1. Java

What it is:
Java is a high-level, object-oriented programming language known for its portability, scalability, and performance.

Benefits:

- Platform-independent (Write Once, Run Anywhere)
- Large ecosystem and community support
- Supports multithreading for high-performance applications

Why we chose it:
Java is widely used in enterprise applications and backend development. It integrates well with Spring Boot and faciliates building scalable web applications.

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2. Spring Boot

What it is:
Spring Boot is a Java-based framework that simplifies the development of standalone, production-ready Spring applications with minimal configuration.

Benefits:

- Auto-configuration & Built-in reduces time spent on production
- Embedded servers like Tomcat for quick deployment
- Microservices-friendly

Why we chose it:
Spring Boot makes backend development faster and more efficient, reducing the need for manual configuration while also maintainability.

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3. Spring Boot Security

What it is:
Spring Security is a framework that provides authentication, authorization, and other security features for Java applications.

Benefits:

- Protects against common and possible vulnerabilities (CSRF, XSS, SQL injection, etc.)
- Supports OAuth2, JWT, and role-based authentication

- Easy integration with Spring Boot applications

Why we chose it:
Security is a crucial aspect of any web application. Spring Boot Security helps us implement authentication and authorization easily, while also provides sufficient data protection.

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4. Lombok

What it is:
Lombok is a Java library that reduces boilerplate code by generating getters, setters, constructors, and other common methods at compile time.

Benefits:

- No need for explicitly implement all getters and setters and many boilerplate code
- Improves readability and maintainability
- Increases development speed drastically

Why we chose it:
Lombok helps us write clean, maintainable code by reducing unnecessary boilerplate code.

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5. JPA / Hibernate

What it is:
JPA (Java Persistence API) is a specification for Object-Relational Mapping, and Hibernate is the most popular JPA implementation that simplifies database interactions.

Benefits:

- Reduces the need for complex SQL queries
- Provides database independence
- Supports caching for better performance

Why we chose it:
JPA with Hibernate allows us to interact with MySQL in an efficient and abstracted way, making database operations easier to manage.

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6. Maven

What it is:
Maven is a build automation and dependency management tool for Java applications, primarily used to manage project lifecycles.

Benefits:

- Convention-over-configuration approach simplifies project setup
- Strong dependency management with a central repository
- Well-integrated with Java, Spring Boot, and other tools

Why we chose it:
Maven provides a structured way to manage dependencies, making it easy to maintain and build our application efficiently. It integrates well with Spring Boot and is widely used in enterprise applications.

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7. JetBrains IntelliJ IDEA

What it is:
IntelliJ IDEA is a popular Java IDE (Integrated Development Environment) developed by JetBrains.

Benefits:

- Smart code completion and refactoring
- Built-in Git and database tools
- Supports Spring Boot and Lombok natively

Why we chose it:
IntelliJ IDEA provides a powerful development environment, increasing productivity and streamlining Java and Spring Boot development.

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8. Postman

What it is:
Postman is an API testing tool used to send requests and analyze responses from APIs.

Benefits:

- Easy to test RESTful APIs
- Supports automated API testing

- Provides collaboration features for teams

Why we chose it:
Postman allows us to test our backend services effectively before integrating them with the frontend, ensuring API reliability.

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9. MySQL

What it is:
MySQL is an open-source relational database management system that stores and manages application data.

Benefits:

- High performance and scalability
- Supports ACID transactions for data integrity
- Widely used and well-documented

Why we chose it:
MySQL is reliable, easy to manage, and integrates well with Hibernate and Spring Boot for seamless database operations.

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10. React.js

What it is:
React.js is a JavaScript library for building interactive user interfaces, primarily for single-page applications (SPAs).

Benefits:

- Component-based architecture for reusability
- Strong ecosystem with libraries like Redux and React Router

Why we chose it:
React.js allows us to build a dynamic, responsive, and user-friendly frontend for our web application.

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11. Git & GitHub

What it is:
Git is a version control system, and GitHub is a cloud-based platform for hosting and collaborating on repositories.

Benefits:

- Enables team collaboration with branching and merging
- Provides version control and history tracking

Why we chose it:
GitHub allows us to manage our source code, collaborate efficiently, and track changes in our project.

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12. Copilot

What it is:
GitHub Copilot is an AI-powered coding assistant that provides code suggestions based on context.

Benefits:

- Speeds up development by generating code snippets
- Helps with learning new frameworks and best practices
- Reduces repetitive coding tasks

Why we chose it:
Copilot assists in writing efficient code, improving productivity, and reducing the time required for development.

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13. Draw.io

What it is:
Draw.io (now known as diagrams.net) is an online tool for creating diagrams, flowcharts, and system architectures.

Benefits:

- Helps visualize system architecture and workflows
- Free and easy to use
- Supports integration with GitHub and Google Drive

Why we chose it:
Draw.io helps us design and document our application's architecture, making it easier for team members to understand and collaborate.