IOT BASED ARDUINO AND RASPBERRY PI WORKSHOP

WHAT IS ARDUINO?

Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. It's intended for artists, designers, hobbyists, and anyone interested in creating interactive objects or environments.

WHAT IS RASPBERRY PI?

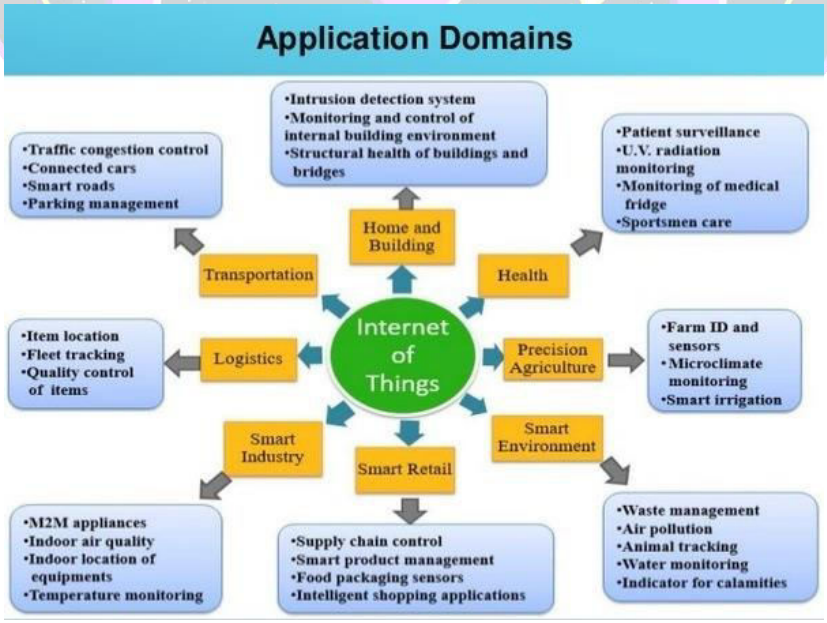
The Raspberry Pi is a low cost, **credit-card sized computer** that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages like Scratch and Python. It's capable of doing everything you'd expect a desktop computer to do, from browsing the internet and playing high-definition video, to making spreadsheets, word-processing, and playing games.

What's more, the Raspberry Pi has the ability to interact with the outside world, and has been used in a wide array of digital maker projects, from music machines and parent detectors to weather stations and tweeting birdhouses with infra-red cameras. We want to see the Raspberry Pi being used by kids all over the world to learn to program and understand how computers work.

WHAT IS IOT?

The **Internet of things** (**IoT**) is the network of physical devices, vehicles, home appliances and other items embedded with electronics, software, sensors, actuators, and network connectivity which enables these objects to connect and exchange data. Each thing is uniquely identifiable through its embedded computing system but is able to inter-operate within the existing Internet infrastructure.The IoT allows objects to be sensed or controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency, accuracy and economic benefit in addition to reduced human intervention. When IoT is augmented with sensors and actuators, the technology becomes an instance of the more general class of cyber-physical systems, which also encompasses technologies such as smartgrids, virtual power plants, smart homes, intelligent transportation and smart cities.

WHY IS IT IMPORTANT TO GO THROUGH THESE TOPICS?



WHAT WILL BE TAUGHT IN THIS ONE DAY WORKSHOP?

As all of us knows that arduino and raspberry pi are two of the most commonly used microcontrollers. In this one day workshop industrially trained professionals will give a hand on training on the following objects-

1) How to work on, program and interface an arduino microcontroller with any device.
2) How to work on and interface a raspberry pi module.
3) How to apply these concepts and make I.O.T work out.
4) A hand on experience to build a Bluetooth controlled robot.

PRE REQUISITIES FOR THIS WORKSHOP

1) A basic knowledge of electronics components.
2) A basic knowledge of writing format of any computer language.

THINGS TO BE CARRIED BY A GROUP DURING THE WORKSHOP

1) Each group must carry a laptop with proper charging equipments and a preinstalled arduino IDE platform. (**IF PLATFORM IS NOT AVAILABLE THEN IT WILL BE PROVIDED BY THE COORDINATORS**) **N.B- CHARGING EQIPMENTS WILL NOT BE PROVIDED BY THE COLLEGE.**
2) NOTEBOOK, PEN for your convenience.

THINGS TO BE TAKEN AWAY FROM THE WORKSHOP

1) NOTEBOOK, PEN AND FILE (PER PERSON).
2) A TAKE AWAY **ARDUINO KIT** (PER GROUP)**.**
3) A **CERTIFICATE FROM THE ORGANISING COLLEGE** (PER PERSON)**.**

DATE OF THE WOKSHOP- 17/01/2018

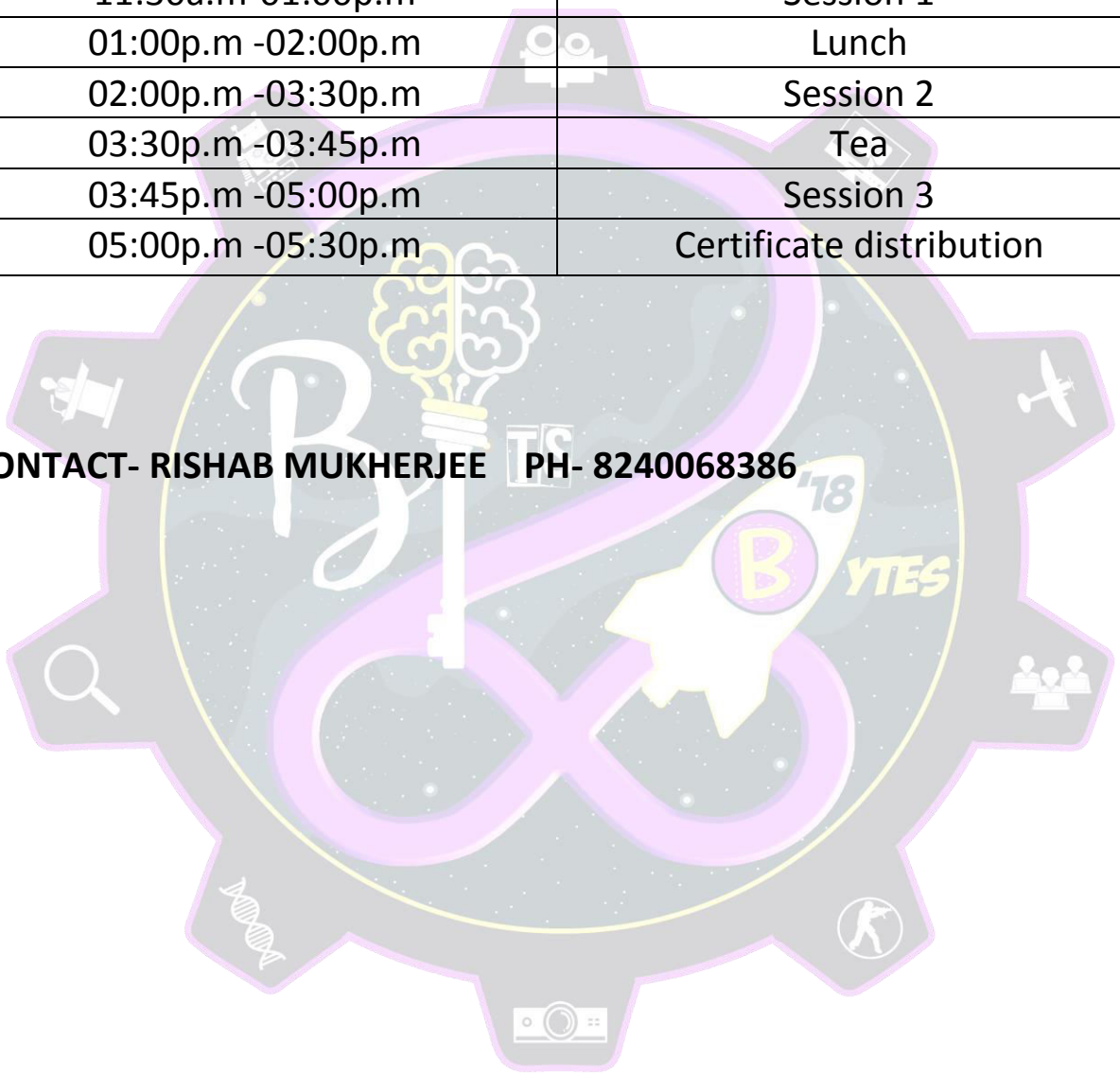
TIME OF THE WORKSHOP-11:00 A.M. ONWARDS

VENUE- BENGAL INSTITUTE OF TECHNOLOGY, MAIN BUILDING (2ND BUILDING), SEMINAR ROOM.

WORKSHOP FEE- 2500 INR PER GROUP (EACH GROUP MAY CONTAIN MAXIMUM 5 PERSONS).

SCHEDULE FOR WORKSHOP ON 17/01/2018

TIMINGS	PARTICULARS
10:30a.m-11:00a.m	Registration
11:00a.m-11:30a.m	Tea
11:30a.m-01:00p.m	Session 1
01:00p.m -02:00p.m	Lunch
02:00p.m -03:30p.m	Session 2
03:30p.m -03:45p.m	Tea
03:45p.m -05:00p.m	Session 3
05:00p.m -05:30p.m	Certificate distribution



CONTACT- RISHAB MUKHERJEE PH- 8240068386