

PROJECT REPORT: E-COMMERCE PLATFORM (UCUZBURADA)

GitHub Link: <https://github.com/3mrah7/ucuzburada-web-app>

1. Project Description

UcuzBurada is a modern full-stack e-commerce application designed to provide a fast and user-friendly interface for browsing technology products. The project architecture consists of a **React** frontend, a **Spring Boot** backend, and a **PostgreSQL** database.

2. Important Features

- **Advanced Search Functionality:** The application includes a dynamic **Search Bar**. It allows users to filter products by name in real-time using React state management, significantly improving catalog accessibility.
- **Dynamic Data Fetching:** All product information is served via a REST API from the Spring Boot backend, ensuring the data is always up-to-date.
- **Material UI Integration:** The interface is built with **MUI** components, providing a professional look with responsive grids and modern navigation elements.
- **Detailed Product Information:** Each product features specific fields like `short_info` and `description` to give users comprehensive details.

3. Technical Stack

- **Frontend:** React.js, Material UI (MUI), Axios.
- **Backend:** Java, Spring Boot, Maven.
- **Database:** PostgreSQL.

4. Implementation Details & Grading Table

Feature	Description	Implementation Detail
JS Framework	React	Used for UI development and real-time search logic.
Component Library	Material UI	Used for Navbar, Search Bar, and Product Cards.
Backend Service	Spring Boot	Manages API endpoints and database connection.
Database	PostgreSQL	Stores product data, prices, and image URLs.
Search Bar	Real-time Filtering	Filters products instantly based on user input.
Home Page	Dynamic Listing	Fetches and displays products from the database.

5. Resources & References

The following resources and platforms were utilized for research, troubleshooting, and development:

- **E-Commerce Benchmarks:** Amazon and Trendyol (Analyzed for product listing and UI/UX design).
- **Technical Education:** Udemy - Enes Bayram (Comprehensive Spring Boot & React development).
- **Technical Documentation:** Official Material UI Docs (mui.com) and Spring.io.
- **Problem Solving & Community:** Stack Overflow and GeeksforGeeks (Used for solving backend-database integration issues).
- **AI Assistance:** ChatGPT (Utilized for generating SQL scripts from CSV files and optimizing code structure).
- **Development Inspiration:** Pinterest and Dribbble (Used for researching modern e-commerce color palettes).

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