Tools and Frameworks

- **Ethereum**, applications and frameworks used are **OpenSource software** under **GPL** or **MIT** licence;
- **Solidity**
  - High-level Programming Language similar cu JS used to develop Smart Contracts;
- **Remix**
  - Cloud IDE;
  - Compiles & debug solidity;
  - Uses JS VM or Metamask to deploy contracts;
- **Truffle**
  - Development environment;
  - Contract Management and Deployment (Migrations);
  - Integrated testing Framework;
- **Ganache**
  - It was called TestRPC;
  - It creates a virtual private Ethereum Blockchain, and it generates some fake accounts that we can use during development. It works well together with Truffle;

Tools and Frameworks (cont)

- Web3.js
  - **Ethereum JavaScript API created by the Ethereum Core Team** used to interact with a local or remote Ethereum Node using HTTP or IPC protocols;
  - Web Applications (Front-Ends) use Web3.js to interact with the Ethereum Blockchain
  - Used by professionals(developers);
- Metamask
  - **Browser Plugin** that allows you to run Ethereum dApps right in your browser without running a Full Ethereum Node.
  - It is also a wallet and can be used to send and receive Ethers in a secured manner;
  - Used by final users (consumers);
- Mist dApps Browser
  - Created my the Ethereum Team, it's a browser used to interact with dApps;
  - It is also a wallet and can be used to send and receive Ethers;
  - Mist can be used to deploy contracts or to interact with already deployed contracts;

Tools and Frameworks (cont)

- Geth
  - Multipurpose command line tool that runs a Full Ethereum Node implemented in Go. It offers three interfaces: the command line subcommands and options, a Json-rpc server and an interactive console;
- React, Vue, Redux
  - JS Front-End Frameworks used to create user interfaces;
  - Have nothing to do with Truffle, Solidity or Ethereum ;
  - Use Web3.js to connect web applications to an Ethereum Node
- Ethereum Node
  - A machine (Laptop or Desktop) that runs an Ethereum Client like Geth or Mist;
  - It downloads the entire Ethereum Blockchain locally.
  - There are miner and non-miner nodes;