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(71)Name of Applicant :

1)SWAMI VIVEKANANDA UNIVERSITY

Address of Applicant :Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat -----

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)IMDADDUL HAQUE MONDAL

Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY, Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat -----

2)SUMON INTEWAJ ALAM

Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY, Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat -----

3)MR. ABHISHEK DHAR

Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY, Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat -----

4)MR. PROMIT KUMAR SAHA

Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY, Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat -----

5)DR. RITUPARNA MUKHERJEE

Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY, Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat -----

6)MRS. SUSMITA DHAR MUKHERJEE

Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY, Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat -----

7)MR. SAURABH ADHIKARI

Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY, Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat -----

(57) Abstract :

Maintaining precise temperature and humidity levels is crucial in various applications, impacting product quality, human health, energy efficiency, and more. Traditional monitoring methods often lack real-time data, automation, and scalability. This project explores the development and implementation of an IoT-based temperature and humidity monitoring and control system. Micro-controller ESP32 for (data read, data upload, display I2C serial communication, send signal for Relays on or off), Oled Display: Displaying real-time data (Temperature, Humidity, Set Temperature, Set Humidity, Mode Status: Auto or Manual, IOT platform connected). The system successfully monitors and controls temperature and humidity levels within desired ranges. Real-time data visualization and remote-control capabilities are achieved through a user-friendly interface. Performance evaluation demonstrates accurate measurements and reliable control functionalities. This project demonstrates the effectiveness of IoT in temperature and humidity monitoring and control. The developed system offers improved data accessibility, automation, and scalability compared to traditional methods, making it a valuable solution for various applications Name of application: -

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