SPHINX 2.0

(27th-29th September 2018)

HACK-E-DESIGN

- **An IOT Hackathon**

A contest for students to document, plan for deploying of IOT sensors and transmit the data over Wi-Fi to Demo Servers.

Theme: - HOME AUTOMATION

Example of Topics on which you can work on:

1. Controlling all electrical appliances in home from a remote location via internet.
2. Automatic switching (ON and OFF) of lights and fans in the room.
3. Automatic irrigation of plants in the garden
4. Temperature and humidity sensing

You can choose your topic of interest related to creating a home automation system. Innovative ideas are always welcome.

Submissions for the Challenge should include the following: -

1. PPT (presentation of your idea) 15 to 20 minutes maximum. PPT must include the working implementation in detail, detailed technical blueprint of the project and the explanation of your implementation.
2. Project abstract with a Detailed Technical Blueprint (upto 8 page) on how to deploy IOT devices, collect, store and manage large amounts of data from sensors. Include plans and schedules of delivery of working prototype.
3. *Build the IOT devices using proper sensors*.

Important points to consider:

1. Provide detailed descriptions, specifications and requirements necessary to show that your strategy can be implemented.
2. A description of the methods and technologies needed to implement the project.
3. Background information that shows evidence to support the strategy.

REGISTRATION AND TEAM FORMATION:

- You will have to register individually on the site: **sphinxmnit.org**
- In case If you are forming a team then you have to mention the Registration id of all members while sending your submission over email.

- You can form with maximum 1-2 members.
- Last date to register 26th September 2018.

For more information visit our site and remain updated: sphinxmnit.org

Judging Criteria:

1. Data management - 20%

1. How will you manage the data so it can be used?
2. What metadata will you collect?
3. What data transmission protocols will you follow?
4. What data storage methods will you use?
5. How will you make the data machine-readable (JSON)?
6. How will you reduce the risk of Data Theft & wrong interpretation?

2. Data Integration - 20%

1. What key parameters will you collect data about?
2. How will you use the data, use cases?
3. What Server, Protocols and Network infrastructure would be used to collect data?
4. Does it connect to Microsoft infrastructure and cloud systems?
5. How will you analyze and visualize the data?

3. Sensor Procurement and Deployment - 20%

1. What sensors will you procure and how will you select them (Ensure Wi-Fi enabled data Transfer)?
2. How will you procure the sensors?
3. On what basis will you deploy the sensors?
4. How will you track the sensors in order to know if they are operational?
5. How will you ensure the physical security, accuracy and precision of the sensors both initially and over time?
6. How quickly can you get the project into operation (Initial Pilot phase in Jaipur City)?

4. Project Sustainability - 20%
It can include:

1. How will you invest resources? Clear details on Availability of students and staff time to implement the Pilot phase?
2. What partnerships required to implement the project, e.g., with sensor manufacturers, data management organizations, environmental groups, etc.?
3. Is the proposed approach economically viable and replicable?
4. What are the possible barriers to success and how will you overcome them?
5. Do team members have the relevant expertise and resources available to carry out proposed work?
6. How is the project eco-friendly?

5. Other broad points - 20%

1. Presentation of your contents.
2. Innovation and creativity.
3. Impact and Usability.
4. Acceptability (Practicality).
5. Market Value and acceptance (Effectiveness).
6. Performance.

7. Understandability and easiness in use.

5. *Properly designed (working) IOT device with help of sensors- extra 20% marks*.

Rule:

1. No copy of ideas/ each team must represent unique approach and applications must be submitted in English.
2. Minimum: 1 and Maximum: 2
3. Submissions must be no longer than 8-9 pages and must address the constraints and performance criteria.
4. The participants should not leave the competition (evaluation of the problem) during the competition time Otherwise the team will be disqualified.
5. In case of any dispute, decision of the organizers or Judges will final and binding on all.
6. Top 3 IOT devices can be asked to submit to sphinx. (as per judge and organizer decision).

***** Even if you are an absolute beginner, you can still show up and discover if this for you. A hackathon is all about making what you can, and learning on the way.*****

********** **BEST OF LUCK** **********