SNS COLLEGE OF TECHNOLOGY

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An Autonomous Institution

COURSE NAME : 19CSE301 INTRODUCTION TO DATA SCIENCE

III YEAR/ V SEMESTER

UNIT – III
Topic: Web Technologies

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Introduction

- Web Technologies focused on the client-side or server-side of web applications. Knowing the basic categories of web technologies is essential if you plan to work in web development.
- To create a web application, a developer should be familiar with one or two programming languages, front- and back-end frameworks, databases, and CSS.

Web Development Technologies

- Browsers
- HTML and CSS
- Programming Languages
- Frameworks
- Web Servers
- Databases
- Protocols
- Lastly, data Formats

CSS:

- Cascading Style Sheets designers change the look of a web page. CSS frameworks such as Bootstrap or Tailwind CSS can speed page development.
- front-end developers can create modular CSS components that can be reused as needed, eliminating the need for frameworks

Frameworks:

- Framework take care of repetitive development tasks or make programming tasks easier to do. There are frameworks for the server-side and the client-side of web development.

Programming Languages:

Programmers have their favourite languages. The best language is more a matter of preference than functionality, although there are times when one language may be better suited to an application than another. Here are the most common programming languages.

- Java script
- Python
- Ruby
- PHP
- Java
- C#
- HTML
- Elixir
- Lastly, Scala

Database:

Database can be relational like SQL or non-relational like Mongo DB. No matter the database, web applications use them to store data that is used to display on web pages. The following are the most used databases.

- **Mongo DB** – is an open-source No SQL database
- **Oracle** – is an enterprise SQL database
- **SQL Server** – Microsoft's SQL database
- **Redis** – is the most popular key-value store
- **Postgre SQL** – is a popular, open-sourced SQL database
- **MySQL** – a popular open-source database

Browser:

Web applications should be browser independent.

Google Chrome. Most popular browser

Safari. Apple's web browser

Firefox. Open-source browser

Internet Explorer. Microsoft's browser

Web Server:

Web server allow communication traffic between the client and the server.
The most used servers include:

Apache Web Server

Nginx Web Server

IIS Web Server

Lite Speed Web Server

Protocol:

Protocols standardize how data interacts among computers. Further, HTTPS is the protocol between a browser and a website. Indeed, it is the fundamental way information transports over the internet. Two newer protocol:

DDP – is a new protocol created in connection with Meteor that establishes a consistent socket connection between the client and the server.

REST – is a protocol for APIs.

An API is an application programming interface that allows programs to access another application. It uses standardized rules for the exchange of information. Indeed, Facebook and Google use APIs for their web services.

Data Format:

Data formats structure data storage. JSON is becoming the most popular, although most Microsoft systems still use XML. CSV is a comma-delimited data format, primarily used by applications such as Excel.

References

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- 2Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani, “An Introduction to Statistical Learning: with Applications in R”, Springer; First Edition 2013.


Thank
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