

(12) PATENT APPLICATION PUBLICATION

(21) Application No. **202141060144 A**

(19) INDIA

(22) Date of filing of Application : 23/12/2021

(43) Publication Date : 31/12/2021

(54) Title of the invention : **AN IOT BASED WASTE MANAGEMENT DEVICE THAT CONVERTS GREEN WASTE INTO ORGANIC MANURE**

(51) International classification	: C05F0003000000, A01K0001010000, A01C0003060000, A47G0029122000, G08B0021180000	(71) Name of Applicant : 1) RISHI UBR WOMENS COLLEGE Address of Applicant : NEAR JNTU METRO STATION, KUKATPALLY, HYDERABAD-85 .....
(86) International Application No	: PCT/	Name of Applicant : NA
Filing Date	: 01.01.1900	Address of Applicant : NA
(87) International Publication No	: NA	(72) Name of Inventor :
(61) Patent of Addition to Application Number	: NA	1) RISHI UBR WOMENS COLLEGE
Filing Date	: NA	Address of Applicant : NEAR JNTU METRO STATION, KUKATPALLY, HYDERABAD-85 .....
(62) Divisional to Application Number	: NA	
Filing Date	: NA	

(57) Abstract :

An IOT based waste management device that converts green waste into organic manure is the proposed invention that focuses on designing and implementing a device that will convert the wastes which are collected from plants of a particular home garden, house, building or even an agricultural land into organic manure without dispensing any toxic or hazardous material. The device will let the user know the step-by-step conversation stages to the registered mobile phone of the user using SOS alert mechanism. The device will also display the quantity of manure collected from time to time.

No. of Pages : 14 No. of Claims : 7



P. L

## ABSTRACT

### AN IOT BASED WASTE MANAGEMENT DEVICE THAT CONVERTS GREEN WASTE INTO ORGANIC MANURE

An IOT based waste management device that converts green waste into organic manure is the proposed invention that focuses on designing and implementing a device that will convert the wastes which are collected from plants of a particular home garden, house, building or even an agricultural land into organic manure without dispensing any toxic or hazardous material. The device will let the user know the step-by-step conversation stages to the registered mobile phone of the user using SOS alert mechanism. The device will also display the quantity of manure collected from time to time.

Gowthami S  
Patent Agent  
INPA 3797  
On behalf of Applicant  
Digitally Signed

Date:21/12/2021



P. H

## MEMORANDUM OF UNDERSTANDING

BETWEEN



ASSOCIATION OF LADY ENTREPRENEURS OF INDIA  
(Atal Incubation Centre ALEAP WE-HUB), Hyderabad

AND



**RISHI UBR DEGREE & PG COLLEGE FOR WOMEN**  
Rishi Campus, Near JNTUH Metro Station, Kukatapally  
Hyderabad, Telangana - 500090

This Memorandum of Understanding is entered into and effective as of 4<sup>th</sup> August 2021, and is valid until five years of the date of signing.

By and Between

Association of Lady Entrepreneurs of India (Atal Incubation Centre ALEAP WE HUB), Survey No.342, ALEAP common facilities building, ALEAP Industrial Estate, Near Pragathi Nagar, opposite JNTUH road, Kukatpally, Hyderabad 500072, Telangana, India

And

Rishi UBR Degree & PG College for Women, Rishi Campus, Near JNTUH Metro Station, Kukatpally, Hyderabad - 500090

**Association of Lady Entrepreneurs of India (ALEAP)**, a non-profit organization is an ISO 9001:2015 certified & NABET gold rank accredited organization, acts as a facilitator & helps woman in acquiring entrepreneurial skill, guides them to become economically independent and assists women from all walks of life in their enterprising endeavors. Now ALEAP in partnership with NITI AAYOG, the premier think tank of the Government of India (GOI), through its ATAL INNOVATION MISSION (AIM) is scaling up its Incubation facilities (Atal Incubation Centre– AIC ALEAP WE-HUB) at its ALEAP INDUSTRIAL ESTATE, Pragathi Nagar, Gajularamaram, Hyderabad. ALEAP put in concerted efforts for past 27 years and created ideal platform for incubation of startups in manufacturing sector (MSME).

With an objective to nurture the women startups, help them to sustain and grow AIC ALEAP WE-HUB is providing co-working spaces, equipment/machinery/tool labs/design labs, common facility rooms, high-speed Internet access, links to research / education resources, technology transfer, links to strategic partners, help with business basics, advisory services, networking with industry peers, marketing assistance, market Research, accounting/financial management, mentorship, Technology commercialization assistance, help with regulatory compliance, Intellectual property management, access to angel investors or venture capital, and conduct periodical entrepreneurship training programs, seminars, events, accelerator programs, capacity building programs, create a network of incubators for sharing of best practices, organize Start-up summits for sharing experiences of incubates, Industry visits etc.

The major focus sectors of AIC ALEAP WE-HUB incubator are:

1. Information Technology and ITES
2. Electronics and Engineering
3. Garments and Textiles
4. Biotechnology
5. Biodegradable Technologies



6. Food Processing and Technology
7. 3D Printing Technologies

A standalone self operating machinery units (20,000 sq.ft) as a common facility for innovations was created to provide access to the startups to perform R&D, Prototyping and Production to test the samples in the market. We have Baking and Biscuit Manufacturing lane (30 tons/month production), Solar dryers (15 tons/month) , freeze driers and Spices/Grains processing machinery (3 tons/month), Biotechnology with fermenter (15 tons/month), Biodegradable Unit (20 tons/month), Printing machine for Jute products exclusively, Socks manufacturing machinery with 1 lakh pieces per month and Electronics sector for R&D and Prototyping, IT and ITES with advanced Software and applications, Nine 3D printers along with industrial scale printers for rapid prototyping are available.

We have at present 70 innovative startups at various stage viz., Ideation, Proof of Concept (POC), Prototype, Minimum Viable Product (MVP) or early, mid and growth stages incubated at our Incubation Centre. The incubation center run different programs like Pre-Incubation (25 startups), Incubation (48 startups), Acceleration and Hyper Acceleration. We have successfully raised 4.5 Cr funding to 12 startups in the form of Grants, Schemes, Banking Loans, B2G, B2B business with success stories within one and half years of operation. We have recently received TIDE 2.0 Scheme as a G2C (Group 2 Centre) to support Electronics and IT sector startups from MEITY, GOI. At present we have 15 startups under this category

Rishi UBR Degree & PG College for Women traced out its foundation in 1991 as institute of higher learning located in 5.2 acres green sprawling Campus, Opp: JNTU, Hyderabad, Telangana.

Rishi UBR Charitable Educational Society was created in 1988 and traced out its foundation as Institute of higher learning for women ensuring quality education and we established Degree level courses during 1991. In the course of time over 33 years, Rishi has grown from a basic Degree level education into a highly selective management and technical courses.

Rishi UBR Group of Institutions started in 1988 with the motto of Empowering young women through education. The three pillars of the group of institutions are Truth, Discipline and Knowledge. Rishi UBR Degree & PG College for Women offers Graduation courses in B.Com (Computer applications), B.Sc.( Physical Sciences) with electives in Physics, Electronics and Statistics and BBA. The college offers PG Course in MBA approved by AICTE. The college is affiliated to Osmania University. The college is in a sprawling campus of 5.2 acres in the heart of the city near JNTUH Metro station, Kukarpally. The College honours its roots and the student population has leapt from 38 in 1988 to over 1600 students today including MBA & MCA in post-graduation and B.Tech engineering Course at Degree level. We have also made an indelible mark on higher education at large and at the same time, Rishi's environment is enhanced by diversity. Rishi M.S Institute of Engineering & Tech for women founded in 2009 with 300 intakes. Approved by AICTE New Delhi and Govt. of A.P. Affiliated to JNTUH, Hyderabad. Our aim is to make learning as choice for the students in their chosen area of study. The organization focused on broadening educational access to them and encourages to acquire knowledge, exposure, independence, hard-work, discipline, individualism, and enjoyment. All the qualities which will help students cope successfully with life after college.



Now, Atal Incubation Centre ALEAP We-Hub (supported by AIM, NITI Aayog, GOI) & Rishi MS Institute of Engineering and Technology for Women desire to record the broad terms and conditions that are jointly accepted and agreed to in this MOU as contained hereunder.

The two parties plan to co-operate & work together for mutual benefit in the following areas:

**Services from AIC ALEAP We-Hub:**

- Student and faculty membership opportunity
- Strengthening "Institutions Innovation Council" or Cell (IIC) of the College
- Student startup counseling program: College student startups with innovative ideas will be counseled on further course of action in their journey to become a startup
- Pre-Incubation Opportunity for students, research scholars and Faculty, if the innovation or idea is scalable and eligible
- Incubation and Acceleration Programs opportunity to Innovations selected through screening committee
- Access to infrastructure and equipment of our seven sectors for R&D, Prototyping, Product Development and MVP stage of the Idea / POC / Venture of the Innovator or Start-up (as per the terms and conditions of the Incubation Centre)
- Principal Investigator opportunity for faculty with PhD qualification or eligible faculty in R&D projects to guide startups and to apply for various grants
- Consultancy & Expertise sharing opportunities for senior academic professionals of the college, paving way for Industry -Academic interfacing
- To provide opportunities to attend and thereby expose the students to various industrial exhibitions, conferences & innovation fests
- Interning opportunities for students on selective basis
- Permitting Industry / Incubation visits to encourage students for entrepreneurship development

**Services from Rishi UBR Degree & PG College for Women**

- Access to Information on research / education resources and academic know how
- Access to Electronics, Artificial Intelligence (Computer Science) and other Labs
- Technical support in projects related to science and management from senior faculty or experts
- Access to Infrastructure of the college
- On boarding potential faculty who would be the mentors to support boot camps, Technology Readiness Level (TRL) activities for prototyping, guide startups on pro bono basis
- To refer or depute faculty or Resource persons for specific programs as speakers.

**Services on mutual basis:**

- Jointly organize awareness generation events on "Entrepreneurship Development" and Startup Hackathons, Workshops and Student Startup Training Programs
- Provide support and participation in student/faculty-oriented events organized by each party
- Networking for mutual benefit
- Provide infrastructure in terms of space in conducting events with mutual support.
- Recognizing the other party as a partner organization in selected events with mutual interest

**Terms and Conditions:**

- Both parties will nominate a point of contact for relationship/engagement with the organization.
- Both parties will allow each other to use the name and logo as a Partner solely for the purpose of (only) promoting the startup ecosystem.
- Both parties shall, for a period of 5 years or until the validity of MoU, mutually agree a level of fees or contributions to be made when opting for any fee-based services.

We agree to cooperate and work in the above-mentioned areas.

Signature & Seal

Mrs. K Rama Devi

President

Association of Lady Entrepreneurs

of India (ALEAP)

Chairperson & CEO,

AIC ALEAP We-Hub, Hyderabad



Signature & Seal

Ms. M. Rajasree

Secretary,

Rishi UBR Degree & PG College

for Women

Hyderabad







# Rishi U.B.R. P.G. College for Women

( Approved by A.I.C.T.E., New Delhi., & Affiliated to Osmania University )

Near J.N.T.U.H. Metro Station, Kukatpally, Hyderabad - 500 085.

Ref. :

Date : \_\_\_\_\_

## OFFICE ORDERS

Date: 09/07/2021

IPR Cell is constituted with the following faculty members for the academic year 2021-2022.

S.No	Name of the Committee Member	Department	Role
1	Ms. N S L Praveena	Business Management	Coordinator
2	Ms. G Kasturi	Science	Member
3	Ms. A. Sirisha	Commerce	Member

- To integrate IPR with education and enhance the quality of thinking.
- To spread awareness on Intellectual Property rights among the faculty and students.
- To conduct seminars/ awareness programs/ workshops on IPR
- To promote adherence to plagiarism.

Copy to Coordinator



*P. H. E.*  
Principal

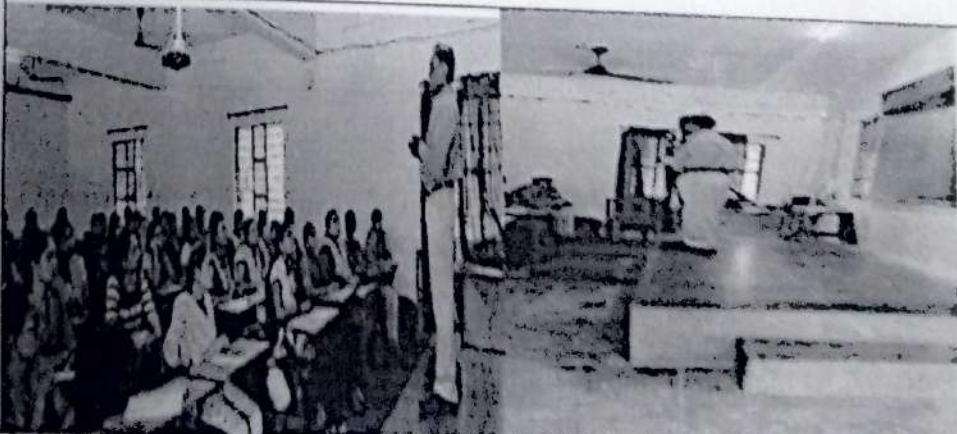
Rishi UBR PG College for W.  
Near JNTUH, Kukatpally,  
Hyderabad-500 085.





RISHIUBRDEGREE&PGCOLLEGE FOR WOMEN ✓


ACTIVITYREPORT

ACTIVITYREPORT	
NameoftheActivity	Seminar on overview of IPR and its evolution
TypeofActivity	Co- Curricular
DateandTimeofActivity	27-04-2019; 2:30 to 3:30 pm
Detailsofparticipants	106
Coordinator	Ms K Sivakaranthi
Organizing department/Supportsystem	Department Of Business Management
Collaborating Agency	Projects & Incubation Center
Description	The resource person was Dr Jahangir from Osmania University. The session started with welcoming and introduction of the speaker. The session focused on defining and explaining IPR. The various types of IPR like copyright, patents, trademarks, Industrial designs, Geographical Indications and Trade secrets was discussed. The tools for public outreach was shared. The importance of IPR was explained.
Photo	



## RISHI UBR DEGREE & PG COLLEGE FOR WOMEN

### ACTIVITY REPORT

Name of the Activity	Seminar on IPR-Importance and challenges in Domain
Type of Activity	Co Curricular
Date and Time of Activity	13-10-2020; 1 pm to 2.30 pm
Details of participants	96 students
Coordinator	Ms. D Harini
Organizing department/Support system	IPR Cell
Collaborating Agency	Dept. Of Commerce
Description	Mr. G Praveen and Dr. K Suguna were the resource persons. The session started with brief introduction of Intellectual Property rights (IPR). The session highlighted the importance of IPR and the crucial role it plays to protect the entrepreneurial spirit. A potential inventor has to be to beware of the law in India and also have assurance of how the invention can be protected. The various challenges of IPR was also discussed. Students were explained on how IPR can help securing the ideas, export them and ensure profit and growth. The major challenges like copying, plagiarism and piracy for IPR Domain were discussed.
Photo	







RISHI UBR DEGREE & PG COLLEGE FOR WOMEN

ACTIVITY REPORT

Name of the Activity Seminar On IPR- Geographical Indicators

Type of Activity Co Curricular

Date and Time of Activity 08-01-2021; 11am to 12.30 pm

Details of participants 63 students

Coordinator MS. N S L Praveena

Organizing department/Support system IPR Cell

Collaborating Agency Dept. Of Science

Description

The resource person was Ms. Archana Patil from Rishi MS Institute of Engineering & technology for Women..The session started with taking students opinion on IPRs. The various products of our country which have specialty were introduced and discussed. The IPR-GI was explained and the relevance was discussed. The importance of Geographical indicators and the connect to the place of origin was discussed. The students were divided into groups to discuss on the products which are associated to a region. The session helped students understand the importance of IPR-GI and how it would protect those products.

Photo





## Rishi UBR Degree & PG College for Women

### ACTIVITY REPORT

Name of the Activity	Seminar On IPR & Research Ethics
Type of Activity	Co-Curricular
Date and Time of Activity	07-07-2021; 2:00 pm to 3:30 pm
Details of participants	78students ; 4 faculty Members
Coordinator	Dr. K Suguna
Organizing department/Support system	IPR Cell
Collaborating Agency	R & D Cell
Description	<p>The resource person was Ms. N S L Praveena. The role of IPR in creating an ethical research environment had been discussed. IPR tries to establish secure channel for transfer of know how. IPR helps the researchers to protect their work and avoid plagiarism also. The linkage of IPR to research ethics was explained. The session focussed on not to infringe the copyright of the owner or author of the published work.</p>
Photos	








## Rishi UBR Degree & PG College for Women

### ACTIVITY REPORT

Name of the Activity	Seminar on IPR – Indian Eco system
Type of Activity	Co-Curricular
Date and Time of Activity	30-09-2021; 11:30 am to 12.30pm
Details of participants	86 students
Coordinator	Ms. Mounika Simhari
Organizing department/Support system	IPR Cell
Collaborating Agency	Projects & Incubation Center
Description	<p>The resource person was Ms. N S L Praveena. In the growing technological era, the role of IPR was explained. The Indian IP ecosystem and Government initiatives were discussed. The IP filing trends and registration process was explained. The various steps in patent registration process lie filling the patent application and get it numbered; request for publication, request for examination and then examination report. The important step is checking the prior search the patentability of the invention. students were encouraged to raise questions and the doubts were clarified.</p>
Photos	



# Rishi U.B.R. P.G. College for Women

( Approved by A.I.C.T.E., New Delhi., & Affiliated to Osmania University )

Near J.N.T.U.H. Metro Station, Kukatpally, Hyderabad - 500 085.



Ref. :

Date : \_\_\_\_\_

## OFFICE ORDERS

Date :09/07/2021

Research and Development Cell is constituted with the following faculty members for the academic year 2021-22.

S.No	Name of the Committee Member	Department	Role
1	Dr.S Subbalakshmi	Business Management	Coordinator
2	Dr. T.Alekhyia	Commerce	Member
3	Dr. P. Kameswara Rao	Business Management	Member
4	Ms. K. Lakshmi Tulasi	Science	Member

- Motivate the faculty members and students to publish papers in Journals and Conferences
- Motivate the faculty to file patents
- Motivate the faculty members to do consultancy work
- Organize conferences/seminars/workshops
- Procure research funding by applying projects to funding agencies
- Procure funding for conferences

Copy to Coordinator



*[Signature]*  
Principal

Rishi UBR P.G. College for Women  
Near JNTU.H. Kukatpally,  
Hyderabad-500 085.





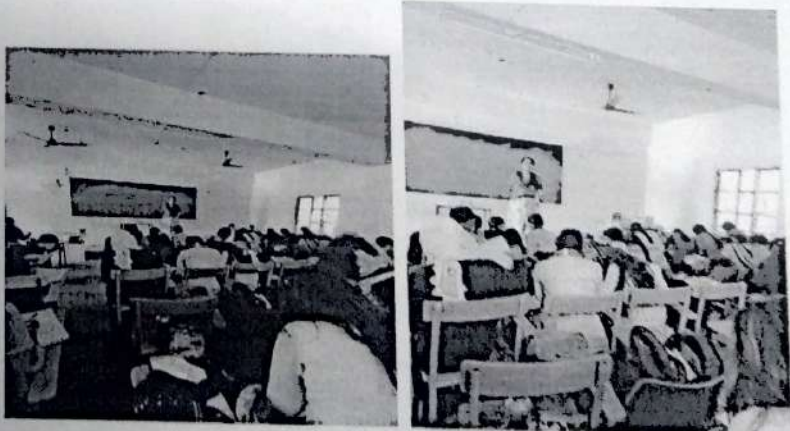
## Rishi UBR Degree & PG College for Women ✓

ACTIVITY REPORT	
Name of the Activity	Seminar On Research Design -Field research and Survey research
Type of Activity	Co-Curricular
Date and Time of Activity	23-03-2022; 1 pm to 2:30 pm
Details of participants	62
Coordinator	Dr S Subbalakshmi
Organizing department/Support system	R & D Cell
Collaborating Agency	Department of Business Management
Description	<p>The resource person for the session was Dr Anuradha Gupta.. The importance of Research design was explained. The components of Field and survey research and the usage according to the requirement is explained. The procedure of doing field survey and research survey was dealt with. The methods and application of the field and research survey was shared with students . Some examples of field and survey research were also discussed for better understanding.</p>
Photos	





## Rishi UBR Degree & PG College for Women ✓

ACTIVITY REPORT	
Name of the Activity	Seminar on Effective Research writing
Type of Activity	Co-Curricular
Date and Time of Activity	11-08-2021; 1 pm to 2:00 pm
Details of participants	82 students
Coordinator	Dr S Subbalakshmi
Organizing department/Support system	R & D Cell
Collaborating Agency	Dept Of Commerce
Description	<p>The research person was Dr Alekhya. Effective research writing is very important for the research to be productive and to get its place. The various tips for effective writing like identification of development of topic, information preliminary search, location of materials, making notes, figuring out the audience, etc were discussed. The qualities of good research paper was explained. The importance of Writing in simple terms was also explained.</p>
Photos	

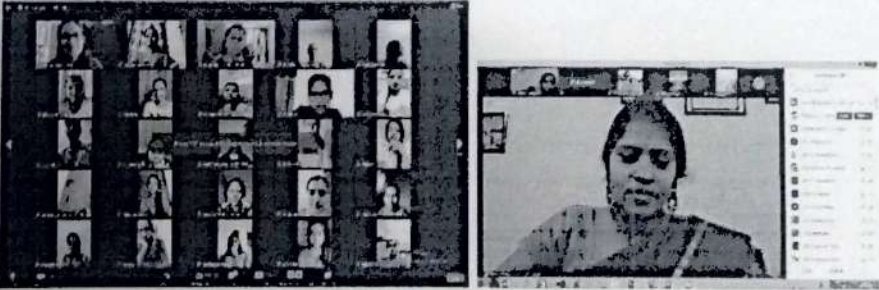






RISHI UBR DEGREE & PG COLLEGE FOR WOMEN ✓

ACTIVITY REPORT

ACTIVITY REPORT	
Name of the Activity	Online seminar on Synopsys Writing
Type of Activity	Curricular
Date and Time of Activity	16-12-2020; 11 am to 12.30 pm
Details of participants	74 students
Coordinator	Ms. Sujitha Devi
Organizing department/Support system	Department of Business Management
Collaborating Agency	R & D Cell
Description	<p>The resource persons were Ms N S L Praveena .Synopsys submission is a part of the curriculum for students of Management. The contents of synopsis was explained and its importance as a pre cursor to the final project or research paper was discussed. The identification of key words in abstract was discussed in detail. The language to be used with reference to writing objectives and need was discussed. The importance of preliminary literature review was discussed. The scope of study and methodology was discussed with students. The questions of students were addressed which were mainly on methodology and research design.</p>
Photo	







RISHI UBR DEGREE & PG COLLEGE FOR WOMEN ✓

ACTIVITY REPORT

Name of the Activity	Online Seminar On Sampling Techniques-Probability and Non Probability sampling
Type of Activity	Curricular
Date and Time of Activity	27-05-21; 2 pm to 3.30 pm
Details of participants	62 students
Coordinator	Ms. S Rani
Organizing department/Support system	Research & Development Cell
Collaborating Agency	-
Description	<p>The resource person was Ms M RamaThe role of sampling in hypothesis testing was explained. The probability sampling technique was explained. The most critical element of probability sampling that everyone in the population has a known and equal chance of getting selected. The various types of probability sampling like simple random sampling, stratified random sampling, random cluster sampling and systematic sampling were explained with examples. The differences between probability and non probability sampling were discussed.</p>
Photo	





ACTIVITY REPORT	
Name of the Activity	Seminar On Effective Bibliography Writing
Type of Activity	Co- Curricular
Date and Time of Activity	07-03-2018
Details of participants	79
Coordinator	Ms N S L Praveena
Organizing department/Support system	Department Of Business Management
Collaborating Agency	R & D Cell
Description	<p>The resource person was Dr A Srihari Krishna. The session was conducted to enlighten students on bibliography writing. The session started with giving importance of bibliography and the various styles. The mostly asked and preferred format in research journals and publications would be APA Style (American psychologists association) style. The procedure of writing bibliography for articles from journals, Ph.d Thesis , web articles, text books and websites in APA style was explained. The session also explained the procedure of using APA style through MS Word. The doubts were clarified.</p>
Photo	