

A graphic for the Octa Hacks event. It features a central black circle with a white dot inside, connected by yellow lines to eight smaller circles (four orange and four blue) arranged in a ring. The word "Octa" is written in a large, bold, grey, sans-serif font, with the "O" being the central black circle. The word "Hacks" is written in a large, bold, grey, sans-serif font, with the "H" being a stylized orange and yellow rocket ship. Below the "Hacks" text, there is a small grey atom icon and the slogan "Tech it Easy!" in a bold, grey, sans-serif font.

# Octa Hacks

Tech it Easy!

14<sup>th</sup>-15<sup>th</sup> March, 2019  
Chitkara University  
Punjab



## About us

# Developer Student Clubs(DSC)

Google collaborates with university students who are passionate about growing developer communities and supports them with starting student clubs on their campuses.

These DSCs provide students with the opportunity to:

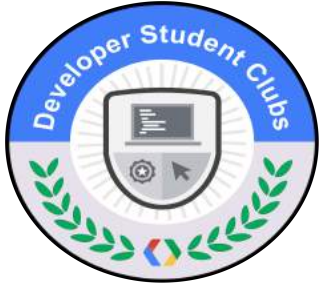
Grow their knowledge on developer technologies and more through peer to peer workshops and events.

Gain relevant industry experience by solving problems for local organizations with technology based solutions.

Showcase their prototypes and solutions to their local community and industry leaders.

## UCollege

UCollege is an initiative started by Udacity to provide industry ready sessions and workshops for aspiring developers.



## OCTAHACKS 2.0

Developer Student Club and UCollege in collaboration with i-3indya Technologies is ready to host IOT Challenge 2019. This National level event on Internet of Things under Radiance'19 IIT Bombay will surely be a great place to learn about IOT and build amazing projects using it.

In this 2 days workshop, first learn about IOT with practical implementation and then hack the IOT Challenge on one of eight (OCTA) different problem statements where one can not only prove themselves but also get a chance to win the competition. Octahacks judges your curiosity to learning and how innovative you are.

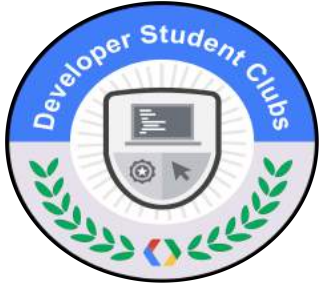


## INTERNET OF THINGS(IOT)

Internet of Things is a new revolution of the Internet. A world where the real, digital and the virtual are converging to create smart environments that make energy, transport, cities and many other areas more intelligent.

The **Internet of things (IoT)** is the network of devices such as vehicles, and home appliances that contain electronics, software, sensors, actuators, and connectivity which allows these things to connect, interact and exchange data. The IoT involves extending Internet connectivity beyond standard devices, such as desktops, laptops, smartphones and tablets, to any range of traditionally *dumb* or non-internet-enabled physical devices and everyday objects. Embedded with technology, these devices can communicate and interact over the Internet, and they can be remotely monitored and controlled.

Now a days there are many android and server based application. With the help of these systems, value of sensor (e.g. temperature sensor, motion sensor, accelerometer sensor etc.) will be shown on GUI or web server or android application through wireless communication and device will be controlled automatically.



## Prerequisites:

- Basic of Electronics.
- Basic Knowledge of Computer.
- Basic Knowledge Programming Language (like C).

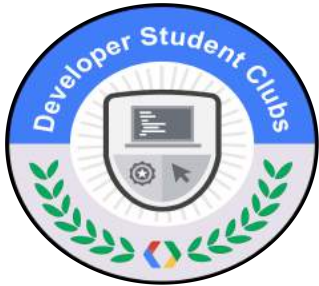
## Learning Outcomes:

- Current scenario/job opportunities of embedded industries.
- Detailed knowledge about power supply.
- Difference between Micro-processor and micro-controllers.
- About Atmega8 MCU.
- Programming of MCU and reading the environmental parameter.
- Can design any practical based on Relay, WIFI module.

## Content Overview:

**DAY 1:** Introduction to IOT, Description about Micro-Controllers and ICs, Pin outs of ATmega8 Microcontroller, Introduction to programming in embedded, Interfacing of LED and Buzzer, Hands-on LED and Buzzer tasks, Serial Communication, UART in microcontrollers, LDR sensor and much more.....

**DAY 2:** Introduction to Wifi and TCP/IP, Real Time monitoring of sensors on a particular IP Address/server, Practical Hands On, Competition cum PRELIMS event and much more.....



In Collaboration with



IIT Bombay Presents



16<sup>th</sup>-17<sup>th</sup> March 2019

## Event Flow Chart





## Registration

Registration Fees: ₹600 per head

Register at:

<https://www.townscript.com/e/iot-challenge-prelims-chitkara-univ>

\* Certificate of Participation from Radiance IIT Bombay & i3indya.

\* 1 hardware kit will be given to a team of 4 members for practice purpose.



## A Glimpse of OctaHacks 2018



Octahacks was successfully held on **14-15th April 2018** at **Chitkara University, Chandigarh**. It featured great coding brains from across North India and provided them a platform to come and showcase their skills by building solutions to challenging problems in a limited time frame. The competitive aura of Octahacks was such that even newbies return home learning new things. Along with all the fun, Winners were awarded prizes worth ₹2,00,000.

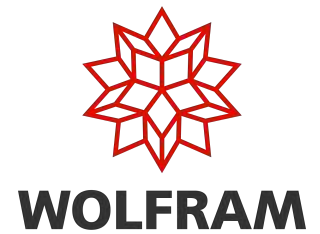








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CHITKARA UNIVERSITY 

Thank You

