



കേരളം കേരल KERALA

DF 741660

This Memorandum of Understanding (MoU) is entered into this 25<sup>th</sup> day of August, 2021 by and between:

Department of Electronics and Communication Engineering, St. Joseph's College of Engineering and Technology, Palai, (hereinafter called SJ CET), a professional education institution, established in 2002 represented by the Head of the Department on the first part;

AND

Whereas, M/S HAPT Engineering and Business Solutions, Palai, Kottayam, Kerala offers the latest technology and capabilities to meet and exceed the most challenging project requirements for Real-time needs and provide solutions to the forefront of designing, developing and executing IoT ecosystems with end-to-end solutions to connect Sensors, Software, and Services in all engineering fields represented by its **Managing Director** on the second part.

WHEREAS

After due discussions and deliberations at the appropriate levels, it is felt necessary to define and widen the scope of relationship currently existent between both the parties; and to extend the scope of co-operation to the respective areas of core competence.

No. 2185

RS-100/-

24/08/2021

Principal

S.J.C.E.T Palai



*Sumathi*  
Rajapuram Vendor  
C.V. Sumathi



## WHEREAS

The First Party, SJ CET Palai, is a reputed institution in professional education sector.

The Second Party is engaged in the designing, developing and implementing IoT ecosystems with end-to-end solutions to connect Sensors, Software, and Services in all engineering fields.

The First Party and the Second Party believe that collaboration and cooperation between themselves would promote more effective use of their resources and provide each of them with enhanced opportunities.

The parties intent to cooperate and focus their efforts within the area of Education, Training, Research and Internship.

Both parties being legal entities decide to sign this MoU for advancing their mutual interests.

## THEREFORE

IN CONSIDERATION OF THE MUTUAL PROMISES SET FORTH IN THIS MoU, THE PARTIES HERETO AGREE AS FOLLOWS:

- This agreement seeks to foster collaboration, provide opportunity for hands-on experience, and to facilitate advancement of knowledge on the basis of reciprocity, best effort, mutual benefit, and frequent interactions.
- Such cooperation shall seek to facilitate effective utilization and updation of the skill sets of the faculty and students of the first party keeping in mind the ever changing needs of the industry; as well as seek to associate in the design and developmental activities of the second party.
- The second party may give industry specific valuable inputs to the first party in improving the scope of teaching- learning.
- The second party may propose skill development programs to the students, so as to bridge the skill gap and make them industry ready.
- Both the parties may agree to do collaborative research on any emerging technological area, identified for joint activity.
- The second party will actively engage with the first party to upskill the students to meet the emerging industrial requirements; and thereby help to place such students through internships.



- The second party may allot industrial projects of selected groups of the department and guide them in its design/development and fabrication. The first party in turn will facilitate selection of perspective student batches for carrying out such industrial projects.
- The first party may provide laboratory facilities to the selected students to solve industry problems identified by the second party. The second party in turns will visit and supervise student's activity in the lab for the time bound execution/fabrication of the allotted projects.

#### COORDINATION:

Both the parties shall suggest for themselves and declare one SPOC (Single Point of Contact), who shall regularly engage in mutual consultation and discussion to identify possible collaborative programs as well as to schedule the same.

#### SCOPE OF THE CO-OPERATION UNDER THE MoU

Subject to mutual consent, the areas of cooperation will include any program or activity proposed by either party as felt desirable and feasible on either side; and that contributes to fostering and development of the objectives stated out in this MoU.

#### AMENDMENTS, RENEWAL, AND TERMINATION

This Memorandum of Understanding may be modified through the mutual discussion and consent of both the parties.

This Memorandum of Understanding will remain valid, until it is expressly terminated by either party after giving 30 days' Notice in writing, expressing the intention to terminate the agreement.

#### OTHER TERMS AND CONDITIONS

- Both the parties agree to respect each other's rights to intellectual property. All intellectual and proprietary rights held by either party to this MoU, prior to entering to this MoU and all materials in which intellectual property is held, disclosed or introduced, shall remain the property of the party introducing the same.
- Further, the intellectual property rights that arise as a result of any collaborative research or activity under this MoU will be worked out on a case-by-case basis, and will be consistent with the officially laid down IPR policies of the two institutions.




- This Agreement places no financial obligations or funding commitments on either Party. Any commitment of resources (financial or otherwise) required by each of the parties derived out of this MoU may be agreed upon by mutual discussions between the respective SPOCs and may be executed through separate supplementary program agreements as necessitated.

In Witness of the terms of this agreement, our signatures are affixed:

Signature with the name, designation, date & seal

Signing for the First Party

  
\_\_\_\_\_  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGG.  
ST. JOSEPH'S COLLEGE OF ENGG. & TECHNOLOGY  
CHOONDACHERRY P. O., PALAI-686 579

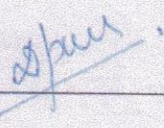
Signing for the Second Party



Witness for the First Party

  
\_\_\_\_\_  


Witness for the Second Party

  
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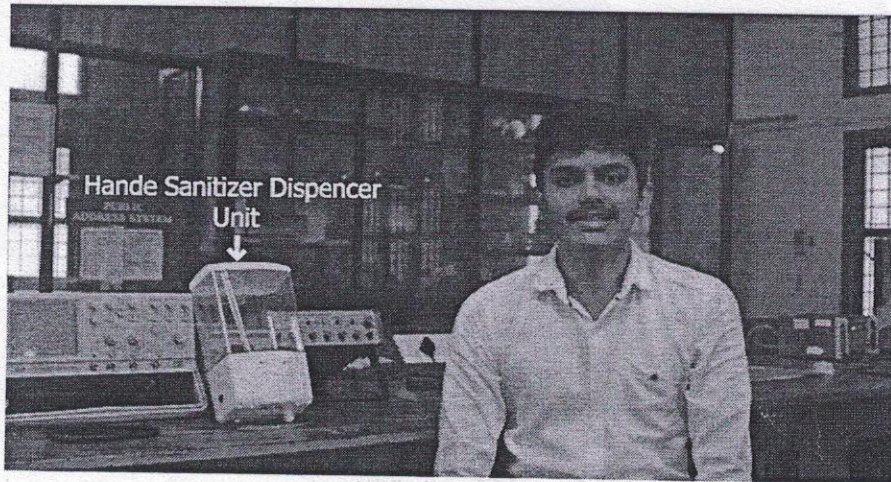
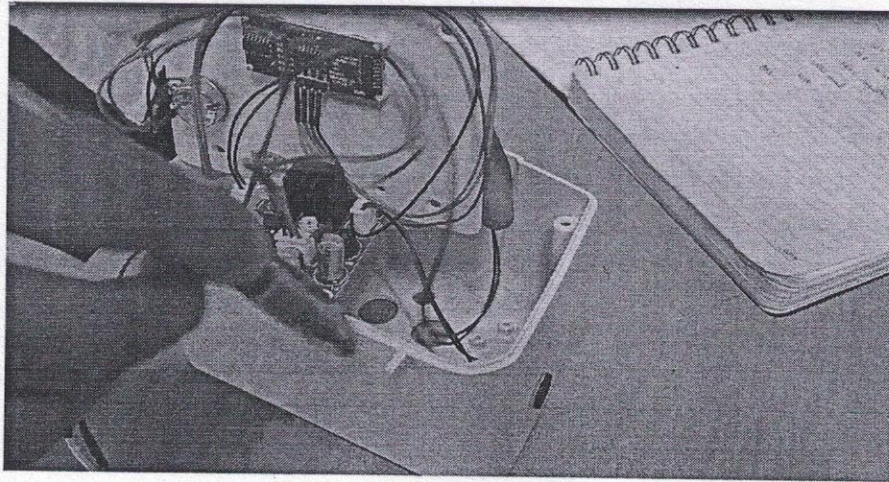


## Lavange - Automated Hand Sanitizer Dispenser Unit

Lavange is a fully automated Hand Sanitizer Dispenser Unit, implemented by the Electronics and communication student Association (ECSA) Of SJ CET Palai by the guidance of M/S HAPT Engineering and Business Solutions, Palai, Kottayam. Palai.

In brief, the product works under a solenoid valve and the nozzle of the valve is found at the bottom of the product. There are two indicator lights- one for power and the other for detecting the presence of palm. The power supply (12 V), is provided at the left end. The Ultrasonic sensor in association with a 10K potentiometer, detects the presence of hand by around 6 cm distance and the flow of the sanitizer is controlled by the Pot. The detecting distance can be varied by using the voltage regulator, inside the system.

The team under the guidance of faculties as well as the experts from HAPT implemented the idea into fruitfulness. Beginning from the circuit design, soldering till the assembling, all the tasks were done by the steadfast volunteers of ECSA. The casing was fabricated by another helping hand and all other efforts were taken by the active student members. The circuit was first designed by optimizing the circuit diagram. The size and positions of components were analyzed to minimize the size of the PCB board for the cost-effective production of the project. Using design tools such as Orcad and Proteus, the circuit schematics is drawn and the PCBs are routed. After etching the PCBs, the components are soldered to respective locations. After the designing of the PCB board, the other connections such as sensors are connected and finally these are incorporated to the casing, which is customized outside. The product works under a solenoid valve and the nozzle of the valve is found at the bottom of the product. There are two indicator lights- one for power and the other for detecting the presence of palm. The power supply (12 V), is provided at the left end. The Ultrasonic sensor in association with a 10K potentiometer, detects the presence of hand by around 6 cm distance and the flow of the sanitizer is controlled by the Pot. The detecting distance can be varied by using the voltage regulator, inside the system. A hanging clamp is attached to hang the product to the wall.



DEPARTMENT OF E & C. ENGINEERING  
CHONGDACHERRY P. O., PALAI-686 579  
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ADDITIONAL SIGNATURE