



# MITHILA DEPARTMENT OF CSE

## **Vision**

**To become a Center of Excellence in the field of Computer Science and Engineering upholding social values**

## **Mission**

**Transforming the students into globally competent and technically well-equipped Computer Professionals with strong theoretical and practical knowledge.**

**Cultivating the spirit of social and ethical values for the cause of development of our Nation.**

# Docker

## Overview:

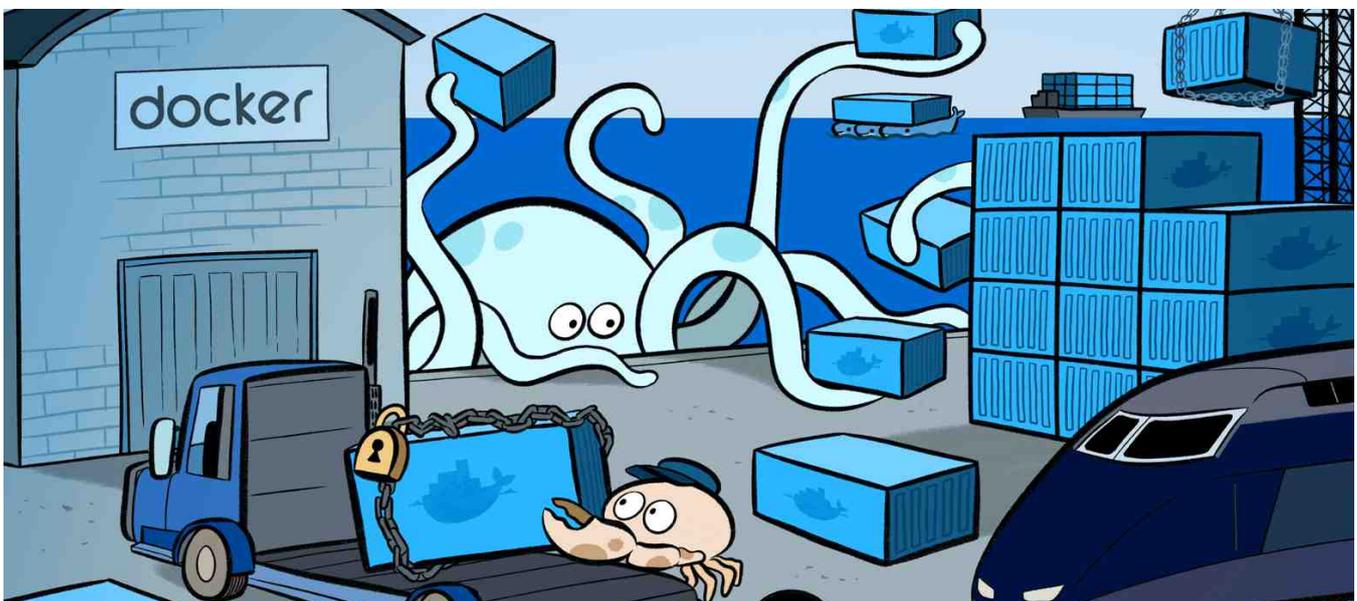
Docker is the world's leading software container platform. Developers use Docker to eliminate "works on my machine" problems when collaborating on code with co-workers. Operators use Docker to run and manage apps side-by-side in isolated containers to get better compute density. Enterprises use Docker to build agile software delivery pipelines to ship new features faster, more securely and with confidence for both Linux and Windows Server apps.

## Docker For Developers

Docker automates the repetitive tasks of setting up and configuring development environments so that developers can focus on what matters: building great software.

## What is a Container?

Using containers, everything required to make a piece of software run is packaged into isolated containers. Unlike VMs, containers do not bundle a full operating system - only libraries and settings required to make the software work are needed. This makes for efficient, lightweight, self-contained systems that guarantees software will always run the same, regardless of where it's deployed.



Developers using Docker don't have to install and configure complex databases nor worry about switching between incompatible language toolchain versions. When an app is dockerized, that complexity is pushed into containers that are easily built, shared and run. Onboarding a co-worker to a new codebase no longer means hours spent installing software and explaining setup procedures. Code that ships with Dockerfiles is simpler to work on: Dependencies are pulled as neatly packaged Docker images and anyone with Docker and an editor installed can build and start debugging the app in minutes.

## Any App, Language or Stack

Build, test, debug and deploy Linux and Windows Server container apps written in any programming language without risk of incompatibilities or version conflicts.

## Awesome Developer Experience

Reduce onboarding time by 65%: Quickly build, test and run complex multi-container apps and stop wasting time installing and maintaining software on servers and developer machines. All dependencies run in containers, eliminating "works on my machine" problems.

Done By,

C.MEENAMBI GAI  
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# Vagrant

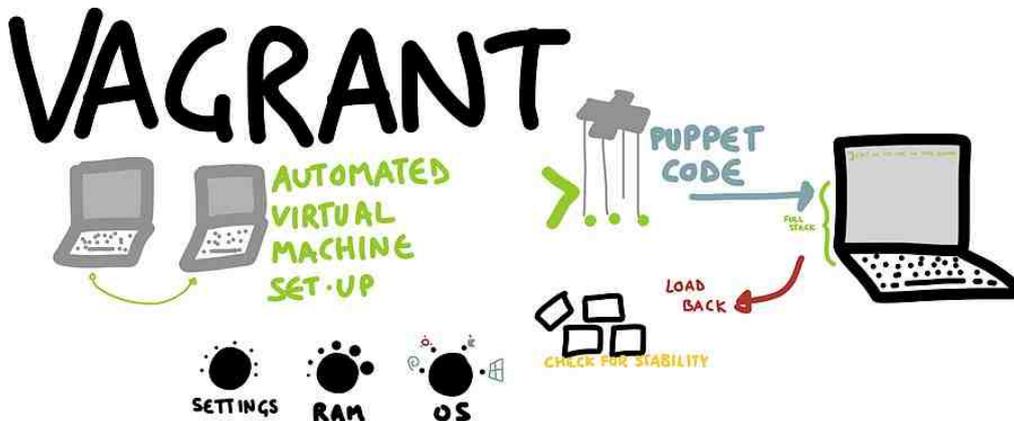
## Why Vagrant?

Vagrant provides easy to configure, reproducible, and portable work environments built on top of industry-standard technology and controlled by a single consistent workflow to help maximize the productivity and flexibility of you and your team.

To achieve its magic, Vagrant stands on the shoulders of giants. Machines are provisioned on top of VirtualBox, VMware, AWS, or any other provider. Then, industry-standard provisioning tools such as shell scripts, Chef, or Puppet, can be used to automatically install and configure software on the machine.

## Vagrant Benefits

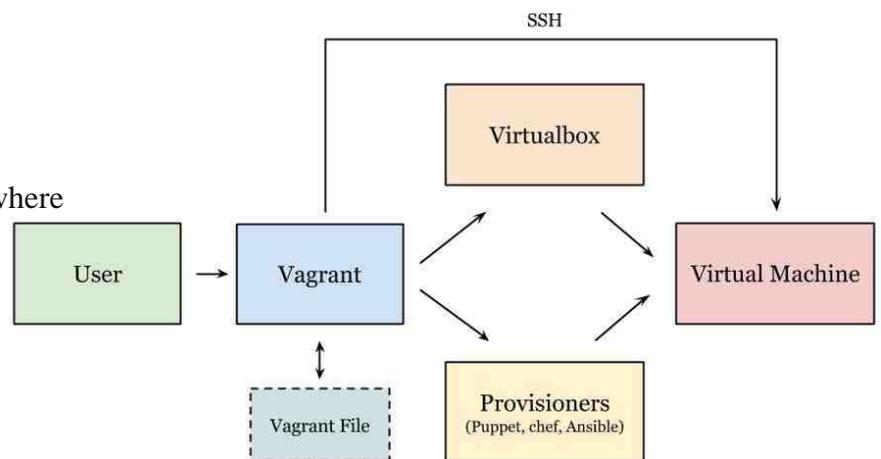
If you are a developer, Vagrant will isolate dependencies and their configuration within a single disposable, consistent environment, without sacrificing any of the tools you are used to working with (editors, browsers, debuggers, etc.). Once you or someone else creates a single Vagrantfile, you just need to vagrant up and everything is installed and configured for you to work. Other members of your team create their development environments from the same configuration, so whether you are working on Linux, Mac OS X, or Windows, all your team members are running code in the same environment, against the same dependencies, all configured the same way. Say goodbye to "works on my machine" bugs.



In order to work with scribus we need a image where the software can be deployed

To search for vagrant images goto the site

<https://atlas.hashicorp.com/boxes/search>



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# Beyond Internet

## ZeroNet

ZeroNet is a decentralized Internet-like network of peer-to-peer users. Programming for the network is based in Budapest, Hungary; is built in Python; and fully open source. Instead of having an IP address, sites are identified by a public key (specifically a bitcoin address). The private key allows the owner of a site to sign and publish change, which propagate through the network. Sites can be accessed through an ordinary web browser when using the ZeroNet application, which acts as a local webhost for such pages. In addition to using bitcoin cryptography, Zeronet uses trackers from the BitTorrent network to negotiate connections between peers. ZeroNet is not anonymous by default, but users can hide their IP address by using the built in Tor-functionality.

### Advantages

- ZeroNet supports dynamic content
- ZeroNet you have full control over the content you hosting
- ZeroNet websites served instantly from your hard disk drive
- ZeroNet you need to use Tor for anonymity

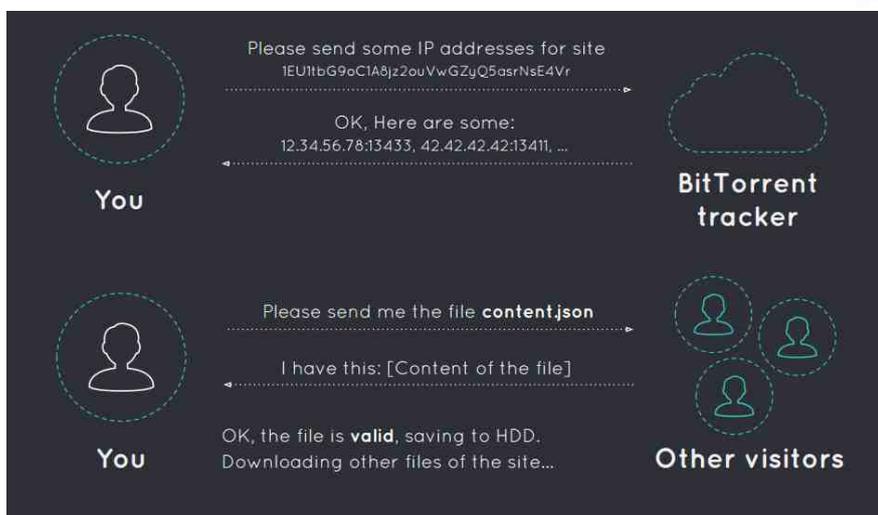
## FreeNet

The Freenet network provides an effective means of anonymous information storage and retrieval. By using cooperating nodes spread over many computers in conjunction with an efficient adaptive routing algorithm, it keeps information anonymous and available while remaining highly scalable. Initial deployment of a test version is underway, and is so far proving successful, with tens of thousands of copies downloaded and many interesting files in circulation. Because of the anonymous nature of the system, it is impossible to tell exactly how many users there are or how well the insert and request mechanisms are working, but anecdotal evidence is so far positive.

### The five major goals of freenet

- Anonymity for both producers and consumers of information
- Deniability for storers of information
- Resistance to attempts by third parties to deny access to information
- Efficient dynamic storage and routing of information
- Decentralization of all network functions

## ZeroNet



## FreeNet



Done By,

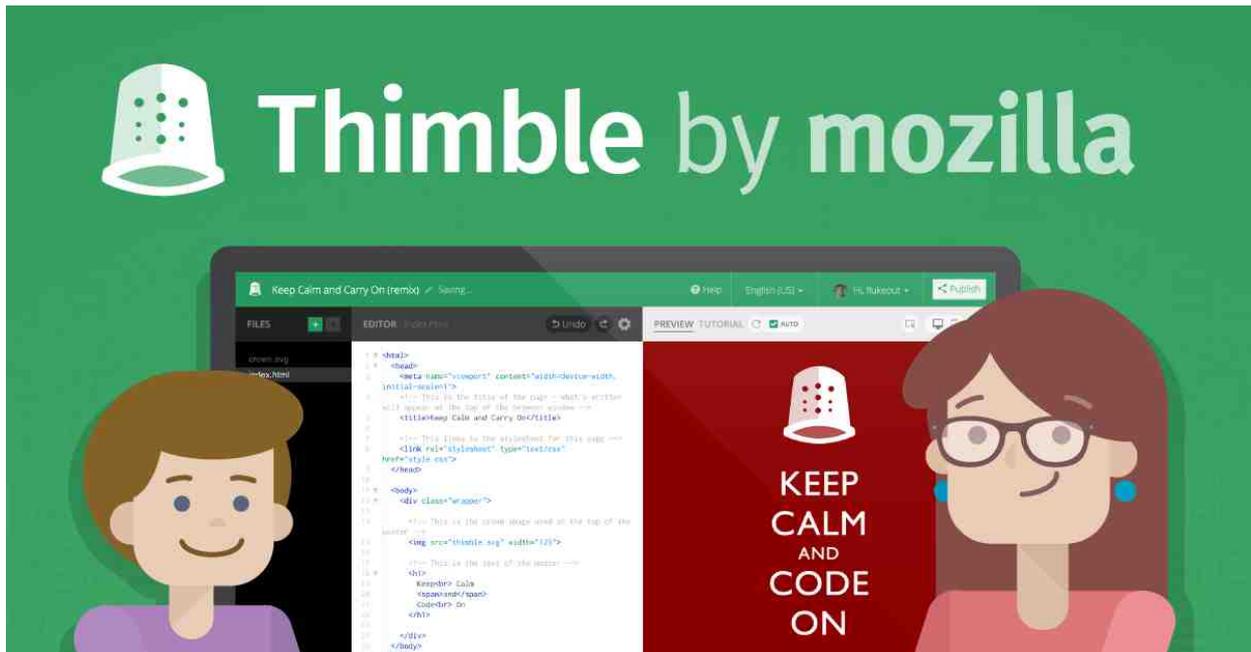
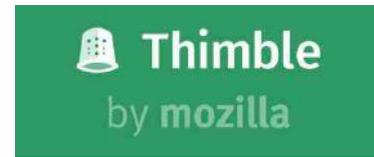
D.VIGNESH  
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# Thimble

Thimble is an online code editor that makes it easy to create and publish your own web pages while learning HTML, CSS & JavaScript.

Mozilla's new Webmaker projects that teach you how to code

Motto: " Write the Web  
On the Web "



Thimble won't teach you HTML directly—you'd still want to have something like Codecademy on hand—but it's a tool that makes learning a lot easier. Instead of having to type your code in a text editor and load the resulting file up in a browser, you can see all your changes in real time as you make them. That also makes correcting mistakes a lot easier, since you'll know exactly what caused a problem as soon as you type it. You can even publish your finished web pages right from Thimble's app for all your friends to see.

Site: <https://thimble.mozilla.org/en-US/>

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# OSQuery

osquery allows you to easily ask questions about your Linux, Windows, and OS X infrastructure. Whether your goal is intrusion detection, infrastructure reliability, or compliance, osquery gives you the ability to empower and inform a broad set of organizations within your company.

osquery is an operating system instrumentation framework for Windows, OS X (macOS), Linux, and FreeBSD. The tools make low-level operating system analytics and monitoring both performant and intuitive.

osquery exposes an operating system as a high-performance relational database. This allows you to write SQL queries to explore operating system data. With osquery, SQL tables represent abstract concepts such as running processes, loaded kernel modules, open network connections, browser plugins, hardware events or file hashes.

## Host Protections

### osquery

- Adhoc
- Scheduled
  - Schedule query
  - Collect logs
  - Review change
- File Integrity Monitoring
- Yara rules
- Query packs



The high-performance and low-footprint distributed host monitoring daemon, osqueryd, allows you to schedule queries to be executed across your entire infrastructure. The daemon takes care of aggregating the query results over time and generates logs which indicate state changes in your infrastructure. You can use this to maintain insight into the security, performance, configuration, and state of your entire infrastructure. osqueryd's logging can integrate into your internal log aggregation pipeline, regardless of your technology stack, via a robust plugin architecture.

Additionally, osquery's codebase is made up of high-performance, modular components with clearly documented public APIs. These components can be easily strung together to create new, interesting applications and tools. Language bindings exist for many languages using a Thrift interface, so you can continue using comfortable and familiar technologies.

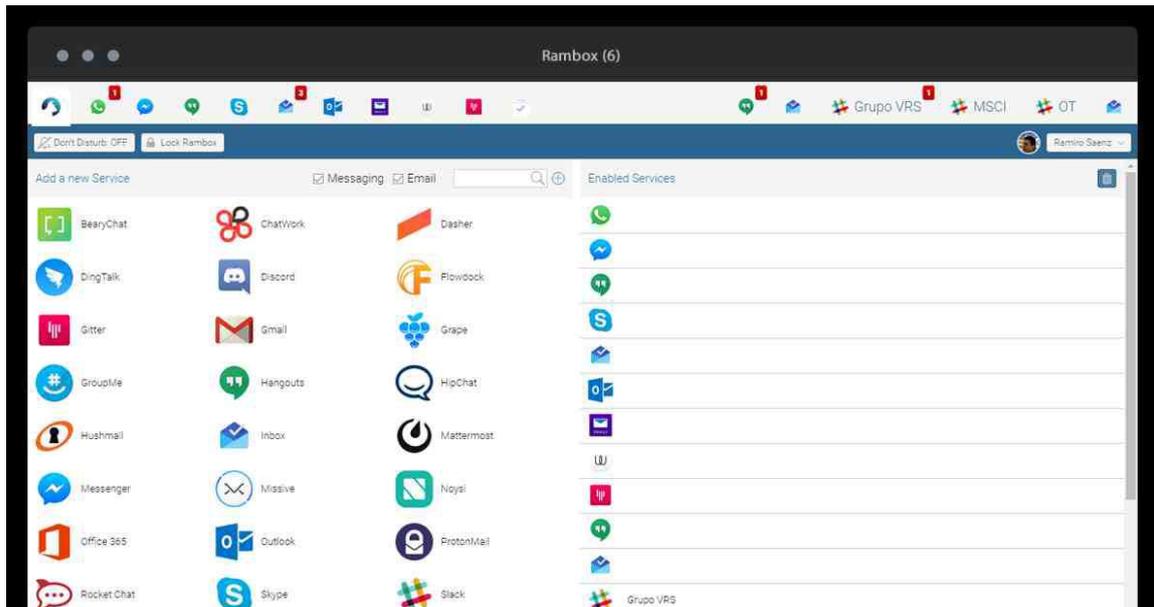
Site: [osquery.io](http://osquery.io)

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# Rambox

Free, Open Source and Cross Platform messaging and emailing app that combines common web applications into one.



Rambox is a free messaging and emailing app created using Electron which is composed of various popular web applications to provide users with the ability to add as many web services as are supported in the same place and to use multiple accounts by way of duplicate apps.

Rambox is available for Linux, Windows, and Mac and at the moment, supports 73 web services including WhatsApp, Messenger, Viber, Telegram, Google Hangouts, Gmail, etc., and users are welcome to manually add services that aren't bundled in the latest shipment.

It has a simple bright interface with a tabs bar at the top of its UI to which added apps can be aligned either to the left or to the right. It comes with a handful of customization options including show notifications, mute all sounds, display read counter.

## Features in Rambox

- Unity notifications for added web services with desktop notification support
- Account synchronization across multiple computers
- Master password
- Menu access from the system tray
- Ability to manually add services of your choice
- Notification count on icons of individual services
- Support for the addition of custom code
- Reorder icons in the tab bar and group services into two
- Long term support (as far back as Ubuntu 12.04)

Site: <http://rambox.pro>

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# ‘BookDrAPP’ - MODERN DAY HEALTH ASSISTANT

## OVERVIEW

The field of Medicine has always been a primary thing to human life ever since the birth of mankind. From the basic home medicines, we’ve now evolved to advanced medicine methods. Yet the way of getting the prescribed medicine has always been tedious due to shortage of doctors in comparison to number of patients. Waiting for new generation doctors is impossible.

But having a better and efficient way of connecting Doctors and Patients can be done, with the existing technology along with additional services. ‘BookDrApp’ is one such service, offering one-stop portal for both Doctors and Patients to connect easily hassle-free.

This state of the art app is built in Tamil, so that facilitating every citizen in Tamil Nadu to make use of a service like this. It could also be localized to other languages in the future.

The app offers separate sections for both doctors and patients, the patients can book appointments to the doctors present in their locality or under hospital.

Whereas, the doctors can view the appointments they’ve received. An option to approve appointments could also be implemented.

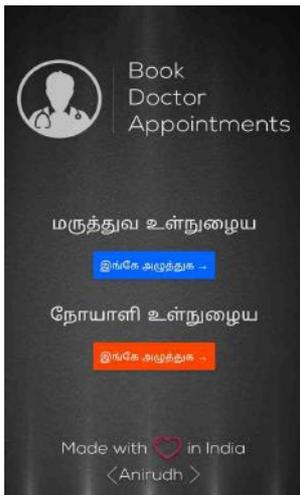
## OUTCOME

- Real-time information on Doctor’s availability
- Reach of service to every person in Tamil Nadu
- Know about doctors present in the locality
- No waiting in Hospital lobby for long hours
- Doctors could track the appointments

## TOOLS USED

- Android Studio
- HTML, CSS for Form
- PHP to store form entries into JSON file

## SCREENSHOTS



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M. Mano Ranjith Kumar (II CSE)  
R. Deepak Chandh (II CSE)

# Cybersecurity

Cybersecurity Explores The Broad Topic Of Cybersecurity In A Way That Matters To You. Learn How To Protect Your Personal Data And Privacy Online And In Social Media, And Why More And More It Jobs Require Cybersecurity Awareness And Understanding.

## Outcomes:

- Learn What Cybersecurity Is And What It Means For You Personally And Professionally.
- Learn How To Be Safe Online By Understanding The Most Common Threats, Attacks And Vulnerabilities.
- Find Out How Businesses Protect Their Operations From Cyber Attacks And Why Jobs Are Growing

## COMPUTER VANDALISM:

- Computer vandalism is a form of malicious behavior that can damage computers and data and disrupt businesses. Learn how to protect yourself here.
- Computer vandalism is a program that performs malicious function such as extracting a user's password or other data or erasing the hard disk.

## DENIAL OF SERVICE:

- A denial-of-service (DoS) attack is an attempt to make a machine or network resource unavailable to its intended users.
- Such as to temporarily or indefinitely interrupt or suspend services of a host connected to the Internet.

## SOFTWARE PIRACY:

- Software piracy is the illegal copying, distribution, or use of software.
- It is such a profitable "business" that it has caught the attention of organized crime groups in a number of countries.
- According to the Business Software Alliance (BSA), about 36% of all software in current use is stolen.

## TIPS TO AVOID CYBER CRIME:

- A secure computer will deter cyber criminals
- Constantly update passwords and login details
- Secure mobile devices.
- Avoid being scammed.
- Protect your e-identity.
- Be aware of what you do while using public Wi-Fi Hotspots.
- Protect your Data.



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# F.O.M.O

## Fear of Missing Out

It's 6 a.m., and by the time you have picked up your morning newspaper, chances are you have already scrolled your Facebook and Instagram newsfeed multiple times to devour updates about your friend's lives. The morning coffee won't taste as good until you know the previous night's posts of your million friends. If you check updates on your phone more than 20 times a day, then you are a victim of this disorder called FOMO.

What is FOMO ?

FOMO Fear of Missing Out is a new term in the psychological circuit. Though considered a modern illness, clinically, it is not a diagnosable condition yet. Restless teenagers and even adults, who are unable to stay away from their phones, and constantly check Facebook updates and WhatsApp messages or relentlessly update Twitter to tell the story of their lives or share what they read/listen to/watch, are a common sight, of late. Underlying FOMO is worry a feeling that we will be left out while everyone else is enjoying themselves. No one puts photos of how depressed they actually look rather, people only share the airbrushed version of their lives. But the truth is we all feel alone and that is why social networking is such a hit in the first place. When we are at a function, we keep glancing at our phones rather than enjoying ourselves. Group chats are so tempting to check even during an important class hours or business meeting.



The impact

FOMO can have a serious performance-related impact. Because the mind always wanders to wondering what one is missing out on, focusing on studies or work can become increasingly difficult.

As prevention,

It is important to be aware of one's habit to consistently shift from important tasks to checking phones, laptops, etc. We must learn to enjoy ourselves without the nagging need to be aware of every little detail about others.

The grass might be greener on the other side, but why care!

Done By,

Mano Ranjith M  
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# ISRO Sponsored Two Days National Seminar On Application Of Cognitive Radio Communication For Remote Sensing In Disaster Management

Conducted On:16-17, February 2017

## SEMINAR VISION

Disasters are unplanned events that cause significant damage or loss of life. They may also knock out the existing communication networks. The damage to the networks, plus the increased traffic demand, hampers the recovery effort. Technologies like Remote Sensing and Geographic Information Systems allow earth observation satellites to monitor disasters such as drought, Earthquakes, tsunamis, volcanic eruptions, field fires and floods. Satellite remote sensing is largely adopted due to its cost effectiveness, short temporal orbiting and large area of coverage. Studies have shown that spectral utilization is relatively low when examined not just by frequency domain, but also across the spatial and temporal domains. Thus, an intelligent device, aware of its surroundings and able to adapt to the existing RF environment in consideration of all three domains, may be able to utilize spectrum more efficiently by dynamically sharing spectral resources. A Cognitive Radio (CR) can observe its operating environment, make decisions and reconfigure in response to these observations, and learn from experience

## PROGRAMME HIGHLIGHTS

Telecommunication Network Technologies

Earth observation satellites

Challenges in Remote sensing

Software Defined Radio

Cognitive radio for disaster management

Spectrum sensing in emergency cognitive radio

GIS Database



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## **Educate Girl Child**

### **Slogan**

*Focus on education and develop the nation.*

*Girls education is a way to developed nation.*

*Books are tools of success and develop the nation.*

*Educate the girls and empower the nation.*

*Educating girls can give many powerful leaders to the country.*

*Educating girls in present will give sweet fruit in future.*

*In India! No girl child should be left behind!*

*Every girl has rights to learn! Educate girls.*

*Don't waste time, just start educating girls!*

*Educate a girl child and brightens the future of country.*

*Good education is the base of developed nation.*

*Educate a girl child and give her way to be independent.*

*Know the way to success from good education.*

*Let a girl child be empowered with proper education.*

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# LINUX BASED SMART PHONES

Android, iOS, Windows Phone, and BlackBerry 10 aren't the only smartphone operating systems vying for a place in your pocket. There are other smartphone operating systems in development — and they're all Linux-based Firefox OS

Initially called Boot to Gecko (or B2G), Mozilla's Firefox OS is a Linux-based open source mobile operating system that adheres to open standards and offers HTML5 applications.

The company has signed deals with carriers and hardware vendors such as LG, ZTE, Panasonic, Orange, Deutsche Telekom, etc to



*Firefox OS*



Ubuntu wants to create a touch-optimized interface that works on smartphones, tablets, and even TVs. This isn't meant to be a separate operating system. Rather, the intention is to have a single version of the Ubuntu Linux distribution. When installed on a smartphone, you'd see a touch-optimized interface designed for your screen

*Ubuntu*

Tizen is more or less is an Intel project that has died and been resurrected time and again -- from Moblin to Maemo to Meego, to LiMO and now Tizen.

After Elop shut every door on open source at Nokia, Intel and Samsung came together to create Tizen, a mobile operating system that can run not only on mobile phones and tablets but also on smartwatches.



*Samsung Tizen*



Sailfish OS was created by team of Nokia developers who came together to create a company called Jolla after ex-Microsoft executive Stephen Elop joined the company as a CEO. Elop shut down all open source projects at Nokia, including its own mobile operating system MeeGo.

### *Sailfish OS*

Amazon's Fire OS — first used on their Kindle Fire tablets and now arriving on the Fire Phone smartphone — is actually based on Android. However, Fire OS isn't just another rebranded version of the Android Open Source Project (AOSP) code with Google's stuff stripped out. Fire OS is more of a fork of Android, and it's moving in its own direction.



### *Amazon Fire OS*

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# YQL-Yahoo Query Language

The YQL (Yahoo! Query Language) platform enables you to query, filter, and combine data across the web through a single interface. It exposes a SQL-like syntax that is both familiar to developers and expressive enough for getting the right data.

## Access Data Across the Web

Select, filter, sort and join data across web services. You can even insert, update and delete from YQL.

## Easily Scrape HTML

Scrape HTML from the web and turn it into data to reuse. Create an API where one doesn't exist.

## Transform XML to JSON

Use YQL to convert XML to JSON & vice versa. Access atom, rss, micro formats and more. You can even load CSV files from anywhere.

## Speed up Your App

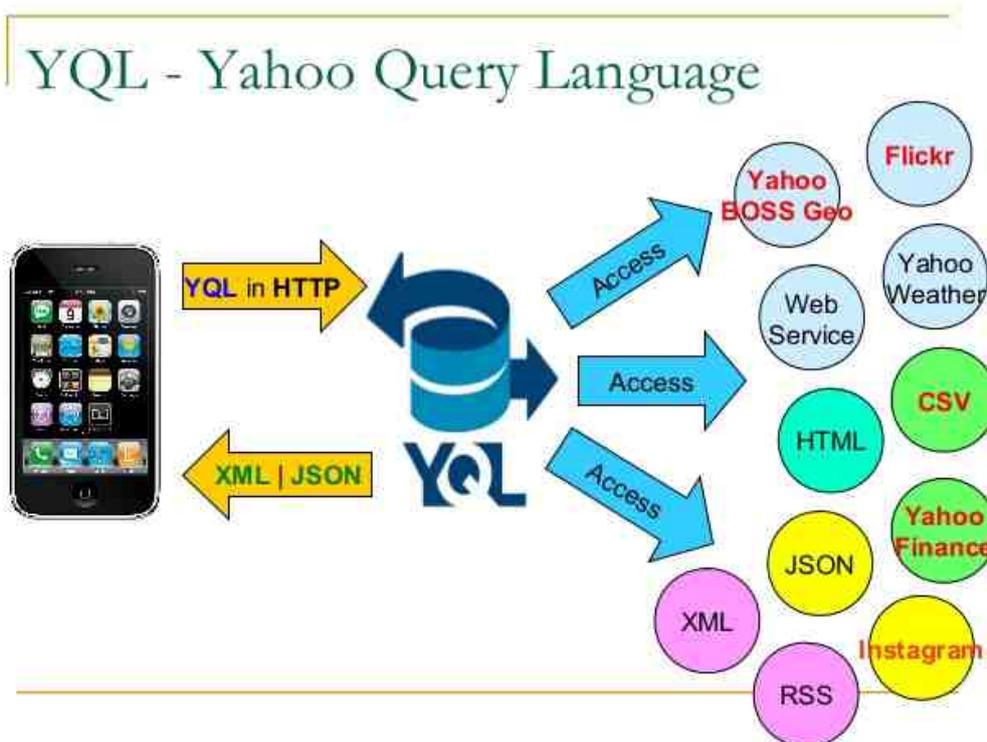
With YQL, apps run faster with fewer lines of code and a smaller network footprint. Batch multiple HTTP requests into a single request.

## Mashup Data Sources

Mix and match data from disparate sources using YQL sub-selects.

## Extend it

Define Open Data Tables to access any data sources other than Yahoo Web Services



Site: <https://developer.yahoo.com/yql/console/>

Done By,

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# Go (Programming Language)

Go (often referred to as golang) is a free and open source programming language created at Google in 2007 by Robert Griesemer, Rob Pike, and Ken Thompson

The language was announced in November 2009. It is used in some of Google's production systems, as well as by other firms.

Two major implementations exist:

1) Google's Go compiler, "gc", is developed as open source software and targets various platforms including Linux, OS X, Windows, various BSD and Unix versions, and also, since 2015, mobile devices, including smartphones.

2) A second compiler, gccgo, is a GCC frontend.



## Language design

Go is recognizably in the tradition of C, but makes many changes to improve brevity, simplicity, and safety. Go consists of,

1) A syntax and environment adopting patterns more common in dynamic languages:

- Optional concise variable declaration and initialization through type inference ( $x := 0$  not  $\text{int } x = 0$ ; or  $\text{var } x = 0$ );
- Fast compilation times.
- Remote package management (`go get`) and online package documentation.

2) Distinctive approaches to particular problems:

- Built-in concurrency primitives: light-weight processes (goroutines), channels, and the `select` statement.
- An interface system in place of virtual inheritance, and type embedding instead of non-virtual inheritance.
- A toolchain that, by default, produces statically linked native binaries without external dependencies.

3) A desire to keep the language specification simple enough to hold in a programmer's head, in part by omitting features common to similar languages.

Reference : [https://en.wikipedia.org/wiki/Go\\_\(programming\\_language\)](https://en.wikipedia.org/wiki/Go_(programming_language))

Done By,

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# CZENIA '17

Our Department of Computer Science and Engineering, Velammal college of Engineering and Technology conducted CZENIA '17, a National Level Technical symposium on 24.02.2017 with various events.

- Technovation
- E-Trix
- Buggy Bag
- Web Tracery
- Hasty C
- Dany Baza
- Jugaad
- Clavier Utsav
- Loco POCO
- Inter Knack

The chief guest for the event is **“Mr.Dr.S.Muralidharan”** HOD , Mechanical Department, Thiagarajar College of Engineering, Madurai.



## Inauguration



There are 180 participants from various colleges attended our symposium, CZENIA'17. They took part in various events and won Cash Prizes and Silver Coins.



Organized By,

Mr. K. Azarudeen, Assistant Professor  
Mrs G. Mohana Priya, Assistant Professor

and

Students of III year CSE,  
Velammal College of Engineering and  
Technology.



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