7) Programs used in work development work flow

IDEs

- integrated development environment
- IDEs are applications which are being used to write code, compile or interpret code, debug and test code
- for example:
  - **VS Code**
    - its lightweight and easy to use application
    - it has a lots extensions and addons which you can use to customize your editor
  - **Cursor**
    - its a fork of VS Code, but it uses AI
    - AI helps you write code and debug it
    - also can help you understand big, complicated code by making comments where its gonna explain what the code does
  - **PhpStorm**
    - its powerful IDE specifically designed for PHP development
    - provides advanced code completion, refactoring tools, and debugging tailored for PHP
    - it also have excellent support for various PHP frameworks
  - **RustRover**
    - thats special editor made just for coding in Rust
    - helps you find problems, fix them, and test your Rust code
    - also helps you manage Rust's tricky rules about how code uses memory

Debugging

- next thing I already mention is debugging
- debugging is a process of finding and fixing errors or bugs in source code
- its being used when software, application or website doesnt work as expected, thats when debugger comes in
- for example:

- **Chrome Developer Tools**
  - its available in chrome browser and other chromium based browsers
  - it lets you look at the HTML, CSS and JavaScript code of the website
- **Xcode Debugger**
  - its debugged for making apps for iPhone and Macs
  - helps you fix code written in Swift and Objective-C
  - it also helps you find memory problems and make your apps run faster
- **Xdebug**
  - tool that helps you debug PHP code
  - lets you stop your code, step through it and look the code is really doing like setting variables, changing values and much more

18) What programming languages do you know?

- I would like to start with that I know a lot of programming languages, but at school we only learn Assembly, C++ and PHP
- but they are many many more than just these and theyre divided into categories like **Web Development**, **System Programming**, **Mobile App Development**, **Game Development**, **Data science & AI** and **Databases**
- now I will say couple of languages for each category
- **Web Development**
  - JavaScript
  - TypeScript
  - PHP
  - Ruby
  - Dart
  - HTML and CSS (not programming language, but markup language)
- **System Programming**
  - C
  - Objective-C
  - C++
  - Rust
  - Go
  - Assembly
- **Mobile App Development**

    - Swift (for iOS)
    - Kotlin (for Android)
    - Java (for Android)
    - Dart (which is Flutter framework)
- **Game Development**
    - C++ and C# (both used for Unity engine)
    - Lua (for Roblox)
    - Pawn (for game modding)
- **Data science & AI**
    - Python
    - R
    - Julia
    - MATLAB
- **Databases**
    - those are divided into multiple categories, but the most important are **Relation Databases** and **NoSQL Databases**
    - **Relation Databases**
        - MySQL
        - PostgreSQL
        - SQLite
        - MariaDB
    - **NoSQL Databases**
        - MongoDB
        - Redis
        - Cassandra