Criteria 3- Research, Innovations and Extension

Key Indicator: 3.1- Resource Mobilization for Research

Metric Number: 3.1.1. Grants received from Government and non-governmental agencies for research projects / endowments in the institution.

ACADEMIC YEAR:2020-2021

Sl.no	Description	Amount (in Lakhs)
1.	Grants received from Government and non-governmental agencies for research projects / endowments in the institution	**RS. 0.46 Lakhs**

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PRINCIPAL
CITY ENGINEERING COLLEGE
Kanakapura Main Road, Bangalore-560061

KSCST

Karnataka State Council for Science and Technology
(An autonomous organisation under the Dept. of Science & Technology, Govt. of Karnataka)
Indian Institute of Science Campus, Bengaluru - 560 012
Telephone: 080-23341652, 23348848, 23348849, 23348840
Email: office.kscst@iisc.ac.in, office@kscst.org.in ♦ Website: www.kscst.iisc.ernet.in, www.kscst.org.in

Mr. H. Hemanth Kumar
Executive Secretary

20th April 2021

Ref: 7.1.01/SPP/10

The Principal,
City Engineering College
Kanakapura Rd near METRO Station Doddakallasandra Bikasipura
Bengaluru - 560062

Dear Sir/Madam,

Sub : Sanction of Student Project - 44th Series: Year 2020-2021
Your Project Proposal Reference No. : 44S_BE_4354
Ref : Your Project Proposal entitled " **SMART AGRONOMIC SYSTEM WITH GLOBAL STORAGE ACCESS USING IoT**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 44th Series" with a budgetary break-up as detailed below:

Students	Mr. Nischal Kothari M	**Budget**	
	Mr. Pavan V	**Particulars**	**Amount (Rs)**
	Mr. Mohammed Shahid Ulla	Materials/Consumables	4,000.00
	Ms. Krupa D	Labour	500.00
Guide/s	Prof. Deepika R	Travel	500.00
	Prof. Ambika P R	Miscellaneous	500.00
Department	Computer Science And Engineering	Report	500.00
		Total	**6,000.00**
	SIX THOUSAND RUPEES ONLY		

The following are the guidelines to carryout the project work :

a) The project should be performed based on the objectives of the proposal sent by you.

b) The project should be completed in all respects and softcopy of the full report in a CD (single file .pdf format only) should be submitted to KSCST.

c) Any change in the project title and objectives, etc., or students is liable to rejection of the project and the amount sanctioned needs to be returned to KSCST.

d) Please quote your **project reference number printed above** in all your future correspondences.

e) Important: After completing the project, 2 to 3 page write-up (synopsis) needs to be sent by e-mail [spp@kscst.iisc.ernet.in] and should include following points:
   1) Title of the project
   2) Name of the College & Department
   3) Name of the students & Guide(s)
   4) Keywords

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ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ
("ವಿ ಟಿ ಯು ಅಧಿನಿಯಮ ೧೯೯೪" ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)
'ಜ್ಞಾನ ಸಂಗಮ', ಬೆಳಗಾವಿ - ೫೯೦ ೦೧೮ ಕರ್ನಾಟಕ ರಾಜ್ಯ

Visvesvaraya Technological University

(State University of Government of Karnataka Established as per the VTU Act, 1994)

"Jnana Sangama" , Belagavi-590 018, Karnataka State, India

Prof. A. S. Deshpande B.E., M.Tech., Ph.D.
REGISTRAR

Phone: (0831) 2498100
Fax: (0831) 2405467

Ref: VTU/Aca./A4/2021-22/ 2628/8

Date: 20 SEP 2021

To,

The Principal,
City Engineering College,
Doddakallasandra,
Kanakapura Main Road,
Bengaluru-560061.

Sir,

Sub: Sanction of Financial Assistance for 2020-21 to the
Innovative Project of UG Final Year students of your Institution..reg.
Ref: No.VTU/BGM/PS/2021-22/545, dated 06.05.2021

With reference to the above subject, please find herewith a D.D Bearing No 643508, dated 09.09.2021 of Rs. 40,000/- (Rupees Forty Thousand Only) towards the sanction of financial assistance to the selected Innovative projects of UG final year students of BE / B.Tech.

Further, you are hereby informed to distribute the amount to the concerned students and get an acknowledgement for the same.

Original copy of the acknowledgements should be submitted to the undersigned on or before 30th September 2021.

Encl: as above

Asst
Pl. Discuss
25.09.2021

REGISTRAR
18/9/21

CITY ENGINEERING COLLEGE Bengaluru-1 124

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Visvesvaraya Technological University
"JnanaSangama"
Belagavi: 590018
Karnataka, India.
Tele: 0831-2498225 ,2405454

VTU Sponsored Student Project Proposal Format

01	Academic Year :	2020-2021	
02	Semester :	8th Semester	
03	Name of the College :	City Engineering College	
04	Branch:	Computer Science and Engineering	
05	Project Title:	**Smart Agronomic System with Global Storage Access Using Iot**	
06	Project Discipline:	Advancement in Agriculture	
07	Principal	Name:	Dr. V.S. RAMAMURTHY
		Contact No:	080-22560313
		Email id:	cityengineering123@gmail.com
08	HOD	Name:	Prof. Vivekavardhana Reddy
		Contact No:	9900212462
		Email id:	hodcse@cityengineeringcollege.ac.in
09	Project Guide	Name:	Prof. Deepika R
		Contact No:	9113895423
		Email id:	deepikar@cityengineeringcollege.ac.in
10	Project Co-Guide(If any)	Name:	Prof.Ambika P R
		Contact No:	9945133228
		Email id:	ambikapr@cityengineeringcollege.ac.in
11	Project Committee coordinator (Identified by the college) :	Name:	
		Contact No:	
		Email id:	

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Kanakapura Main Road, Bangalore-560061

<table>
<tr><td>12</td><td colspan="2">Name of project group Members</td></tr>
<tr><td></td><td colspan="2">1.Group leader and Member</td></tr>
<tr><td></td><td>Name: Nischal Kothari M
USN No. : 1CE17CS074
Contact No: 9066466514
Email id: kotharinischal@gmail.com</td><td>  </td></tr>
<tr><td></td><td colspan="2">2.Member</td></tr>
<tr><td></td><td>Name: Pavan V
USN No. : 1CE17CS081
Contact No: 9901607918
Email id: pavansrinivas017@gmail.com</td><td>  </td></tr>
<tr><td></td><td colspan="2">3.Member</td></tr>
<tr><td></td><td>Name: Mohammed Shahid Ulla
USN No. : 1CE17CS064
Contact No: 9632725794
Email id: mohammedshahid80798@gmail.com</td><td>  </td></tr>
<tr><td></td><td colspan="2">4.Member</td></tr>
<tr><td></td><td>Name: Krupa D
USN No. : 1CE17CS052
Contact No: 9945224055
Email id: krupadinesh07@gmail.com</td><td>  </td></tr>
</table>

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Kanakapura Main Road, Bangalore-560061

13	Scope / Objectives ofthe project:	❖ To create **History in Agricultural Domain** by making it one of the cheapest Product that costs a Farmer **Rs. 5000*/- to Rs. 6000*/-** which will cover an **Acre of Land** with 3 Nodes and one Master Node. ❖ To program **Node MCU with Double Tier Data Storage** so as to access data by **Locally** as well as **Globally** with help of **SD Card** and **Cloud** respectively. ❖ To create a System that will be known as the **Future of Agricultural Domain** and also as the **Farmer's Friend** by making it one of the most **Qualitative** and **Quantitative** Analyzer of an Agricultural Field. To create a System where in a Farmer having less knowledge of Computers can also operate or **anyone from anywhere in the world** can also operate the system and collect the data using **Real Time Data Accessibility.**

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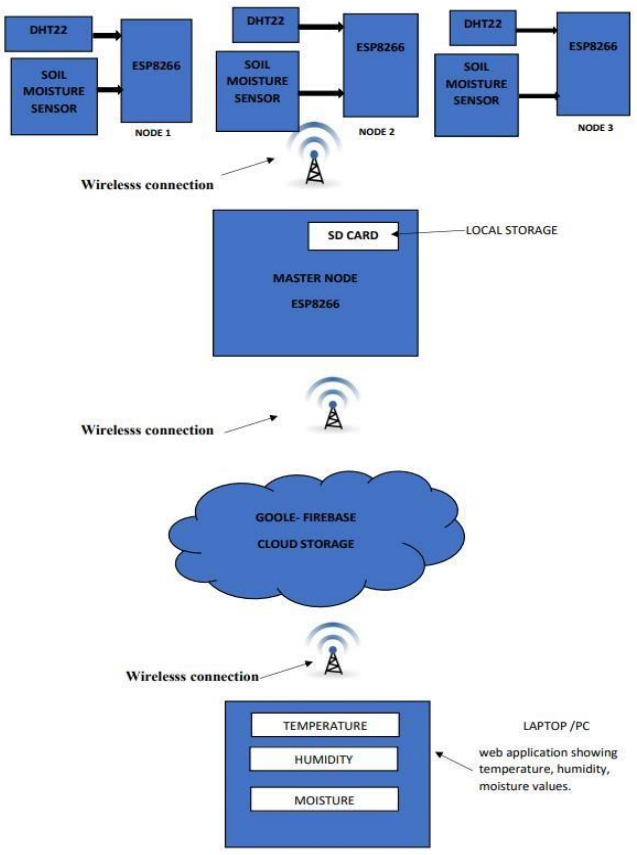
14	Methodology of work: (Including diagram, flow chart and design calculations)	 As shown in the System Architecture : ❖ 4 nodes will be created, where in three Nodes will be consisting of **Node MCU, DHT22 Sensors and a Soil Moisture Sensors**, whereas only the Master node will be given a **SD Card** for local data storage. Creation of Nodes will make the System **Highly Portable and Easily Maintainable.** All these Nodes will be **Wirelessly** connected with Cloud storage for **Real Time Data Accessibility** on a Web Application which will have Global and Local Data Accessibility so that the field data can be accessed by anyone & anywhere around the Globe and round the Clock.

15	Expected Outcome ofthe project:	By collecting data from **DHT22 and Soil Moisture Sensors**, the data will be stored in **Local Storage Tier** that is SD card. This data will be transferred to **Global Storage Tier** that is Cloud Storage from which data is stored in Real Time Database – Firebase and can then be retrieved into a **Web Application** by **Anyone & Anywhere** around the Globe and round the Clock, henceforth the collected information can be conveyed to the farmer and then the Farmer can manage his field in accordance to the data collected.
16	Application of the project:	a) This Proposed System will become farmer's friend if implemented on both large scale and small scale as the data can be retrieved by anyone. b) Data in this system is stored as two-tier data storage manner that is it is stored both locally and globally. c) The entire Drip Irrigation System has been dropped out so that a farmer can take his individual decisions independently. d) The cost of the entire system can be summed up to Rs. 5000/- where as cost in the existing system will be summed up to Rs. 25000 */- and above as one Raspberry Pi costs around Rs 4500/-*. Until and unless we don't have experience, no one can solve the issue, hence with experience we have made the actual required changes in the system

17	Budget details with Materials required:	

Budget	Amount
a) Materials	3859.00
b) Labor	1000.00
c) Travel	500.00
d) Report	1000.00
e) Miscellaneous	500.00
Total	**6859.00**

Materials Required :

- Resistor Kit
- PCB
- Connectors
- Micro USB to USB cable
- Single Stranded Wires
- Multi Stranded Wires
- DHT22 Sensors
- Soil Moisture Sensors
- SD Card Module
- ESP8266-01
- Female DC Jack
- 6V DC Adapter – 2A
- 7805 IC
- 1000uF Capacitor
- Tp4056 + Boost Convertor
- Node MCU

	Activities Planned	1 Month	2 Month	2 Month	2 Month	2 Month	1 Month
01	Literature review						
02	Planning/ Designing						
03	Assembly/ Fabrication work						
04	Final Testing						
05	Result & Calculation/ Conclusion						
06	Preparation of Report & Submission						

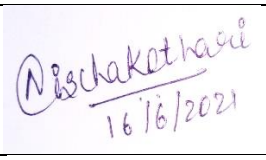
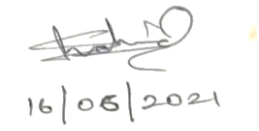
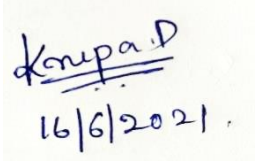
18	Date of commencement of the Project:	12/10/2020
19	Probable date of completion of the project:	17/07/2021
20	Duration of project work:	9 months
21	Pert chart for completion of the project in said duration as per	

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the projectproposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, 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 are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belagavi. If the project group fails to attend the evaluation in Regional centre and for Exhibition in VTU Belagavi, the sponsored project amount will be returned back to VTU immediately.

We also hereby, enclose the endorsement form to VTU, Belagavi.

SL.No	Name of the Student	Signature with date
01	NISCHAL KOTHARI M	
02	PAVAN V	
03	MOHAMMED SHAHID ULLA	
04	KRUPA D	

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Visvesvaraya Technological University
"JnanaSangama"
Belagavi: 590018
Karnataka, India.
Tele: 0831-2498225 ,2405454

VTU Sponsored Student Project Proposal Format

01	Academic Year :	2020-2021	
02	Semester :	8th Semester	
03	Name of the College :	City Engineering College	
04	Branch:	Computer Science and Engineering	
05	Project Title:	Vision Based Banknote Recognition System	
06	Project Discipline:	User friendly devices for aged or physically challenged people	
07	Principal	Name:	Dr. V.S. RAMAMURTHY
		Contact No:	080-22560313
		Email id:	cityengineering123@gmail.com
08	HOD	Name:	Prof. Vivekavardhana Reddy
		Contact No:	9900212462
		Email id:	hodcse@cityengineeringcollege.ac.in
09	Project Guide	Name:	Prof. Archana Bhat
		Contact No:	9902381611
		Email id:	archanabhat@cityengineeringcollege.ac.in
10	Project Co-Guide(If any)	Name:	
		Contact No:	
		Email id:	
11	Project Committee coordinator (Identified by the college) :	Name:	
		Contact No:	
		Email id:	

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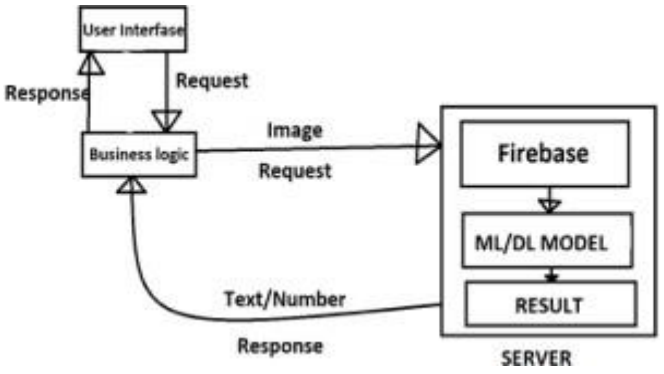
<table>
<tr><td>12</td><td>Name of project group Members</td></tr>
<tr><td></td><td>1.Group leader and Member
Name: Rahul Karmakar
USN No. : 1CE17CS093
Contact No: 9370966787
Email id: imrahul3610@gmail.com
  </td></tr>
<tr><td></td><td>2.Member
Name: Sridhar D N
USN No. : 1CE17CS127
Contact No: 9591784127
Email id: ajithsridhar007@gmail.com
  </td></tr>
<tr><td></td><td>3.Member
Name: Thejas Murthy R
USN No. : 1CE17CS137
Contact No: 9945796958
Email id: thejasmurthyr@gmail.com
  </td></tr>
<tr><td></td><td>4.Member
Name: Vidhyadhar Joshi
USN No. : 1CE17CS143
Contact No: 7022804892
Email id: vidhyadhardec22@gmail.com
  </td></tr>
</table>

13	Scope / Objectives ofthe project:	• This application will help to overcome the problem faced by visually impaired people in exchanging denominations in their daily routines like groceries, and other activities. • Screen reading tools like VoiceOver (iOS) and TalkBack (Android) comes in-built within smartphones, so that users will be able to detect and identify the denominations with ease. • User-friendly application for technically weak people. • Flutter application overcomes the traditional limitations of cross-platform approaches and straight-forward integration with Firebase (Database). • Firebase (Real-time database) helps to store and synchronize data. It also has fast and secure web hosting.

14	Methodology of work: (Including diagram, flow chart and design calculations)	 ● Users will click on the button, where they can take an image of the denomination through their mobile camera and then the image will be sent to the backend (Firebase Server). ● In the Client-Side Server, Image will be zipped and sent to the server. ● In Firebase Server, it will unzip the image and feed the image to the model to detect and identify the bank note using DL (Deep Learning) model. ● Then the result will be zipped and sent back to UI/UX where it will be unzip and displayed on the screen with production of audio as output.

<table>
<tr><td>15</td><td>Expected Outcome ofthe project:</td><td>• Lightweight AI Powered Mobile Application for visually impaired people.
• This application is to identify the denominations of Banknotes using in-built screen reader tools like TalkBack (Android) and VoiceOver (iOS) as well as audio feedback to ensure simple navigation.</td></tr>
<tr><td>16</td><td>Application of the project:</td><td>This application will help to overcome the problem faced by visually impaired people in exchanging denominations in their daily routines like groceries, and other activities.</td></tr>
<tr><td>17</td><td>Budget details with Materials required:</td><td>
<table>
<tr><th>Budget</th><th>Amount</th></tr>
<tr><td>a) Materials/Consumable</td><td>2400.00</td></tr>
<tr><td>b) Labor</td><td>0.00</td></tr>
<tr><td>c) Travel</td><td>0.00</td></tr>
<tr><td>d) Report</td><td>1000.00</td></tr>
<tr><td>e) Miscellaneous</td><td>2000.00</td></tr>
<tr><td>Total</td><td>5400.00</td></tr>
</table>
</td></tr>
</table>

	planned activities:

Sl.No	Activities Planned	1 Month	2 Month	2 Month	2 Month	2 Month	1 Month
01	Literature review						
02	Planning/ Designing						
03	Assembly/ Fabrication work						
04	Final Testing						
05	Result & Calculation/ Conclusion						
06	Preparation of Report & Submission						

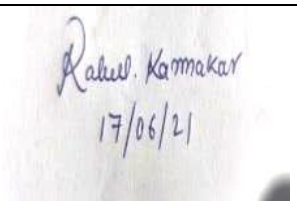
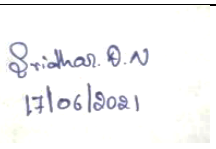
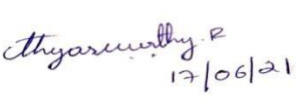
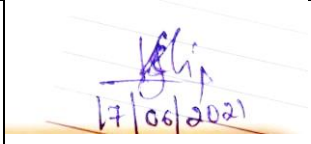
18	Date of commencement of the Project:	01/10/2020
19	Probable date of completion of the project:	01/08/2021
20	Duration of project work:	10 months
21	Pert chart for completion of the project in said duration as per	

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the projectproposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, 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 are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belagavi. If the project group fails to attend the evaluation in Regional centre and for Exhibition in VTU Belagavi, the sponsored project amount will be returned back to VTU immediately.

We also hereby, enclose the endorsement form to VTU, Belagavi.

SL.No	Name of the Student	Signature with date
01	Rahul Karmakar	
02	Sridhar D N	
03	Thejas Murthy R	
04	Vidhyadhar Joshi	

Visvesvaraya Technological University
"JnanaSangama"
Belagavi: 590018
Karnataka, India.
Tele: 0831-2498225 ,2405454

VTU Sponsored Student Project Proposal Format

01	Academic Year :	2020-2021	
02	Semester :	8th Semester	
03	Name of the College :	City Engineering College	
04	Branch:	Electronics and Communications	
05	Project Title:	Smart Farming	
06	Project Discipline:	Advancement in Agriculture	
07	Principal	Name:	Dr. V.S. RAMAMURTHY
		Contact No:	080-22560313
		Email id:	cityengineering123@gmail.com
08	HOD	Name:	Prof. Mallikarjuna GS
		Contact No:	9980133030
		Email id:	hodece@cityengineeringcollege.ac.in
09	Project Guide	Name:	Prof. Deepa Mathew
		Contact No:	9632864033
		Email id:	deepamathew@cityengineeringcollege.ac.in
10	Project Co-Guide(If any)	Name:	
		Contact No:	
		Email id:	
11	Project Committee coordinator (Identified by the college) :	Name:	Dr. Shalini Prasad
		Contact No:	9449445388
		Email id:	shaliniprasad@cityengineeringcollege.ac.in

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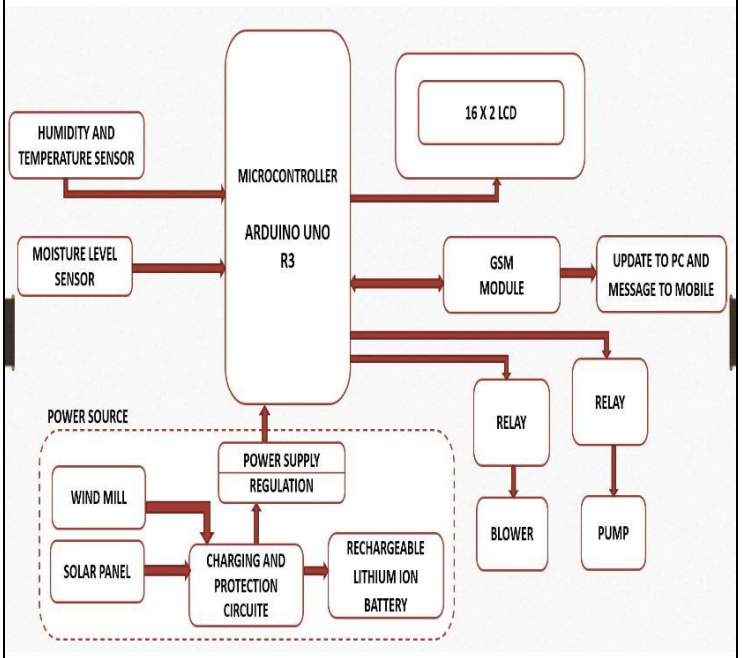
CITY ENGINEERING COLLEGE
Kanakapura Main Road, Bangalore-560061

<table>
<tr><td rowspan="11">12</td><td colspan="2">Name of project group Members</td></tr>
<tr><td colspan="2">1.Group leader and Member</td></tr>
<tr><td>Name: Nimisha Prasad
USN No. : 1CE17EC036
Contact No: 9611604964
Email id: nimisha.pras@gmail.com</td><td>  </td></tr>
<tr><td colspan="2">2.Member</td></tr>
<tr><td>Name: Divya S
USN No. : 1CE17EC024
Contact No: 9972626479
Email id: divyas1802@gmail.com</td><td>  </td></tr>
<tr><td colspan="2">3.Member</td></tr>
<tr><td>Name: Rakesh S
USN No. : 1CE17EC045
Contact No: 8151959891
Email id: rakeshshashikumar007@gmail.com</td><td>  </td></tr>
<tr><td colspan="2">4.Member</td></tr>
<tr><td>Name:
USN No. :
Contact No:
Email id:</td><td>Passport size photo</td></tr>
<tr><td colspan="2">5.Member(If any)</td></tr>
<tr><td>Name:
USN No. :
Contact No:
Email id:</td><td>Passport size photo</td></tr>
<tr><td>13</td><td>Scope / Objectives of the project:</td><td>Smart Farming is an emerging concept that refers to managing farms using modern Information and Communication Technologies to increase the quantity and quality of products while optimizing the human labour required. Smart farming has a real potential to deliver a more productive and sustainable form of agricultural production, based on a more precise and resource-efficient approach. The solar and wind energy which are natural, clean and safe resources can be used for generating electricity.</td></tr>
</table>

14 **Methodology of work:**
(Including diagram, flow chart and design calculations)



- We are developing a smart farm where the water is supplied to the farm automatically by checking the water content in the soil and supplying according to the requirements of the crop, the power required for the process is achieved by converting the wind and solar energy.

- Arduino uno is the heart of our project. The board is used to program, and the program is flashed using Arduino IDE.

- The power supply unit supplies power to all the peripherals.

- We have windmill and solar panel setup which is natural, economic, clean and safe resources. It provides a considerable electrical energy production with less expense apart from the construction and maintenance budget.

		• The solar panel is used and the charging protection circuit is built to charge the batteries. This power can then be used to run the motor. • The windmill can be remotely monitored and also prolong the lifetime of the wind mill and also increase its productivity. • Everyday water has to supplied to the crop in required amount, to check the water content in the soil we have a soil moisture sensor which will measure the volumetric water content in soil. • Once the moisture content is measured, this data will be sent to the system and the motor is switched on or off accordingly to the conditions. • We also have a DTH sensors which helps is knowing the temperature and humidity, the humidity sensor measures the humidity in the environment and converts its findings into a corresponding electrical signal. • The unfavorable weather conditions will affect the crops, greenhouse farming optimizes growing conditions and protects the crops from extreme weather conditions. • The blower is placed to maintain the temperature if the temperature is high the blower gets on and once the temperature is reduced then the blower gets off. • The GSM module is used to establish communication between the devices.

15	Expected Outcome of the project:	The batteries will get charged from the solar and wind energy, and this power will be utilized to run all the devices like motors in field. In the agricultural field the water will be supplied to the fields automatically according to the requirements of the crops and also the humidity and temperature will be maintained, every information regarding the agricultural field like moisture content in soil, temperature and humidity in the field, motor condition, blower condition will be updated to the pc and the mobile, in this way the field will be monitored remotely.
16	Application of the project:	• Electricity generation using solar energy and wind energy. • Agricultural fields.
17	Budget details with Materials required:	Components Required: Sensor – Rs.400/- • DHT11-Temperature n Humidity • Moisture sensor with driver board Actuators - Rs.300/- • 2 Dc Fan or 5V BLDC Small fan • DC Submersible water pump

		Power Supply – Rs.600/- • 12V 2A Adapter • Multipin board • 12V Relay - 2 Wires - Rs.150/- • Male to Female • Male to Male • Female to Male • Single strand wires Power source - Rs.800/- • Wind mill module • Solar panel • 18650 Li-ion Battery Charger • 18650 Li-ion Battery 3.7V • 18650 Battery Holder Microcontroller Board: Aurdino UNO R3 with USB Cable - Rs.750/- Display Device: 16X2 LCD module - Rs.200/- Communication Device: GSM Module - Rs.900/- Project setup - Rs.2000/- Total budget - Rs.6100/-	
18	Date of commencement of the Project:		12/10/2020
19	Probable date of completion of the project:		17/07/2021
20	Duration of project work:		9 months
21	Pert chart for completion of the project in said duration as per		

	planned activities:

Sl.No	Activities Planned	1 Month	2 Month	2 Month	2 Month	2 Month	1 Month
01	Literature review						
02	Planning/ Designing						
03	Assembly/ Fabrication work						
04	Final Testing						
05	Result & Calculation/ Conclusion						
06	Preparation of Report & Submission						

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, 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.

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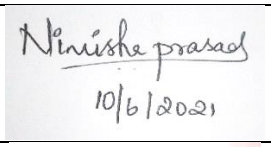
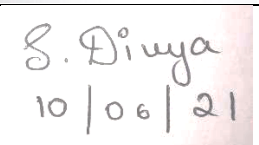
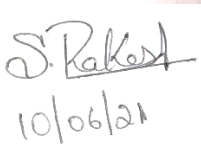
We also hereby, enclose the endorsement form to VTU, Belagavi.

SL.No	Name of the Student	Signature with date
01	Ms. NIMISHA PRASAD	
02	Ms. DIVYA S	
03	Mr. RAKESH S	

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CITY ENGINEERING COLLEGE
Kanakapura Main Road, Bangalore-560061

ENDORSEMENT

(Endorsement to be taken in the institution on Department Letter head)

This is to certify that 1] Ms. NIMISHA PRASAD

2] Ms. DIVYA S

3] Mr. RAKESH S

4] ……

Are bonafide students of Department in Electronics and Communications , of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the Regional centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional centre and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Visvesvaraya Technological University
"JnanaSangama"
Belagavi: 590018
Karnataka, India.
Tele: 0831-2498225 ,2405454

VTU Sponsored Student Project Proposal Format

01	Academic Year :	2020-2021	
02	Semester :	8th Semester	
03	Name of the College :	City Engineering College	
04	Branch:	Electronics and Communication	
05	Project Title:	Garbage Segregation and Monitoring System	
06	Project Discipline:	Waste Management/ Disposal	
07	Principal	Name:	DR V.S RAMAMURTHY
		Contact No:	080-22560313
		Email id:	cityengineering123@gmail.com
08	HOD	Name:	Prof MALLIKARJUNA GS
		Contact No:	9980133030
		Email id:	hodece@cityengineeringcollege.ac.in
09	Project Guide	Name:	Prof SHYLAJA K
		Contact No:	9916780169
		Email id:	
10	Project Co-Guide(If any)	Name:	
		Contact No:	
		Email id:	
11	Project Committee coordinator (Identified by the college) :	Name:	DR SHALINI PRASAD
		Contact No:	9449445388
		Email id:	shaliniprasad@cityengineeringcollege.ac.in

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<table>
<tr><td rowspan="16">12</td><td colspan="2">Name of project group Members</td></tr>
<tr><td colspan="2">1.Group leader and Member</td></tr>
<tr><td>Name: TOUSIF PASHA
USN No. :1CE17EC070
Contact No:8951232304
Email id:contact.to.tousif@gmail.com</td><td>  </td></tr>
<tr><td colspan="2">2.Member</td></tr>
<tr><td>Name: TANUSHREE C
USN No. :1CE17EC067
Contact No:9066310370
Email id:tanushreecgowda@gamil.com</td><td>  </td></tr>
<tr><td colspan="2">3.Member</td></tr>
<tr><td>Name: SYED SMAEER PASHA S B
USN No. :1CE17EC066
Contact No:9113983849
Email id:syedsameerpasha582@gmail.com</td><td>  </td></tr>
<tr><td colspan="2">4.Member</td></tr>
<tr><td>Name:
USN No. :
Contact No:
Email id:</td><td>Passport size photo</td></tr>
<tr><td colspan="2">5.Member(If any)</td></tr>
<tr><td>Name:
USN No. :
Contact No:
Email id:</td><td>Passport size photo</td></tr>
</table>

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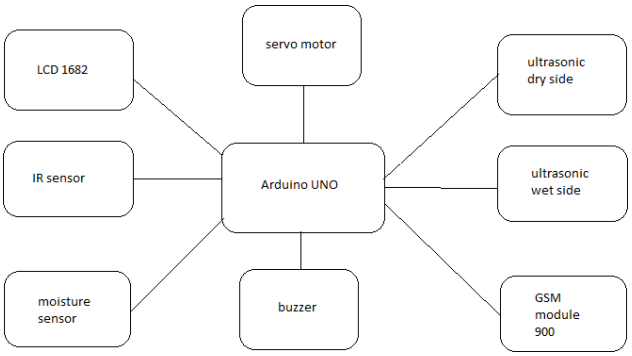
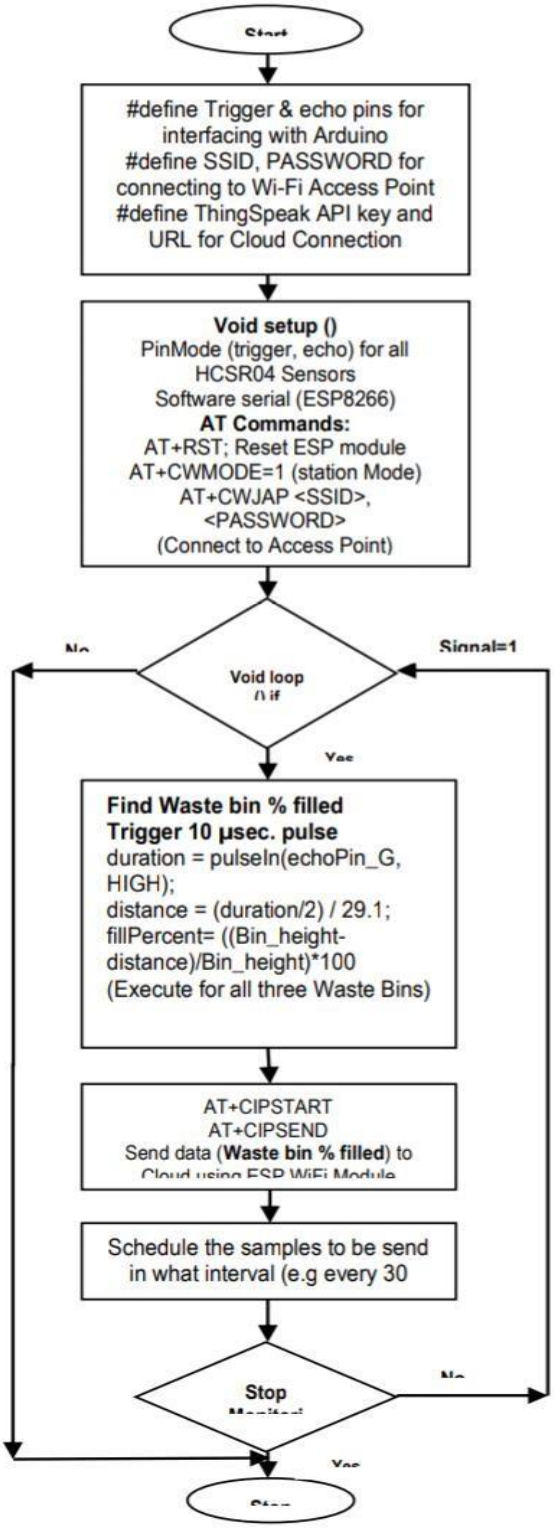
13	Scope / Objectives of the project:	• The proposed system would be able to automate the solid waste monitoring process and management of the overall collection process using IOT. • The Proposed system consist of main subsystems namely Smart Trash System (STS) and Smart Monitoring and Controlling Hut (SMCH). • In this proposed system, the received signal indicates the waste bin status at the monitoring and controlling system.
14	Methodology of work: (Including diagram, flow chart and design calculations)	BLOCK DIAGRAM:  **Ultrasonic sensor:** here we use two ultrasonic sensors, one at the **wet side** of the Bin and another is at the **dry side** of the Bin. It indicate the level of garbage inside the bin. **IR sensor** : It detect the garbage and activate the mechanism of segregation. **Moisture sensor**: sense whether the garbage is wet or dry (organic and inorganic). **Servo motor** : It flips the mechanical door toward its corresponding bin. **GSM module 900 :** It continuously monitor and sends message to the authorities if the bin is full.



15	Expected Outcome of the project:	• Output will be display in mobile as – 'your city engineering college bin organic side is full' or 'your city engineering college bin inorganic side is full'. 
16	Application of the project :	• It is used in the "Smart city". • It helpful in the government project of "SWATCHH BHARAT ABHIYAN". • The waste segregator can be improvised to include the separation of paper and plastic, safe segregation of biomedical waste generated at home, compact and aesthetic Mechanical design.
17	Budget details with Materials required:	Arudino Uno, cable, Wifi esp8266,Servo motor, Ultrasonic, Wire, Adaptor 2amp, Lcd 16x2, 7805 circuit, Cardboard cutting pieces, Glue gun, Glue stick, Bug stick, Ir sensor. TOTAL – 6500/-
18	Date of commencement of the Project :	November 2020
19	Probable date of completion of the project :	JULY 2021

20	Duration of project work :	9 MONTHS
21	Pert chart for completion of the project in said duration as per	

	planned activities:

Sl.No	Activities Planned	1 Month/ Week	2 Month/ Week	3 Month/ Week	4 Month/ Week	5 Month/ Week	6 Month/ Week
01	Literature review						
02	Planning/ Designing						
03	Assembly/ Fabrication work						
04	Final Testing						
05	Result & Calculation/ Conclusion						
06	Preparation of Report & Submission						

DECLARATION BY THE STUDENTS

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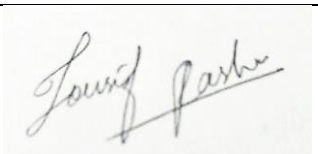
We also hereby, enclose the endorsement form to VTU, Belagavi.

SL.No	Name of the Student	Signature with date
01	SYED SAMEER PASHA S B	
02	TANUSHREE C	
03	TOUSIF PASHA	
04		

Visvesvaraya Technological University
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Belagavi: 590018
Karnataka, India.
Tele: 0831-2498225 ,2405454

VTU Sponsored Student Project Proposal Format

01	Academic Year :	2020-2021	
02	Semester :	8th SEM	
03	Name of the College :	CITY ENGINEERING COLLEGE	
04	Branch:	MECHANICAL ENGINEERING	
05	Project Title:	DESIGN & FABRICATION OF CONTROLLED WIRELESS AGRO SPRAYER	
06	Project Discipline:	ADVANCED AGRICULTURAL EDUIPMENT	
07	Principal	Name:	DR V.S. RAMAMURTHY
		Contact No:	080-22560313
		Email id:	cityengineering123@gmail.com
08	HOD	Name:	Dr. S KARUNAKARA
		Contact No:	+91 9844065414
		Email id:	hodmech@cityengineeringcollege.ac.in
09	Project Guide	Name:	SAMPATH H P
		Contact No:	+91 9880001967
		Email id:	hpsampath.037@gmail.com
10	Project Co-Guide(If any)	Name:	
		Contact No:	
		Email id:	
11	Project Committee coordinator (Identified by the college) :	Name:	
		Contact No:	
		Email id:	

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CITY ENGINEERING COLLEGE
Kanakapura Main Road, Bangalore-560061

<table>
<tr><td rowspan="15">12</td><td colspan="3">Name of project group Members</td></tr>
<tr><td colspan="3">1.Group leader and Member</td></tr>
<tr><td colspan="2">Name: MANOJ R S
USN No. :1CE17ME011
Contact No: 9060774444
Email id: manojgowda9898@gmail.com</td><td>  </td></tr>
<tr><td colspan="3">2.Member</td></tr>
<tr><td colspan="2">Name: PRASHANT S KOTAGI
USN No. : 1CE17ME020
Contact No: 8050697479
Email id: prashantkotagi163@gmail.com</td><td>  </td></tr>
<tr><td colspan="3">3.Member</td></tr>
<tr><td colspan="2">Name: PAVAN KUMAR A
USN No. : 1CE17ME017
Contact No: 8867521538
Email id: pavankumar3964@gmail.com</td><td>  </td></tr>
<tr><td colspan="3">4.Member</td></tr>
<tr><td colspan="2">Name: DHANUSH B R
USN No. : 1CE17ME005
Contact No: 8088549074
Email id: dhanusharadhya5@gmail.com</td><td>  </td></tr>
<tr><td colspan="3">5.Member(If any)</td></tr>
<tr><td colspan="2">Name:
USN No. :
Contact No:
Email id:</td><td>Passport size photo</td></tr>
<tr><td rowspan="3">13</td><td rowspan="3">Processing Fee Details</td><td colspan="2">Bank name : CENTRAL BANK OF INDIA</td></tr>
<tr><td colspan="2">Branch : JARAGANAHALLI</td></tr>
<tr><td colspan="2">DD number with date :
OR
Cheque no with date :</td></tr>
<tr><td>14</td><td>Scope / Objectives of the project:</td><td colspan="2">1) TO REDUCE FARMERS EFFORTS AND HEALTH PROBLEMS.
2) MODERNIZE AGRICULTURE SECTOR.
3) MAKE AVAILABLE IN LEAST COST.</td></tr>
</table>

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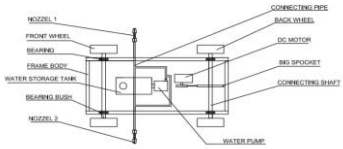
15	Methodology of work: (Including diagram, flow chart and design calculations)	1) DESIGN OF FERTILIZER SPRAYER 2D LAYOUT. 2) SKETCHING 3D FIGURE & DESINGING MODEL. 3) MAKE NUMBER OF TRAILS BY VARYING THE PARAMETERS. 4) MANUFACTURING OF ACTUAL MODEL. 5) DESIGN THE SPRAYER AND MANUFACTURING. 6) TESTING & MODIFACATION. 7) INTERPRETATION OF RESULT & DISUSSION. 
16	Expected Outcome of the project:	1) REDUCE FARMERS EFFORT & TIME. 2) REQURIES LESS MAN POWER. 3) OVERCOME LABOUR PROBLEM. 4) SATISFY THE PARTIAL THRUST OF INDIAN CULTURE.
17	Application of the project :	1) SPRAYING PESTICIDES. 2) ALSO USED FOR SPRAYING MOSQUITO. 3) REPELLENT & SANITIZER.
18	Budget details with Materials required:	WATER PUMP, NOZZLE,ALLOYS, STORAGE TANK,D C MOTORS,BLUETOOTH,AURDINO,12V BATTERY,CHASSIS BUDGET: 12000/-

19	Date of commencement of the Project :	28-12-2020
20	Probable date of completion of the project :	15-06-2021
21	Duration of project work :	5 - 6 MONTHS
22	Pert chart for completion of the project in said duration as per planned activities:	

Sl.No	Activities Planned	1 Month	2 Month / ...	3 Month ...	4 Month ...	5 Month ...	6 Month ...
01	Literature review						
02	Planning/ Designing						
03	Assembly/ Fabrication work						
04	Final Testing						
05	Result & Calculation/ Conclusion						
06	Preparation of Report & Submission						

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We also hereby, enclose the endorsement form to VTU, Belagavi.

SL.No	Name of the Student	Signature with date
01	PRASHANT S KOTAGI	10/05/21
02	MANOJ R S	10/05/2021
03	PAVAN KUMAR A	10/05/2021
04	DHANUSH B R	10/5/2021
05		

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