EE 565 Project 2 Report

Group Member: Kai-Jen Zheng, Zhiwei Zhong

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1. **Summary of Backend System**

   In this project, our backend system is composed of the following blocks:

   a. The HTTP server
   b. The UDP Client
   c. The UDP Server

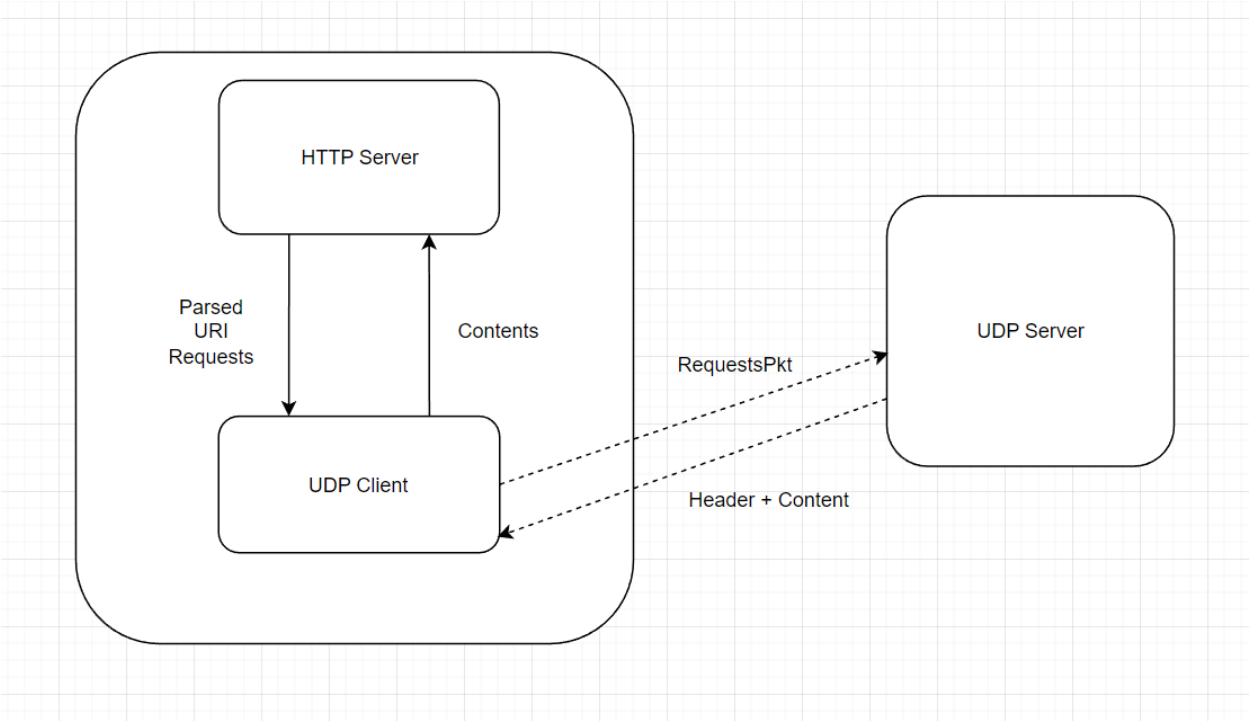

Fig 1. The Block Diagram of Backend System Design

As the block diagram shows, there is a UDP client socket which is responsible for sending requests to the backend server once it receives the parsed requests from the HTTP server.

Whenever the UDP server receives a request, it will send back the content requested to the client.

Then, the UDP client would transfer the received content back to the HTTP server.

2. Protocol Design

I. Packet Format

4 Bytes	1020 Bytes
Sequence Number	FileName

Fig 2. The Packet Format for UDP Client

4 Bytes	8 Bytes	8 Bytes	4 Bytes	4 Bytes
Sequence Number	File Size	Laste Modified	Number of Packets	Window Size

Fig 3. The Packet Format for UDP Server

3. Libraries Used

```
1   import java.io.*;
2   import java.net.*;
3   import java.util.*;
4   import java.util.ArrayList;
5   import java.util.HashMap;
6   import java.lang.Thread;
7   import java.nio.file.Files;
8   import java.nio.file.Path;
9   import java.nio.file.Paths;
10  import java.text.DateFormat;
11  import java.text.SimpleDateFormat;
12  import java.util.ArrayList;
13  import java.util.Calendar;
14  import java.util.Date;
15  import java.nio.ByteBuffer;
16  import java.nio.charset.*;
17  import java.util.logging.*;
18  import java.lang.Thread;
```

Fig 4. The Used Libraries

4. Extra Features

We added the “show status” page. To use the feature, simply type:

http://<host>:<port>/peer/status

The page will show up with the completeness of transfer and transfer rate of current transfer.

5. Instructions to executes the code

a. Check if all the source code and build.xml files are in the same directory.
b. Type ant in the command (when in the same directory)
c. Type java VodServer <http port> <udp port>
d. Type
   http://localhost:8080/peer/add?path=Content/test.png&host=localhost&port=8081&rate=1600
   in the browser
e. Type http://localhost:8080/peer/view/Content/test.webm to show file content