



PHARMACOLEARN

It's Important to Know!

BP205T — Computer Applications in Pharmacy

B.Pharm Semester 2 · Unit 2 — Web Technologies and Databases

Unit II: Web Technologies and Databases

HTML, XML and CSS

HTML describes the structure of a web page using elements such as headings, paragraphs, tables and links. XML stores structured data using user-defined tags and is designed to represent data rather than primarily display it. CSS controls presentation such as colour, spacing, typography and layout.

A web server receives requests and returns resources. A client is usually a browser or another application. HTTP transfers requests and responses. HTTPS adds encryption and server authentication through TLS.

Programming concepts

A program is an ordered set of instructions. Variables store values, operators perform actions, conditions select between paths and loops repeat actions. Functions divide a larger task into reusable units. Good programs validate input, handle errors, document assumptions and separate data from presentation.

Databases

A database is an organised collection of data. A relational database stores data in tables containing rows and columns. A primary key identifies a row. A foreign key links related tables. A query retrieves or changes selected records.

Database design begins with requirements and entities. Normalisation reduces unnecessary duplication and update anomalies. A transaction groups related changes so that they either complete consistently or are rolled back. Backups, permissions and audit trails support reliability.

Unit II: Frequently asked questions

Q: What is the difference between HTML and CSS?

A: HTML describes page structure and CSS describes presentation and layout.

Q: What is a primary key?

A: A primary key is a field or combination of fields that uniquely identifies a row in a table.

Q: Why is database normalisation useful?

A: It reduces repeated data and helps prevent inconsistent updates, insertions and deletions.

Unit II: Key takeaways

- HTML structures content, XML represents structured data and CSS controls presentation.
- HTTPS protects web communication through TLS.
- Relational databases organise records in related tables.
- Primary and foreign keys support identity and relationships.
- Transactions and backups protect data integrity.

Unit II: Practical correlation

Practical correlation: pharmacy drug database. A drug database should separate medicine identity, strength, dosage form, stock, supplier and transaction records instead of repeating the same information in one large table.