Development Tools

Blockchain
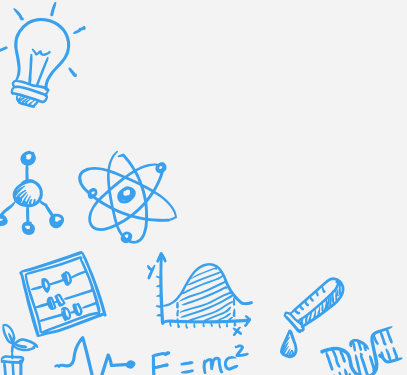
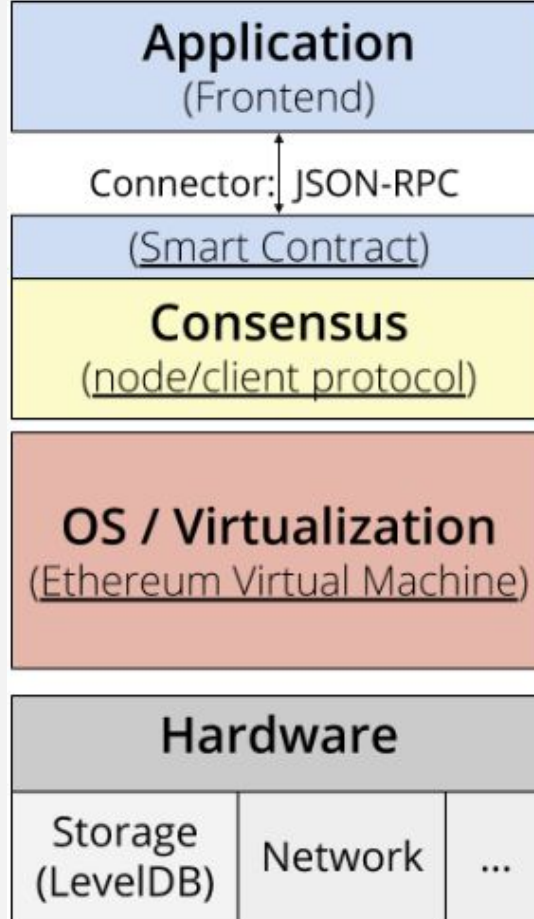**Derek**

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Today's format

❑ Software Stack (Blockchain vs Traditional)

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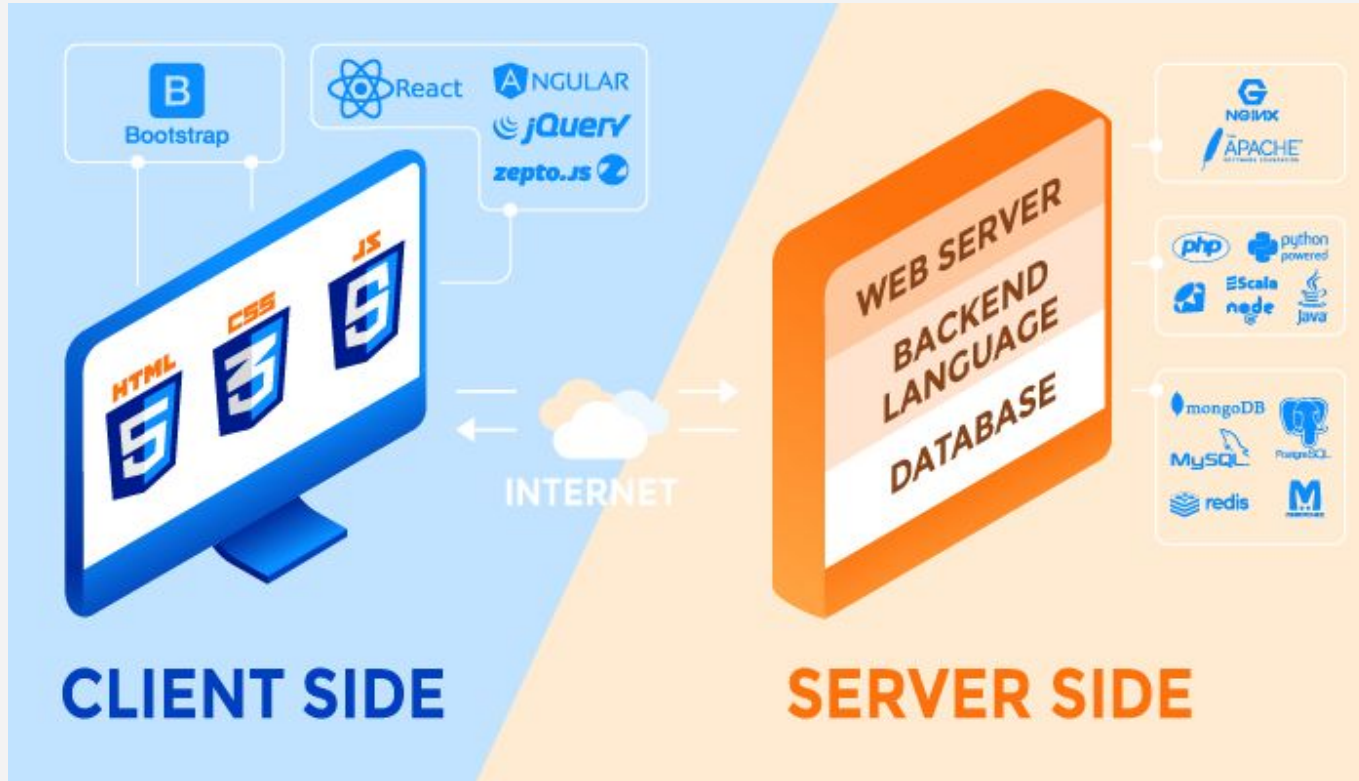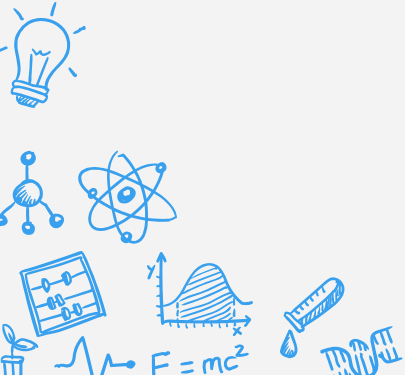# Software Stack

Software Stack

❑ Group of programs that work together to achieve a common goal

  ↳ Requires understanding of <u>what</u> the goal is first

❑ <u>Who</u> is it for?

❑ <u>What</u> platform are you using?

❑ <u>How often</u> do you want the system to be up?

❑ <u>How many</u> people do you foresee using the system?

❑ etc…

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Software Stack

Application Interface

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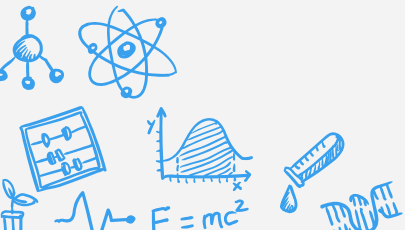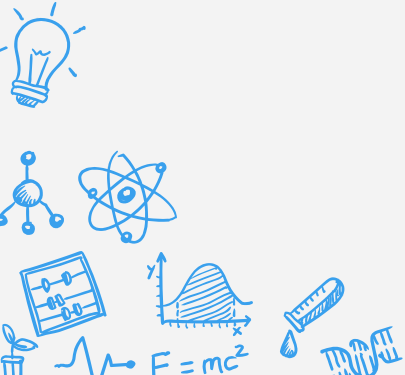AT NTU

Web Applications

- ❑ HTML - Hypertext Markdown Language
  - ↳ Basic structure (skeleton) of webpage
- ❑ Javascript
  - ↳ Front-end logic, executes within browser
- ❑ CSS - Cascading Style Scripts
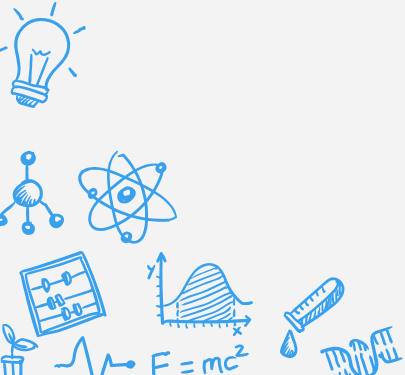 - ↳ Beautifies the web-page
- ❑ PHP
  - ↳ Server-side logic

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1. React.js

❑ Tutorial:

↳ http://bit.ly/bnsWebReact

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2. Bootstrap

❑ Tutorial:
  ↳ http://bit.ly/bnsWebBootstrap
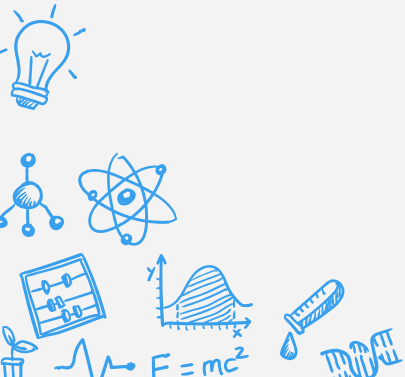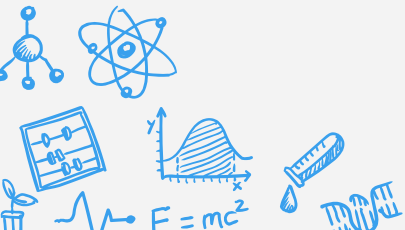
Communication

JSON / XML

Communication

❏ Communication is done through API (Application Platform Interface)

❏ Interfaces interact by sending packets of data (usually in JSON or XML format)
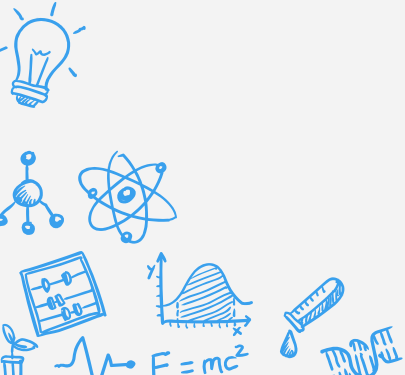

❏ Blockchain : Web3, JSON RPC

JSON

❏ JSON (Javascript Object Notation) is a common way to send data between different components

↳ to access: myObjc.age

```
var myObj = {name: "John", age: 31, city: "New York"};
```

XML
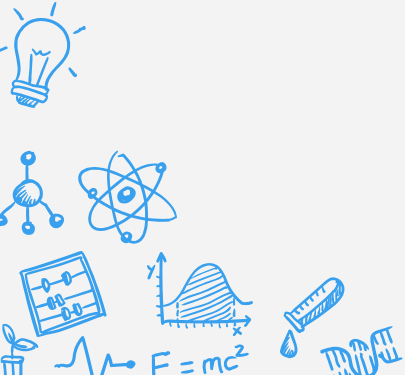
- ❑ XML (Extensible Markup Language) is another way to communicate
- ❑ Most notable difference: no arrays in XML

```
<?xml version="1.0"?>
<quiz>
 <qanda seq="1">
  <question>
   Who was the forty-second
   president of the U.S.A.?
  </question>
  <answer>
   William Jefferson Clinton
  </answer>
 </qanda>
 <!-- Note: We need to add
  more questions later.-->
</quiz>
```
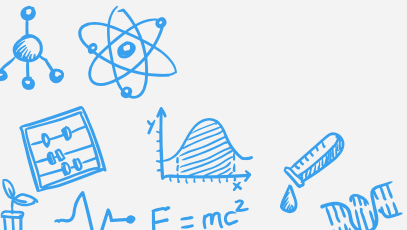
XML

Backend

Python Flask

2. Python Flask

❑ To install:
  ↳ Python (3)
  ↳ Git
  ↳ Heroku
  ↳ Postman

❑ Tutorial:
  ↳ http://bit.ly/bnsWebFlask

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Attendance

Password: gitpush