



WEEKEND OF CODE



Get onboard to witness the extravagance of
code.

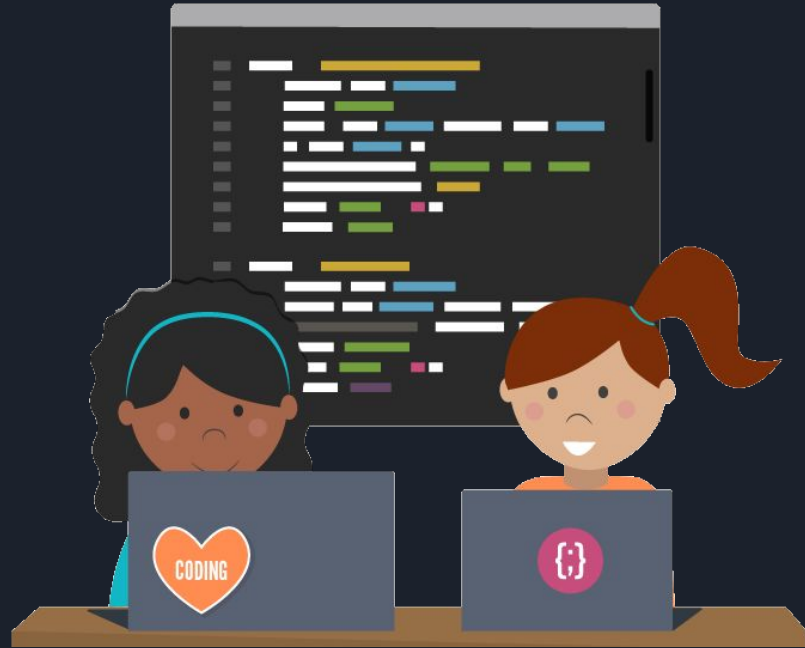
Why Weekend of Code?

It is observed that the freshers and the sophomores aren't very familiar with the structure of events like Hack36 and Insomnia. The possible reason being the lack of dedicated mentorship and guidance. So Weekend of Code(WOC) provides an opportunity to you all to really dig deep and explore the world of development and coding with dedicated mentorship and exclusive participation for the freshers (and sophomores for codestart).



What is in it for you?

1. DevJam
2. CodeStart





DevJam

- An exclusive event for the MNNIT freshers
- Mini Hack36
- No restrictions on what to make or the tech stack
- Dedicated mentors from the final year will be allotted to each participating team.
- Team size of 2-4 members. Sorry lone wolves :(





DevJam

Devjam offers you a unique opportunity to explore the world of development (which is really vast). Unlike Hack36, this event is exclusive only to the freshers to help them familiarise with the beautiful world of development.

It is a week long event where you'll be building anything from any domain of your choice with the help of any technology you want to.

No themes would be provided and you are free to let your imagination run wild.



DevJam

You'll be given a week's time to build your project

During this time you can consult your allotted mentor (from final year) regarding any doubts or suggestions. Remember it is more about learning than winning so try to learn as much as you can during this period.

There will be a mid term evaluation where we'll be assessing your projects' current status and we will help you out with some advices. The mid term evaluation will also have a weightage in the score distribution so don't forget to attend the same.

On the weekend we (the pre-final year students) will be evaluating your projects. Incomplete projects will also be evaluated but try to finish the project within the time period.

The logo graphic consists of two overlapping parallelogram shapes. The front one is blue and the back one is light green, both pointing towards the bottom right.

DevJam

Your limit is your imagination. There is no restriction on tech stack. You can do:

- Mobile App Development
- Website Development
- Desktop App Development
- AI/Machine Learning
- Blockchain
- IoT (Internet of Things)
- Cloud Computing
- Game Development (Unity)

and much much more...



CodeStart

- A competitive programming event for the sophomores and freshers.
- Mini ICPC
- Single round
- 5 hours of hustle for the title of CodeStart champions
- Team event (max size = 3). Lone wolves are allowed :)
- An awesome event to introduce you to highly esteemed contests like ICPC.





CodeStart

Get a glimpse of the extravagance of INSOMNIA (the flagship competitive programming event under CyberQuest AVISHKAR) by participating in CodeStart 4.0

Since the freshers haven't experienced the excitement of our Techfest AVISHKAR, we highly recommend you to participate in CodeStart to witness the fun.

Let the adrenaline run wild when you try to solve the problems the fastest in a competitive environment.



CodeStart

Unlike previous year, CodeStart 4.0 will only consist of a single 5 hour round consisting of 10 problems (tentative).

Since it is a team event we highly encourage you to find like-minded individuals to compete by your side. (Though Lone wolves are allowed).

The problems will be of varying difficulties. There would be easy/beginner friendly problems to give the dopamine boost to beginners and there will also be relatively harder problems to ensure it doesn't become a cakewalk for the more experienced competitors. (Victory is sweet when it is hard to achieve :))



Study materials

Disclaimer : The list of resources mentioned here isn't exhaustive. Moreover you aren't bound to follow only the mentioned resources. You should try to explore as much as you can and don't forget to have fun throughout this journey.

Also, most of the books mentioned here are available for free on: <https://libribook.com/>



Competitive Programming

- [Competitive Programmer's Handbook](#) : The Competitive programming handbook is an amazing way to start your CP journey.
- [Main Page - Competitive Programming Algorithms](#) : This site is an amazing reference to complex algorithms. The tutorials are very well written.
- [CSES](#) : An wonderful collection of CP problems meant for practicing the concepts learnt from the the CP handbook.
- Various online judges like Codechef, CodeForces,etc will help you develop your CP skills.
- You can also read solution code written by fellow coders which can help you get valuable insight into the problem.

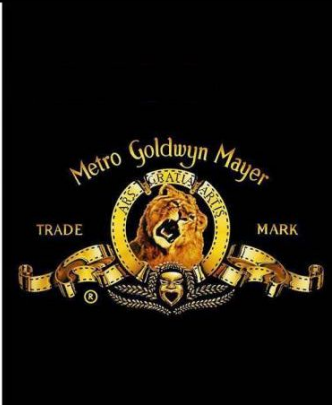
Remember CP is an e-sport. Just like you play other e-sports like CS-Go, Valorant etc., for having fun, you should do CP for the same purpose of having fun and getting that adrenaline boost.

Web Development

Any website can be broadly divided into 3 sections:

- **Frontend** : Refers to the content visible to the users.
- **Backend** : Refers to the under the hood programming to make the website do meaningful work.
- **Database** : Acts as storage for the data required by the website.

BACKEND vs FRONTEND





Frontend (Web Development)

- To begin with frontend learn about HTML (HyperText Markup Language). HTML constitutes the basic structure and content of the website.

Link - <https://www.w3schools.com/html/>

- After HTML, learn CSS(Cascading Style Sheet) which helps to beautify the website.

Link - <https://www.w3schools.com/css/>

- After that focus on JavaScript, which helps to add dynamic behaviour to the web site.

Link - <https://www.w3schools.com/js/DEFAULT.asp>

Bonus : After learning about the basics of HTML , CSS , JavaScript, try exploring JS frameworks and libraries like Vue , React , Angular.

For better understanding...



HTML



CSS

HTML
structure



CSS
presentation/appearance



JavaScript
dynamism/action





Backend (Web Development)

- Install Xampp for running and testing the backend code (Only with PHP).

Link -

<https://www.ionos.com/digitalguide/server/tools/xampp-tutorial-create-your-own-local-test-server/>

- Learn PHP to begin with backend programming.

Link - <https://www.w3schools.com/php/DEFAULT.asp>

Bonus : Explore other frameworks and libraries like -

1. NodeJS (<https://www.w3schools.com/nodejs/>) [Prerequisite - JavaScript]
2. Django (<https://tutorial.djangogirls.org/en/>) [Prerequisite - Python]



DataBase

- Learn SQL (Structured Query Language) for setting up and manipulating MySQL DataBase.

Link - <https://www.w3schools.com/sql/>

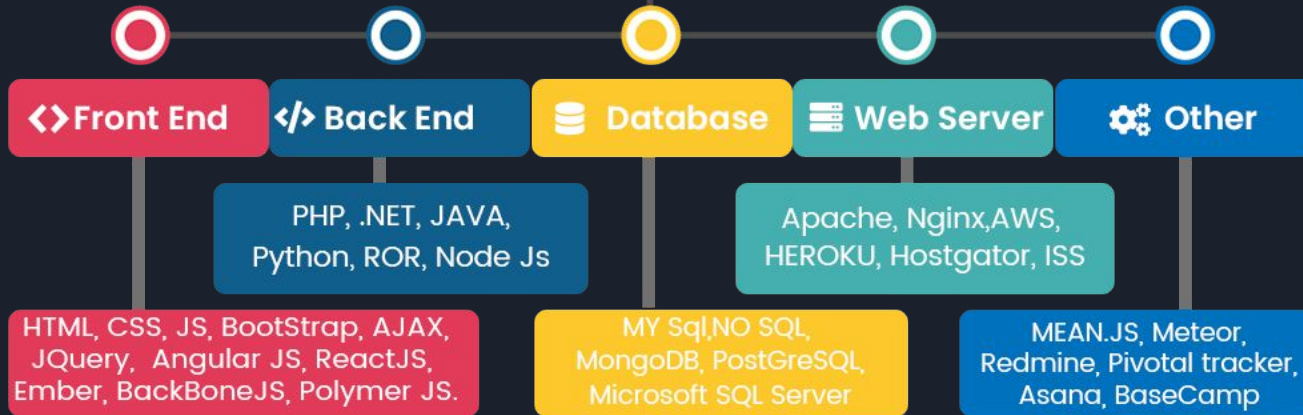
- Open the Xampp app and start the Apache server and MySQL database. Open a browser of your choice and head over to **localhost/phpmyadmin**. Try exploring the dashboard and its functionalities.

Bonus : Try learning about NO-SQL databases (like mongodb , dynamodb , redis etc.) and the tradeoffs between SQL and NO-SQL.

Summary of Web Development



Full Stack Developer





Android Development (Native)

Books:

- To learn Java: Head First Java/ Java- the Complete Reference (Herbert Schildt)
- For Native Android development (in Java): Head First Android

Android Native Courses:

- [Android Studio Tutorial - Instagram App Tutorial Including Stories in Hindi - YouTube](#)
- [Android Development for Beginners - Full Course - YouTube](#)
- [Android Studio - Firebase Backend Tutorial Full Course - YouTube](#)
- [EDMT Dev - YouTube](#)

Docs:

- You'll find everything you need on <https://developer.android.com/studio/intro>



Mobile App Development (Flutter)

Best way to start is to head on to <https://flutter.dev/> and press the 'Get Started' button. The official docs of Flutter are very great for learning.

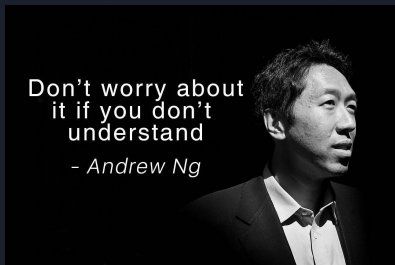
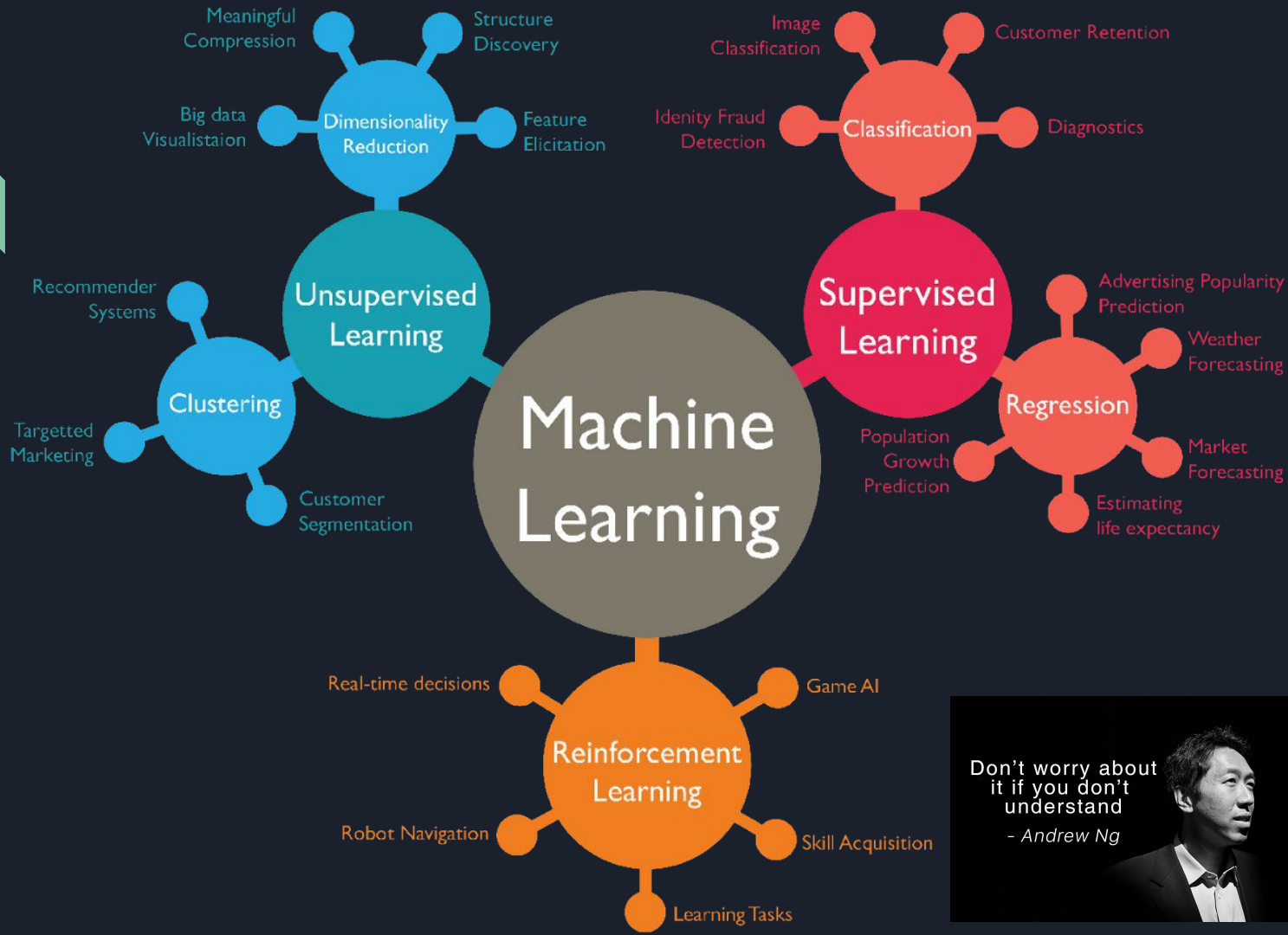
Flutter Courses:

- Flutter: [Flutter Tutorial for Beginners using Dart: Develop Android and iOS mobile app - YouTube](#)
- Dart: [Dart Tutorial for Beginners: Basics and Fundamentals for Flutter - YouTube](#)
- [Build App with Flutter SDK from scratch - YouTube](#)
- [Flutter & Firebase App Build - YouTube](#)
- [E-commerce App using flutter - YouTube](#)



Machine Learning

- One stop resource to start with machine learning has to be the youtube playlist for machine learning by Andrew NG. (Link: [Machine Learning – Andrew Ng, Stanford University \[FULL COURSE\]](#))
- Learn a programming language like python to work with datasets.
Link: [Python Tutorial by telusko](#) (videos 1-70)
- After learning about the core concepts head over to [Kaggle: Your Machine Learning and Data Science Community](#) and explore the titanic dataset.
- After that explore other datasets like Housing Price Dataset and other beginner friendly datasets to get yourself started.
- You can also read the notebooks made by other Kagglers. If you ever get stuck they can throw some amazing insights into the dataset





Blockchain Development


- [Intro to Solidity Programming Language - Ethereum Blockchain Developer Tutorial for Beginners - YouTube](#)
- [Solidity - YouTube](#)
- [Free Course: Developing Ethereum Smart Contracts for Beginners - YouTube](#)
- [How does Ethereum work, anyway?. Introduction | by Preethi Kasireddy | Medium](#)
- [web3j/web3j: Lightweight Java and Android library for integration with Ethereum clients \(github.com\)](#) (for Java developers)
- [Web3j docs](#) (for Java developers)
- [web3.js - Ethereum JavaScript API — web3.js 1.0.0 documentation](#) (for web developers)
- [Sweet Tools for Smart Contracts | Truffle Suite](#)
- Learn about truffle and Ganache here: [Documentation | Truffle Suite](#)



Software Development

- Learn JAVA (highly recommended for beginners).
- Learn about the required libraries like AWT, Swing etc. for GUI. You can also use IDEs like NetBeans, Eclipse and IntelliJ Idea where the GUIs could be made using drag and drop method.
- Learn about databases (Refer to web slide for that purpose).

Bonus : Explore other JAVA frameworks like JAVAFX , Spring etc.



Need a compiled list of resources for all these tracks???

Head on to <https://github.com/CC-MNNIT/> to access the resources compiled by our senior CC co-ordinators.

All the class recordings of CC classes taken last year: [Class Recordings - Google Drive](#)



THANK YOU

WE ARE ALL OPEN TO QUESTIONS NOW.



Stay Safe

- Do yoga daily
- Drinks lots of water
- Keep yourself warm

And also, make good teams :D

All the best

Team MNNIT Computer Coding Club