Day 3-4: Technology for PMs - Cole Mercer - LinkedIn

> ⓘ After the completion of 2 days onboarding. Here's my journey of unlearning and re-learning everything about Tech. My goal is to make myself 'HIGHLY' comfortable with the **key concepts** of Tech to cover for my non-Tech background. I am starting with this course as suggested by my buddy @ Varad Pingale .

1. Cloud just means **OVER THE INTERNET.**
2. **What is internet?** Internet is a lot of devices connected together in a **huge network.** We connect to internet through an Internet service provider. If you want to connect any device to internet, you need to get through an ISP. ISP gives you a portal and charges monthly for the service.
3. The devices on the internet can be sorted into 2 different classes: **Servers** and **Clients**.
4. A server is a machine that **stores data/webpages** and **allows others to access the data**.
5. A client is any device that is **used to access the server.**
6. **IP address is the address of the URL** that we type in the web browser.
7. When you type URL in the web browser, request is sent to ISP to connect to the DNS server. URL is converted to IP address by the DNS and sent to server. Web server sends it to our client.

> How does information travel over internet?

Front End, Back End and Tech Stacks

1. **Front end:** What user sees (Programming Languages: HTML, CSS, JAVASCRIPT)
2. **Back end:** Servers and databases that hold information (Technologies: MYSQL, Amazon S3)
3. **Application layer:** Programming that communicates between Front end and Back end ensuring right data gets to right place. The code for application layer is housed upon either front end or back end. (Programming languages: Python, PHP, Ruby). For eg. User goes to Amazon webpage and clicks sort items. This application layer reads our search, queries the database for the data you want, sorts them and sends it to you.
4. **Tech stacks:** All the programming that makes up front end and back end.

> How does knowing about Tech stack of a software help in making decisions? Why is it important to know about Tech stacks? What kind of decisions?

Programming languages

1. A programming language is simply a way to give instructions to any kind of computer, including a phone so that it accomplishes a certain function or provides a certain experience **to someone using the device.** A complete set of instructions is what we call an application, or app, or program. You'll also hear the set of instructions referred to as the code. Code just means the instructions that are written in the actual computer language.
2. Computer languages differ in the specific types of functions they do well. If you're working with web products, the languages used there are HTML, CSS, and JavaScript.
3. **HTML** provides the content you see on a webpage, basically what the text and images are.
4. **CSS** specifies how that content should look, what font and what size, the background color; and all the visual aspects of a page.
5. **JavaScript** gives the webpage behavior. If you interact with a webpage and it responds to you appropriately, JavaScript is probably responsible.
6. **Python** is an example of a high-level language. This just means that Python is often used to program web servers and mobile apps. Python programs are often called scripts. And the language itself is frequently referred to as a scripting language. You're probably going to hear about Python the most in reference to data analysis as it's a very popular language to make scripts in that parse data.
7. Now, Java might be confusing because it sounds similar to JavaScript, but they aren't even close. JavaScript is specialized to change the behavior of webpages, but **Java is an all-purpose**, general programming language **that is used to write everything from enterprise software, to games, and mobile apps.** Java is designed so that once the program is written, it can run on pretty much any platform that supports it without any adjustment to the code.
8. **Ruby** is another language that is pretty easy to read. And like Python is considered to be a good user-friendly language for beginners. It's used for developing websites and mobile apps. And is the power behind sites such as Groupon and Shopify. You've probably heard of Ruby when people talk about Ruby on Rails, which is just a framework that makes building applications in Ruby even easier.
9. **Scala** is what's called a functional application language. And was designed as an update or improvement to Java, providing features or fixing things that Java does not do so well. Programs written in Scala are compatible with Java. And they will run on any system which can run Java, which is just about anything and everything. So Scala, like Java can be used to write a wide range of applications.
10. **PHP is a web server language** that are used to display pages on websites and mobile apps. It generates web pages that are created on the fly based on a user's request or input. You'll often see .php web pages in the address bar of your browser. PHP was one of the earliest languages adopted en masse for making full web applications.

Frameworks, Libraries, SDKs and Preprocessors

1. **Library:** A collection of code to link to your app. For eg. In C++ you dont have to explain what a 'cin' or 'cout' is. Once we download the library, it already knows and we can build upon it.
2. **Frameworks:** Anything and everything we use for application development. In a framework, we just write little of our code, rest is pre-made. Unlike in library, most code is ours.
3. **SDK: Software development kit/** A set of tools to make an app.

Databases

1. **Relational:** SQL
2. **Non-relational Databases:** Stores information in specialised documents. Take advantage of cloud capacity. Cassandra (Open source) and MongoDB (

Need to learn more about non-relational databases.

API

1. Application programming interface
2. Allows one program to talk to another program
3. API has access to the database, knows how to retrieve the data and
4. 2 types: Public API and Private API

Learn more about APIs

Web Development

1. Any information that we see on a website would be different on a mobile and on a laptop. Then how does the web server knows what information to display? When we send a request to web server, the data stream that carries that request consists of information about our OS, Device type and Browser. This means the website knows which device it is talking to.
2. Content management system

Mobile Development

1. Native, Non-native and Hybrid apps