bank, Raghuvanahalli**  **Note :** Please indicate Team Leader name, Project Title and Name of the College on the backside of the DD. |
|  | **Date of commencement of the project: 06/02/2019** |
|  | **Probable date of completion of the project : 19/04/2019** |
|  | **Scope / Objectives of the project:**  The main objective of our proposed system is to create a device that can monitor the garbage in the society. And can alert the Waste Picker (sanitation worker). On time pickup can help in improve healthy ecosystem. |
|  | **Methodology:** Now-a-days dustbins placed near public places in the cities/villages are filled due to increase in the waste every day. So, an efficient method to dispose the waste has been designed with GSM system. If the disposal of waste is not properly done it creates unhygienic condition for the people and it creates ugliness to that place. Also it may cause some deadly diseases & human illness. To avoid such a situation we are planning to design “GSM Based Waste Management for Smart Cities”. In this proposed system there are multiple dustbins located across a wide area, these dustbins are provided with ultrasonic sensor which helps in identifying level of the garbage bins. When the level reaches the maximum limit, the ultrasonic device will transmit the level along with the percentage of waste in the dustbin to the concern authorities from their place with the help of GSM Module and an immediate action can be made to clean the dustbins.  **Keywords: GSM, Atmega328p, LDR ,LCD**  In this proposed system we mainly use, Atmega 328 micro-controller and ultrasonic sensors which are fixed to the garbage bin. ultrasonic sensor are connected to the micro-controller. This sensor is based on the property of sound waves and frequency. A 16\*2 alpha-numeric LCD display is used which shows the real time information about dustbin. Sim 900 GSM Module is used for communication purposes, which works on a frequency of 850/900/1800/1900 MHz.  In this proposed system 230 volt step down transformer is used. the transformer is connected to the bridge rectifier The function of the bridge rectifier is converted from AC to DC. There are capacitors used for filtering purposes. The 7805 voltage regulator are used the function of the voltage regulator is provide constant +5 voltage supply to the system. The heat sink is providing to the regulator for the cooling purpose. The ultrasonic sensor is connected to the dustbin for the sense the level of the dustbins. The ultrasonic sensor works on property of sound and frequency. There are two terminals of sensor which is eeco and trigger. Eeco, which transmit the waves and these reflected waves are captured by the trigger. The trigger this captured signal gives to the micro controller and micro controller sense the signal and immediate take action. The atmega 328p AVR family micro-controller is used in this system. It has inbuilt ADC/DAC, timer, shift registers. The 16MHz crystal oscillator is provided to the micro controller for the internal operation Sim 900 GSM modules is used for the communication purposes.  **Note :** If this project is an improvised work of the previously awarded project, then you need to submit the proposal under Stream A. |
|  | **Expected Outcome of the project** :   * Healthy Eco-System * Control over the influence of harmful disease * Control over decay of waste * Helps in the control of soil erosion |
|  | **Application of the project : Societal**   1. **Industry** 2. **Health** 3. **Agriculture** 4. **Disaster Management** 5. **Societal** 6. **Education / Academic**   (You may provide details also) |
|  | **Is the project proposed relevant to the Industry or Institution? :**  **Yes / No**  **No**  **If Yes, Please provide details of the Industry / institution and contact details :**  N/A  (**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. |
|  | **In case of fabrication work in the project, an engineering drawing with dimensions / detailed design calculations (approximately) of the machine / device should be attached to the proposal.**  No fabrication required in our project. |
|  | **Can the product or process developed in the project be taken up for filing a Patent?**  **Yes / No.**  **No**  **If Yes, you may contact Patent Information Centre of KSCST**  **for more details**  Karnataka State Council for Science and Technology  Indian Institute of Science Campus, Bengaluru - 560012  Tel: +91-080-2334 1652 / 2334 8848 / 2334 8849  Email : patent@kscst.iisc.ernet.in |
|  | **Budget details (break-up details should be given) :**  **Budget Amount**  a) Materials / Consumables 4000.00  b) Labor 0.00  c) Travel 500.00  d) Report 2000.00  e) Miscellaneous 500.00  **Total** 7000.00 |
|  | **Any other technical details (Please specify) :**  N/A |
|  | **SPP Coordinator (Identified by the college) :**  (Note: KSCST will be providing financial and technical support to student projects and these projects will be evaluated by experts in identified nodal centers. There will be interaction between students and experts to fine-tune the project in the nodal centre. The project recommended by experts will be selected for state level Seminar and exhibition. Hence the role of SPP Co-ordinator is very important to KSCST regarding receipt of project sanctioned, amount released to the College, informing the concerned project guides regarding evaluation of projects and sending the softcopy and hardcopy of the reports to KSCST.  Further interacting with the Principal of the institution in submission of statement of expenditure, etc. Hence it is requested that the Principal of the institution to nominate the SPP Co-ordinator for smooth functioning of educational Programmes of KSCST.)  **Name : Dr. B.S.Ajaykumar**  **Email id : ajayakumarmanju@gmail.com**  **Contact No.:9845249046/9483018353** |

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| **(Name &Signature of Project Guide with Seal)** | **(Name &Signature of HOD with Seal)** |
| **Email id: venkataraok@ksit.edu.in** | **Email id: rekhabvenkatapur@ksit.edu.in** |
| **Contact No.:+91 9343751362** | **Contact No.:+91 9740295819** |

**DECLARATION**

**(From Project Students)**

We, the project team hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge and belief and we undertake to inform KSCST of any changes therein in the project tile, students name will be intimated immediately. 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, Bangalore.

We are aware that the project team has to 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 back to KSCST.

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

**Name of the students Signature with date**

1. Mr. Sathish Srinivas
2. Mr. Shashwath GM
3. Ms. Shravya MS
4. Ms. Spandana Manjunath

**ENDORSEMENT**

**(From College, endorsement to be taken in the institution / Department Letter head)**

This is to certify that 1) Mr. Sathish Srinivas 2) Mr. Shashwath GM  
3) Ms. Shravya MS 4) Ms. Spandana Manjunath are bonafide student(s) of Department of Computer Science & Engineering in the degree program of our institution. If the project proposal submitted by these students under the 42ndSeries 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 back to KSCST.

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| **(Name and Signature of HOD with Seal)** | **(Name & Signature of**  **Project Guide with Seal)** | **(Signature of the Principal with Seal)** |
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| **Email id:**  **rekhabvenkatapur@ksit.edu.in** | **Email id:**  **venkataraok@ksit.edu.in** | **Email id:**  **principal.ksit@gmail.com** |
| **Contact No.:9740295819** | **Contact No.:9343751362** | **Contact No.:080-28435722** |