**Operating Systems**

* What are operating systems?
* How operating systems run on hardware
* Windows
* Unix / Linux
* Mac

**Types of software**

* Desktop
* Web
* Mobile
* Hybrid
* Embedded

**Types of languages**

* **High level** – high abstractions, lower detailed to hardware, focused building applications (JavaScript, Python, Go)
* **Low level** – closer to hardware (Assembly, C, C++, Java, C#)
* **Compiled** and **Interpreted** languages

**Error in Software Development Cycle**

* Syntax error
* Logic error
* Runtime error
* Debugging skill

**Software Security**

* **Libraries –** application might depend from 3rd party libraries
* **CORS –** cross origin resource sharing. When connecting backend with frontend with http protocol
* **XSS –** cross site scripting. Application should validate user input before displaying it.
* **DDOS –** distributed denial of service attack. Huge amount of requests to the system where server becomes overloaded.
* **SQL injection –** it lets attackers manipulate database queries by injecting malicious input which often leads to data leaks, account takeover
* **CSRF –** cross-site request forgery
* **Local threats**
* **2 Factor Authentication –** security process which requires user to provide two different type of verification. It protects against stolen or weak passwords and blocks phishing attack.