**9.** **Web Component Development in Java (CGI Programming)**

**• Theory:**

1. **Introduction to CGI (Common Gateway Interface):-** CGI (Common Gateway Interface) is a standard protocol that allows web servers to communicate with external programs or scripts in order to generate dynamic content on the web. CGI enables web servers to run scripts or executable programs (often referred to as CGI scripts) in response to user requests, typically from a web browser. This interaction allows the web server to send dynamic, customized content, such as user-specific data, processed forms, or results from databases.
2. **Process, advantages, and disadvantages of CGI programming.**

**Advantages:**

Language Flexibility: Works with various programming languages.

Simplicity: Easy to implement for dynamic content.

Portability: Compatible with different web servers.

**Disadvantages:**

Performance: Creates a new process for each request, which is inefficient.

Resource Intensive: Consumes CPU and memory with each request.

Security Risks: Vulnerable to attacks if not properly secured.

Scalability Issues: Hard to scale for high-traffic applications.