

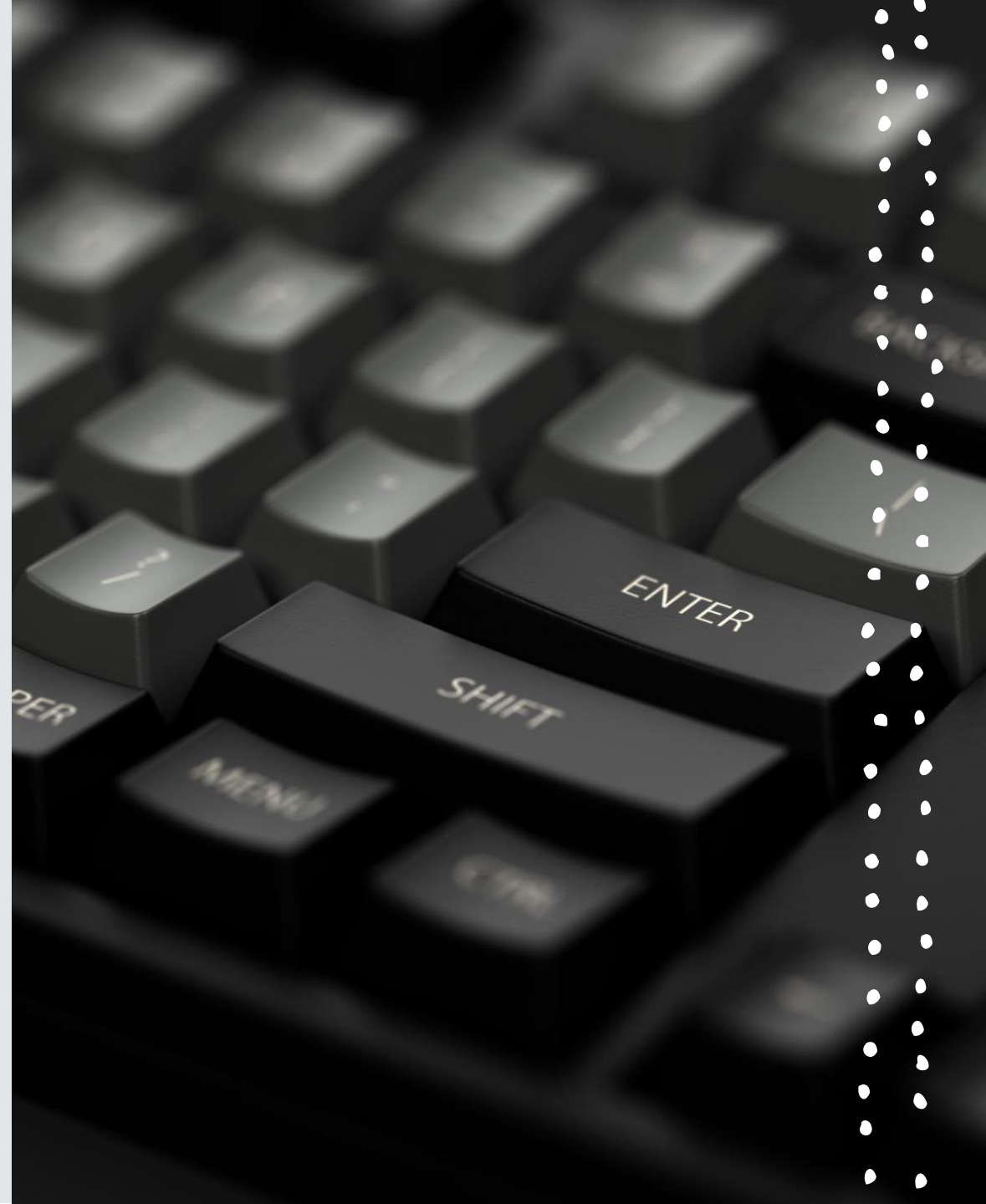
LECTURE # 1

Web & Mobile App Development

What is Computer?

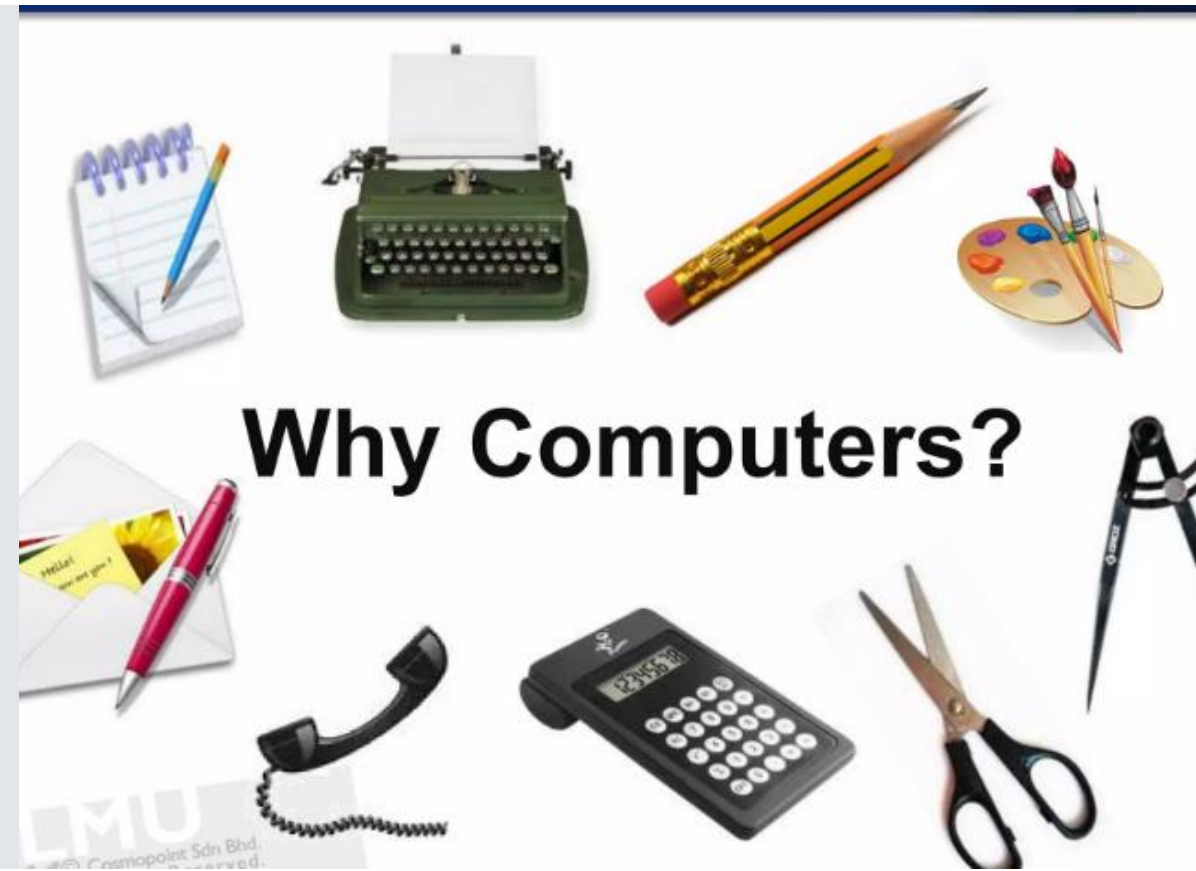
A computer is **a machine that can store and process information.**

It's a device that accepts information (in the form of digitalized data) and manipulates it for some result based on a program, software, or sequence of instructions on how the data is to be processed.

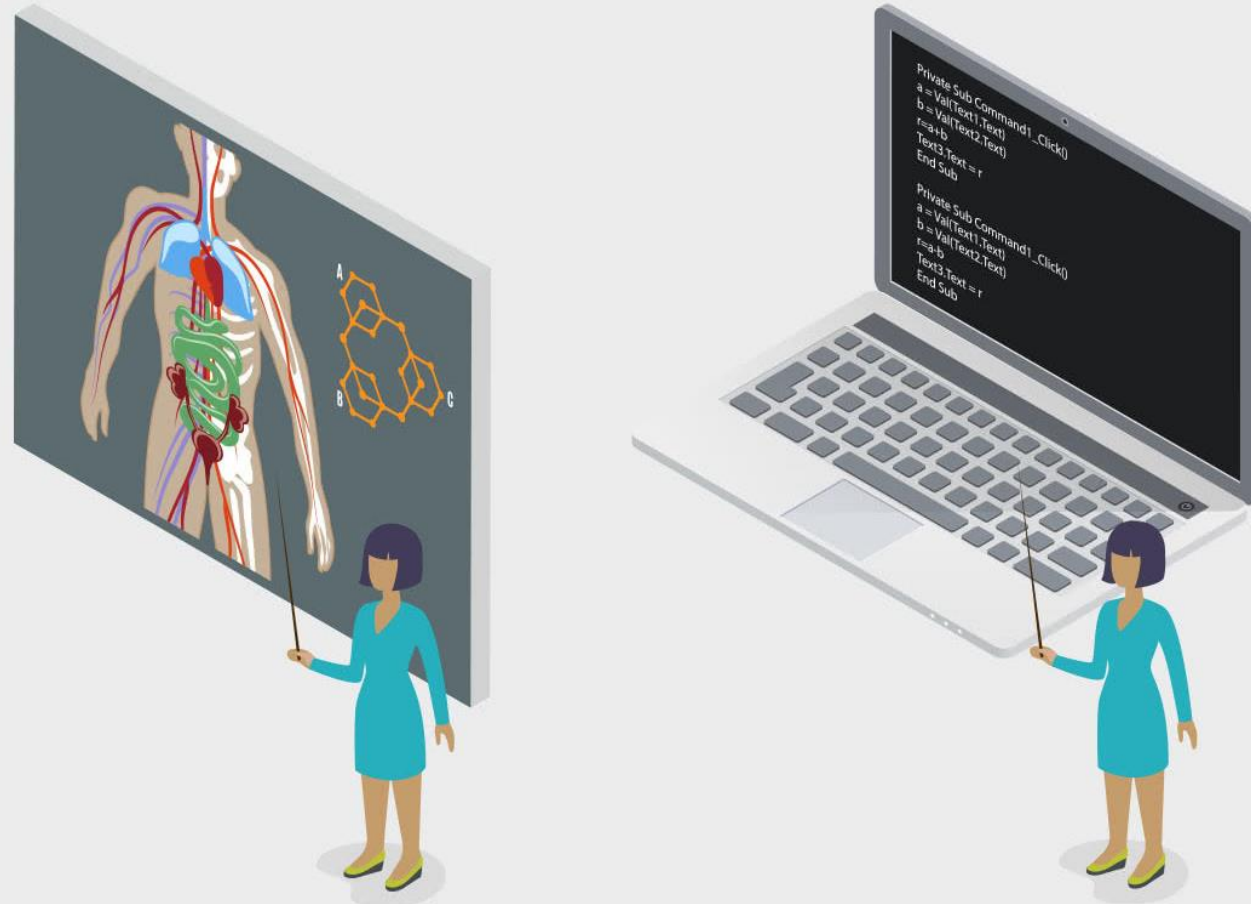


Why Computers?

- The computer was invented in order to **automate mathematical calculations** that were previously completed by people.
- “Automation” of everything is the main cause behind invention of computers.



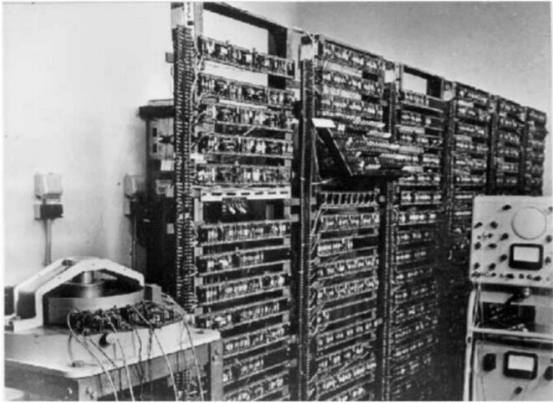
Computer science is foundational



Every 21st century child should have a chance to learn about algorithms, how to make an app, or how the Internet works.

Just like they learn about photosynthesis, the digestive system, or electricity.

Generation Of Computers 1st To 5th



First Generation 1946-1959



**Second Generation
1959-1965**



**Third Generation
1965-1971**



**Fourth Generation
1971-1980**



Fifth Generation 1980- Present



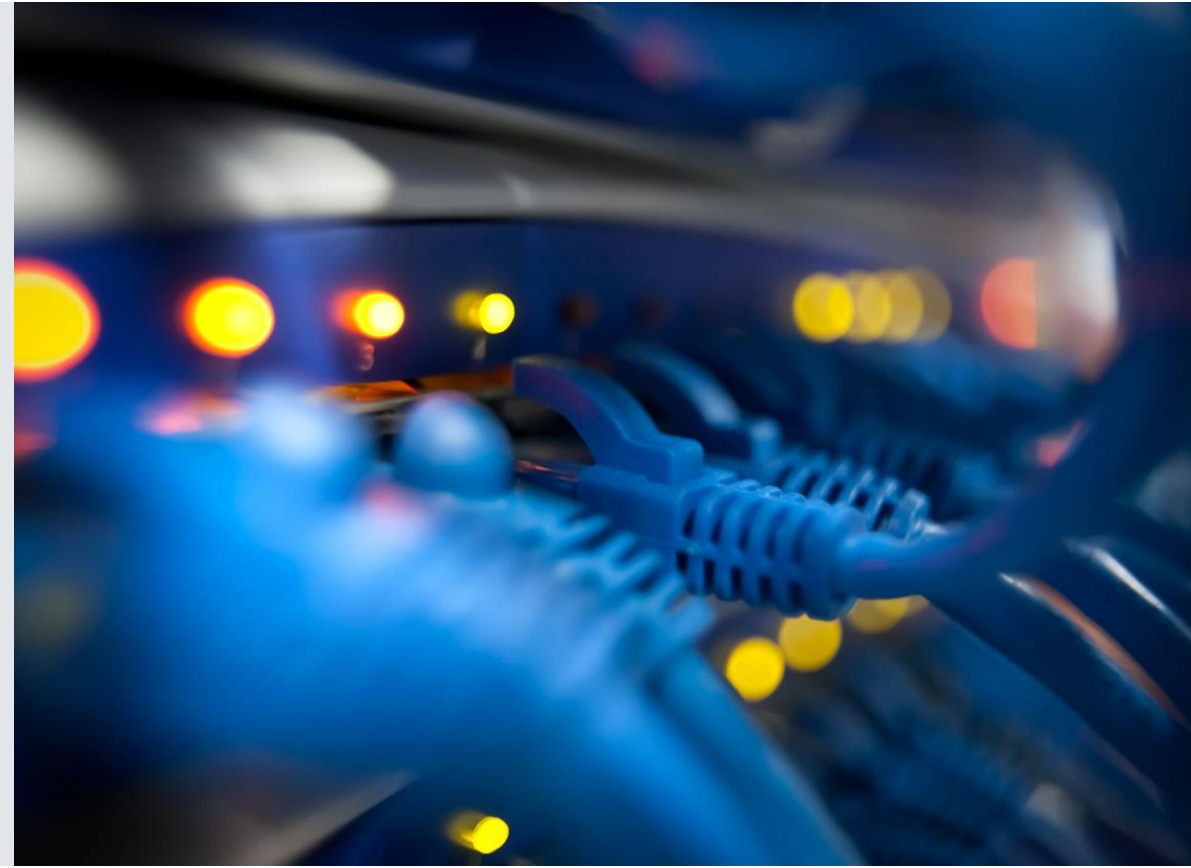
Parts of Computer

Computer



Input and Output

- An input device is connected to a computer that sends out data into the computer, while an output device is connected to a computer that receives incoming data.
- A keyboard or computer mouse is an input device for a computer, while monitors and printers are output devices.

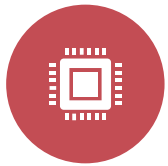




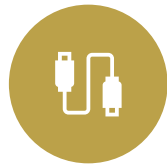
Hardware and Software

- **Hardware** is any element of a computer that's **physical**. This includes things like monitors, keyboards, and also the insides of devices, like microchips and hard drives. **Software** is anything that tells hardware **what to do and how to do it**, including computer programs and apps on your phone.

Hardware Example



Processor



**Memory Devices
(USB/Hard drive)**



Monitor



Printer



Keyboard



Mouse



**Central
Processing Unit
(CPU).**

Types of Software



System Software



Application Software

System Software

- System software is **a type of computer program that is designed to run a computer's hardware and application programs.**
- Examples of system software include operating systems (OS) like macOS, Linux, Android and Microsoft Windows.

Application Software

- Application software is a **type of computer program that performs a specific personal, educational, and business function.**



Microsoft Word



Spreadsheet



Word processor



Web browser



Google Chrome



Photoshop



Microsoft Excel



Presentation program



Microsoft Office



Microsoft PowerPoint



CorelDRAW



VLC media player



Educational software



Microsoft Outlook



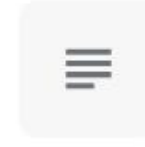
Firefox



Windows Media Player



Safari



WhatsApp



iTunes



AutoCAD



WordPad

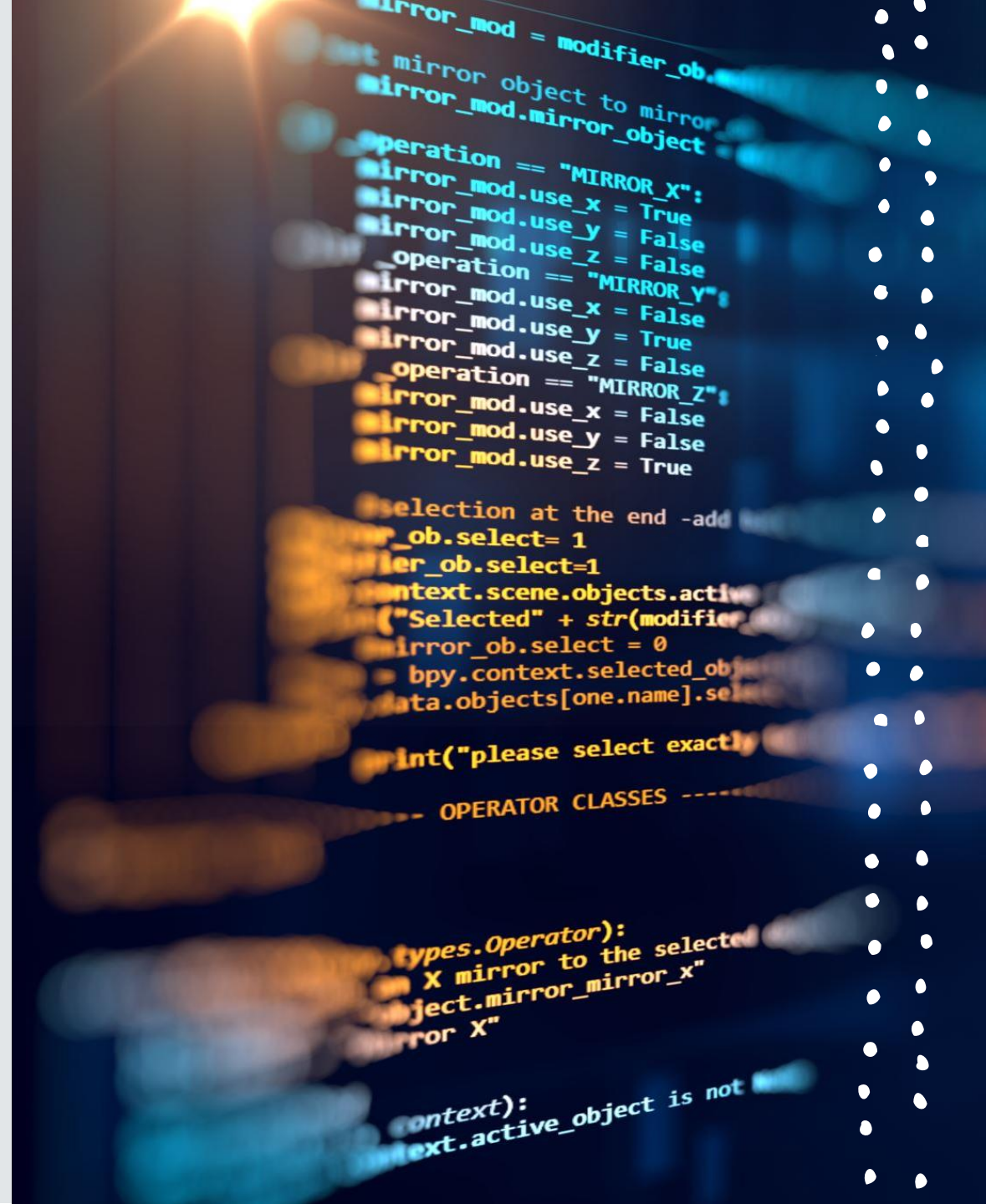


Accounting software

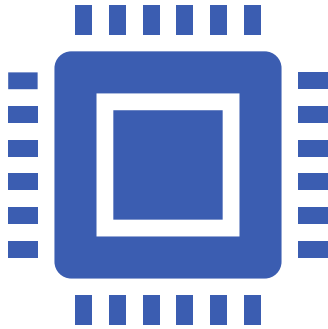


What is a Program?

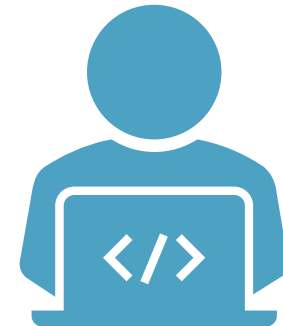
- A program is a set of instructions that a computer follows in order to perform a particular task.



What is a Programming Language?



A programming language is **a vocabulary and set of grammatical rules for instructing a computer or computing device to perform specific tasks.**



A programming language is **a way for programmers (developers) to communicate with computers.**

Modern programming languages



Python



Java



JavaScript



PHP



Swift



Ruby



Kotlin



Rust



Scala



Objective-C



SQL



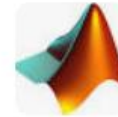
Perl



Dart



TypeScript



MATLAB



Haskell



Elixir



Fortran



C++



Julia



COBOL



Visual Basic



Lisp



Lua



Programming vs Coding vs Development

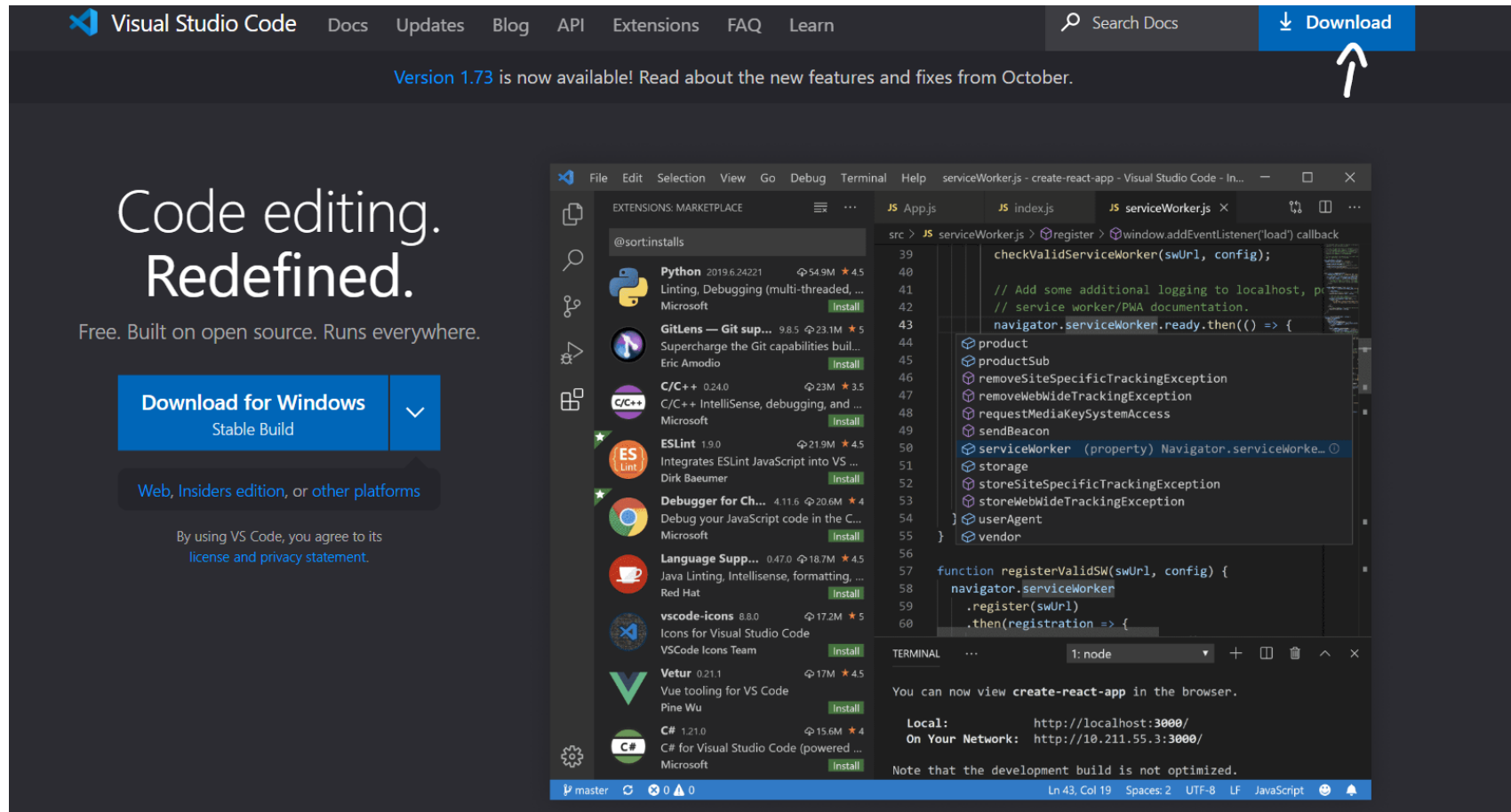
It's about thinking and problem solving	Pertains to computer code	Involves both and more.
You create a set of instructions which defines your apps behavior	You implement the instructions for the computer with code	Involves both
You don't need to know how to code	You should know how to program conceptually to represent it in code.	Should know how to do both
The most fundamental skill to have.	Important. Becomes easier when you have mastered programming.	Very important skill for project managers to possess. Harder than other two.
Isn't technical, but logical. Even a kid can program	A technical skill which can be comparatively easy to acquire	Technical. mental, psychological and even emotional.
An inborn skill everyone who can think already has	You can get code from Stack Overflow, GitHub or even AI (GitHub CoPilot)	Entails teams of people (designers, programmers, testers, etc), planning, revisions, testing, and release.

Where to write Code?

- An editor lets you write computer code. They range from simple, like a basic text editor, to advanced software, such as Adobe Dreamweaver, Eclipse, JDeveloper, or Microsoft Visual Studio Code.

VS Code Installation

<https://code.visualstudio.com>



Visual Studio Code Docs Updates Blog API Extensions FAQ Learn

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EXTENSIONS: MARKETPLACE

@sort:installs

- Python** 2019.6.24221 54.9M ★ 4.5
Linting, Debugging (multi-threaded, ...
Microsoft [Install](#)
- GitLens — Git sup...** 9.8.5 23.1M ★ 5
Supercharge the Git capabilities built...
Eric Amodio [Install](#)
- C/C++** 0.24.0 23M ★ 3.5
C/C++ IntelliSense, debugging, and ...
Microsoft [Install](#)
- ESLint** 1.9.0 21.9M ★ 4.5
Integrates ESLint JavaScript into VS ...
Dirk Baumer [Install](#)
- Debugger for Ch...** 4.11.6 20.6M ★ 4
Debug your JavaScript code in the C...
Microsoft [Install](#)
- Language Supp...** 0.47.0 18.7M ★ 4.5
Java Linting, IntelliSense, formatting, ...
Red Hat [Install](#)
- vscode-icons** 8.8.0 17.2M ★ 5
Icons for Visual Studio Code
VSCode Icons Team [Install](#)
- Vetur** 0.21.1 17M ★ 4.5
Vue tooling for VS Code
Pine Wu [Install](#)
- C#** 1.21.0 15.6M ★ 4
C# for Visual Studio Code (powered ...
Microsoft [Install](#)

src > JS serviceWorker.js > register > window.addEventListener('load') callback

```
39  
40  
41 checkValidServiceWorker(swUrl, config);  
42 // Add some additional logging to localhost, p  
43 // service worker/PWA documentation.  
44 navigator.serviceWorker.ready.then(() => {  
45   product  
46   productSub  
47   removeSiteSpecificTrackingException  
48   removeWebWideTrackingException  
49   requestMediaKeySystemAccess  
50   sendBeacon  
51   serviceWorker (property) Navigator.serviceWorke...  
52   storage  
53   storeSiteSpecificTrackingException  
54   storeWebWideTrackingException  
55   userAgent  
56   vendor  
57  
58 function registerValidSW(swUrl, config) {  
59   navigator.serviceWorker  
60     .register(swUrl)  
61     .then(registration => {
```

TERMINAL

1: node

You can now view create-react-app in the browser.

Local: http://localhost:3000/
On Your Network: http://10.211.55.3:3000/
Note that the development build is not optimized.

Main Shortcut Keys

Copy	Copy: Ctrl + C.
Cut	Cut: Ctrl + X.
Paste	Paste: Ctrl + V.
Select	Select All: Ctrl + A

Explore

Application Software (MS Office etc.)

Browsers (Chrome, Firefox, Opera, Safari)

Files and Folders

Search Engine (Google, Yahoo)



Saylani WMA-06 (Female)

WhatsApp group



Scan or upload this QR code using the WhatsApp camera to join this group



Saylani Web & Mobile B1

WhatsApp group



Scan or upload this QR code using the WhatsApp camera to join this group