

# CHAPTER IV

## ANALYSIS AND DESIGN

### 4.1. Analysis

Servers open socket to receive any request from clients. After Servers received, it process requests to response client requests.

After servers get the requests, servers send response to clients. If clients request is a PHP file, then servers execute the PHP file with php5 program. If clients request is a JSP file, then servers execute the JSP page with Tomcat program. After that, server send response and clients accept the response.

### 4.2 Design

#### 4.2.1. Use Case Diagram

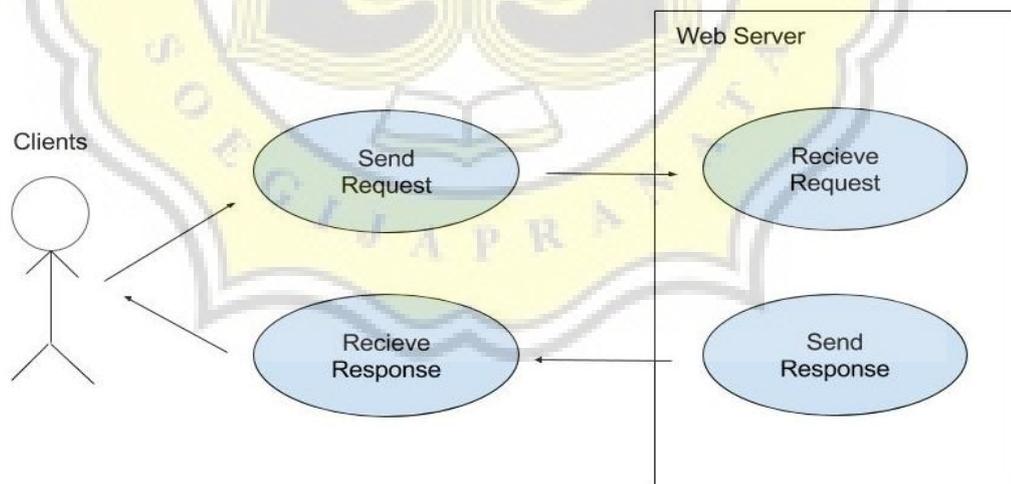


Figure 1. Use Case Diagram

Firstly, clients will send request to servers. Then, servers process the request so servers can send response to clients.

#### 4.2.2. Flow Chart

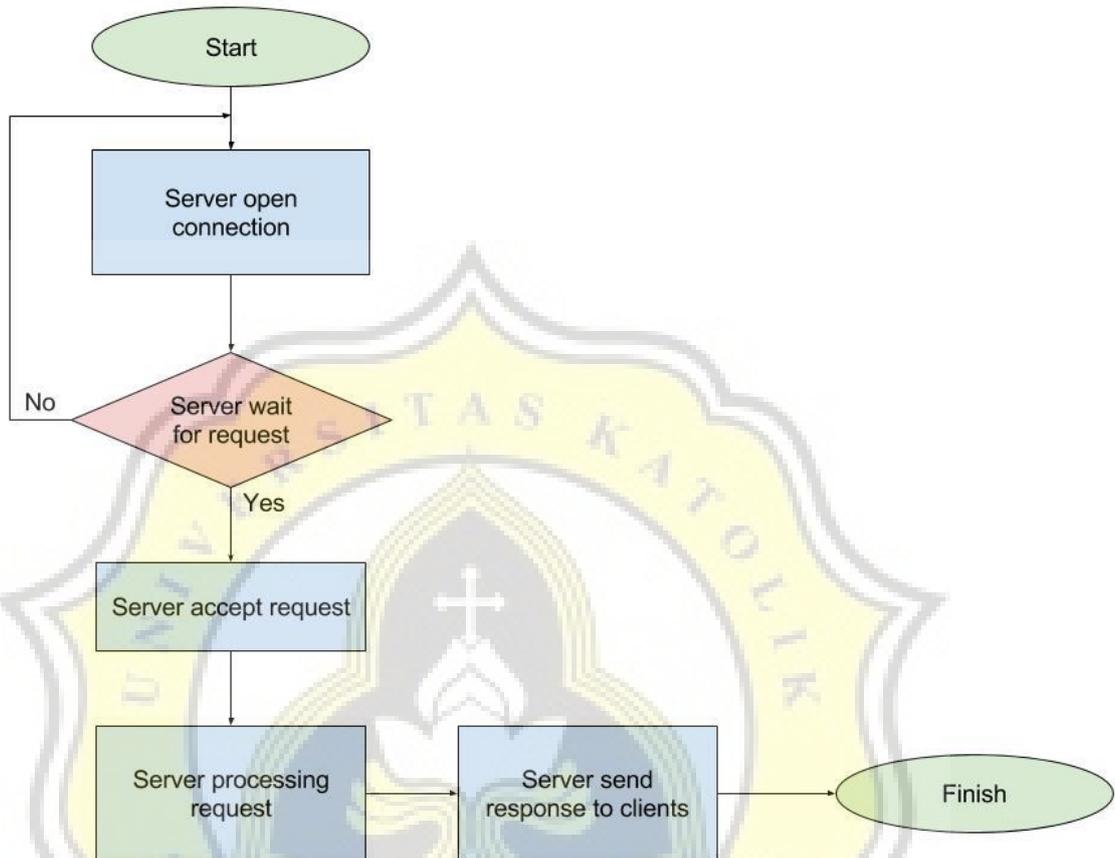


Figure 2. Flow Chart

Servers opens socket to receive clients request. Servers wait for request until request from any clients received. The, servers process the request. Finally, servers send response to clients.

### 4.2.3 Class Diagram

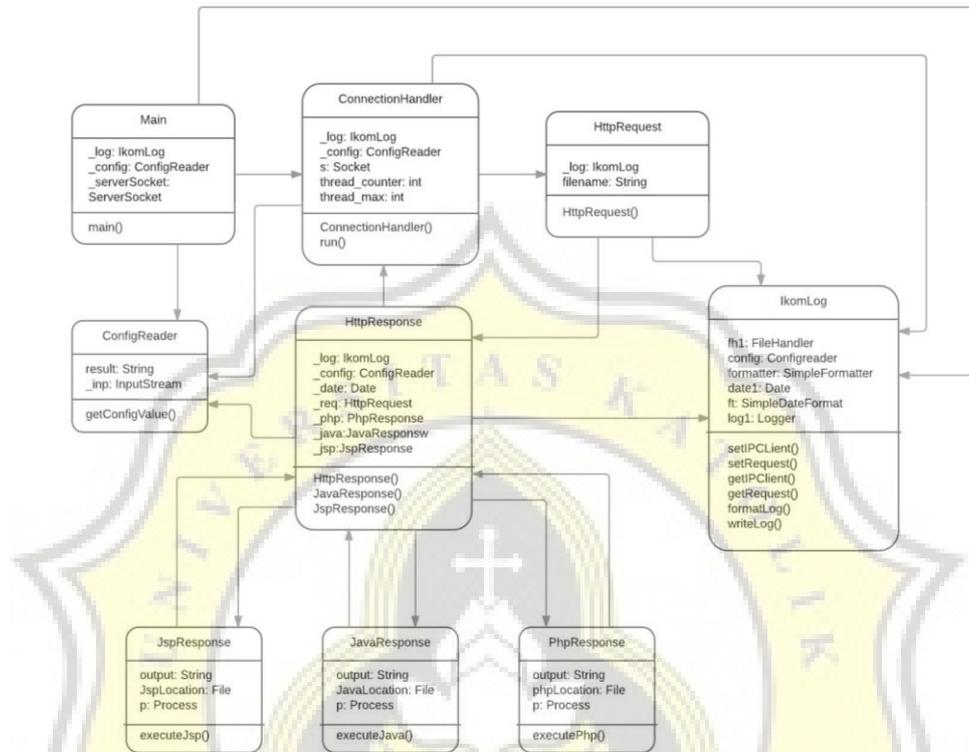


Figure 3. Class Diagram

- Main Class

Main class has a function to handle any connection from clients. There are explained by java.net.ServerSocket function. ServerSocket wait for request from any client over the network. After Client connect to ServerSocket, any request will be processed in ConnctionHandler Class.

- ConnectionHandler Class

ConnectionHandler Class has a function to manage all request to be processed and sending response. ConnctionHandler accepted request and send it to HttpRequest class. Then, HttpRequest will send the return the value to this

class and send it to the HttpResponse Class. Finally, HttpResponse send the final result of response and ConnctionHandler send it to clients.

- HttpRequest Class

This class has a function to take the filename from request that given by client. So server know what page that client requested.

- HttpResponse Class

This class has function to make the header response and send the response file to PhpResponse Class. PhpResponse result will send it back to this class and forward it to ConnectionHandler class.

- PhpResponse Class

This class has a function to execute PHP function in PHP pages. After that, response will send it to HttpResponse Class

- JavaResponse Class

This class has a function to execute java function in class pages. After that, response will send it to HttpResponse Class

- JspResponse Class

This class has a function to execute JSP function in JSP pages. After that, response will send it to HttpResponse Class

- IkomLog Class

This class has a function to take the Client IP address, take the content of the request and write it into log.

- ConfigReader Class

This class has a function to read value from config.properties file. So configuring the web server such as Max Thread, port number and root directory is easily configured without editing the master code.

