# **Internet of Things**



(A Workshop on IoT | Workshop on Internet of Things)

MBS Group™

#### Dear Sir/Madam,

#### Sub: To organize IOT workshop in your College.

This is to bring to your kind notice that HoriZON (A Unit of MBS Group) is an Indian entity exploring itself in various sectors like Practical Educational Training, Professional Training, Corporate Training, Web & IT Services, and Placement Assistance with most advanced technologies & experience in hand.

# What is the Internet of Things?

If you think that the internet has changed your life, think again. The IoT is about to change it all over again!" - Brendan O'Brien, Aria systems

It's a global network infrastructure, linking physical and virtual objects using cloud computing, data capture, and network communications. It allows devices to communicate with each other, access information on the Internet, store and retrieve data, and interact with users, creating smart, pervasive and always-connected environments.



# **About the Workshop**

Can you imagine a computing concept where everyday objects have network connectivity? Is it possible for ordinary devices to communicate among themselves?

Yes!! And the answer is 'the Internet of Things'.

This Network of networks extracts and makes sense of data within machines. An estimated 30 million wireless devices are to be connected to the internet by 2020.

Interesting! Isn't it?

How beautiful it is when your door can update its Facebook Status every time some one opens it. A song starts playing when you tweet about it. A fire sensor that automatically send an E-Mail to the fire department. Keeping all the awesomeness in mind Innovians Technologies has introduced the Internet of things workshop to get you ready for the future.

You'll learn the basic concepts and features of the Internet of Things and build projects utilizing the Arduino platform. You'll discover fundamental concepts of cloud computing, sensor reading and connecting the Arduino to the Internet, wireless interfaces and Android phones. You'll also learn to use the most popular open platforms for managing sensor data from the Arduino, how to trigger actuators remotely, and how to reprogram Arduino using cloud services.

# **Workshop Highlights**

- What "the Internet of Things" means and how it relates to Cloud computing concepts
- How open platforms allow you to store your sensor data in the Cloud
- The basic usage of the Arduino environment for creating your own embedded projects at low cost
- How to connect your Arduino with your Android phone.
- How to send data to the Internet and talk to the Cloud.
- How to update sensor readings on Twitter (Social Networking Sites).
- Control a Relay Switch by texting from your Phone.

# **Topics to be Covered in Workshop**

#### Day 1

- Introduction to the Internet of Things
  - The Internet of Things
  - The Basics of Sensors & Actuators
  - Introduction to Cloud Computing
- > The Arduino Platform
  - The Arduino Open-Microcontroller Platform
  - Arduino Basics
  - Arduino Board Layout & Architecture
  - Reading from Sensors
- Programming fundamentals ( C language )
- Arduino Programming & Interface of Sensors
  - Interfacing sensors with Arduino
  - Programming Arduino
  - Reading from Sensors

**Project 1:** Simple LED Program for Arduino

**Project 2:** Integrating Sensors & Reading Environmental Physical Values.

- Talking to your Android Phone with Arduino
  - Connecting Arduino with Mobile Device.
  - The Android Mobile OS.
  - Using the Bluetooth Module

Project 3: Voice Controlled Mini Home Automation using Android Smartphone

**Project 4:** Reading Environmental Values on Android Smartphone.

#### Day 2

**Project 5:** Tweet Sensor Reading on Twitter.

- Make Electronics Gadget Talk to Internet
  - Integrating Wi-Fi Module
  - Creating App on Twitter

**Project 6:** Control a device by texting from your phone.

- Cloud Computing
  - Communicating with the Cloud using Web Services.
  - Cloud Computing & IoT.
  - Popular Cloud Computing Services for Sensor Management.

**Project 7:** Sending Arduino Data to your Cloud Application.

**Project 8:** Use Arduino to Upload free data from Environmental Sensors.

This workshop will also provide a platform where young students can mould their imagination into reality and feel the excitement first hand. With this end in view, we extend our support and technical expertise to the students of your school in the form of this workshop. We seek your cooperation and look forward towards a successful execution of this workshop in your College.

We are hoping that you will find this workshop really interesting for the students. If you have any queries please get back to us anytime.

Thanks & Regards,

**Sumit Choubey** 

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# **Company Details**

We, **HoriZON (A Unit of MBS Group)**, are the India's fastest growing company in the field of Practical Educational Training, Professional Training, Corporate Training, Web & IT Services, with most advanced technologies & experience in hand. We ma-jorly deal in Educational Workshop and Training, Corporate Training, Motivational Seminar, Software Development, Web Development, Consultancy & Out-sourcing, Placement Assistance.

HoriZON (A Unit of MBS Group)delivers interactive training & workshops which equip its participants with better practical understanding and preparation for jobs in industry. The hands-on sessions and lectures are designed based on current industry trends and draw on the rich experience of instructors and organizers. We focus on Android, Ethical Hacking, Embedded Systems, Robotics, Automation, Web Development, Social Networking, 3D Animation, Automobile Mechanics, Aircraft Designing, Share Market, 2G & 3G Technology and many more.

The Corporate Training programs of HoriZON (A Unit of MBS Group)encompass a wide range of skills that are integral & necessary part of everyday business, daylife or work environment. In our quest to address every organizational development need, HoriZON (A Unit of MBS Group)offer a gamut of training programs, which ranges from Motivational Seminar, Faculty/Staff Development Training, 5S Training, Personality Development, Professional Skills Training & Foreign Languages.

## **Our Mission**

HoriZON (A Unit of MBS Group)mission is to offer world class, Professional Training & Development Solutions. We strive to offer excellence, professionalism, and a long-term commitment to remain among the premier Training & Development companies in India. HoriZON (A Unit of MBS Group)and its staff are respected for their dedication and contribution to the industry.

## **Our Values**

Our values are embraced in the hearts and minds of every HoriZON (A Unit of MBS Group)team member who then embodies these values and shares them throughout our company and with our clients. You will find three core values at work: Relation - We listen, learn, and help selflessly in our interactions with others. Humanity - Through business, we foster a strong sense of corporate social responsibility. Commitment - We honor our commitments and act with responsibility in all our relationships. These values are the building blocks of our work culture.

## **Team of Professional**

Our team, as our imperative asset, works with great zeal to realize the mutual interests or our organization. Our team is made of professionals including professional trainers, managers, consultants, business development staff, quality audi-tor and other workforces.

Each member in our team is selected on the basis of their domain knowledge in respective fields. To upgrade the expertise of our team we also conduct regular training exercises. It helps us to be paralleled with new changes occurring time after time in the market. Our team members are highly efficient and understand the needs of clients as precisely as possible.

## **Process Guidelines**

- We want your association with us to make this workshop big success in your college.
- Date of conducting the workshop can be finalized by telephonic conversation with Coordinator/ Convener or Secretary, according to the College feasibility and slots available in our calendar.
- The entire workshop will be conducted at college campus.
- Each student participating in the workshop will get a certificate of merit.

# **Workshop Requirements**

- Seminar hall/classroom having a capacity enough to conduct hands-on-session for all participants.
- Good Quality public address system ideally two cordless mikes will be required.
- Projector/ Screen along with black/white board for teaching and presentation purposes.
- One small stereo jack cord to connect in laptop for its sound system.
- The workshop center can only be arranged for a minimum of 80 students.

# **Basic Requirement**

- Accommodation to our visiting team members in your school guest house or any other good place.
- Pick and drop facility from nearest railway station/ bus-stand/ or airport.

## **Course Duration**

The duration of this workshop will be two consecutive days, with 7 -8 hours session each day in a total of 14 -16 Hours.

# **Certificate Policy**

- Certificate of Merit for all the workshop participants from HoriZON.
- At the end of this workshop, a small competition will be organized among the
  participating students and winners will be awarded with a 'Certificate of Excellence'.
- Certificate of Coordination for the coordinators of the college workshops.

# **Eligibility**

The pre-requisite for joining this workshop is zero. Anyone who is interested for this workshop can register it.

#### **Fees**

- The charge of this workshop for a participant is Rs. 1350 only (Minimum of 80 Students).
  - Take away complimentary kit for a team of 4 or 5 participants. (Arduino Board, Bluetooth Module, Wifi-Module, Bread Board, Temp. & Humidity Sensor, LED, Reed Relay, Resistors, LEDs, Jumper Wires, Power Supply Module, Battery Connector, Breadboard).
- This fee include workshop training, study material, certification, government taxes and other human resources charges.

## Contact

We will happy to be a part of your esteemed organization .Kindly contact us with any questions or requests

#### With Best Regards

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