***Section 1:***

**Design Patterns:**

In programming, we encounter various problems and challenges while writing and developing software. There are standard and reliable solutions to these problems, known as Design Patterns.

These patterns are the result of many years of investigation and research by prominent programmers worldwide. Design Patterns empower you to overcome programming challenges and implement scalable, modern, and clean software.

**Why Use Design Patterns?**

1. Improved software development
2. Modern and maintainable software
3. Clean and structured code
4. Reusable code
5. Enhanced software flexibility
6. Time-saving solutions

**How Are Design Patterns Created?**

Design Patterns are not created by a specific person or company but have evolved through contributions from various programmers.

In 1993, four individuals identified the 24 most effective and widely used design patterns. These pioneers are known as the Gang of Four (GoF).

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