

# COMP3322 Modern Technologies on World Wide Web

## Assignment One

Total 12 points

Deadline: 23:59 February 19, 2024

### Overview

You are going to design a web page for presenting the assignment information of the networking course – “CSIS0234 Computer Networks”. The task requires creating a web page with a responsive design and suitable styling, which should contain the content from the provided sample pdf/word file. You **CAN ONLY USE** pure HTML & CSS for this assignment. You **CANNOT USE** any front-end libraries such as Bootstrap or JavaScript for the assignment.

### Objectives

1. A learning activity to support ILO 1 and ILO 2.
2. To get solid experience in using HTML & CSS to construct a single web page with responsive features, appropriate styling, and appearances.

### Requirements

The assignment consists of two parts: 1) implementing a web page using HTML and CSS code and 2) using CSS for responsive design.

We provide a pdf/word file that contains the content of a past networking project assignment. You can download the file Webpage.zip from the course’s Moodle site and find the following files:

```
Webpage.zip
├── Sample.docx
├── Sample.pdf
├── images.zip
│   ├── image1.png
│   ├── image2.png
│   └── menu-icon.ico
```

Sample.docx and Sample.pdf contain the content of the networking project, and the two image files: image1.png and image2.png are the diagrams in the project document. The file menu-icon.ico is for the implementation, but you can use another icon instead.

You are required to complete the following tasks.

**Desktop Look** - Render the page on a desktop browser with a window width  $\geq 1000$ px.

1. Convert the document sample.docx/pdf file to a single-paged web page; you have to make sure that the web page includes all the content from the document.
2. Design a header block containing the course name, the assignment title, and the submission deadline.

# CSIS0234 Computer Networks

## Programming Project

Total 15 points

Version 1.1

Due date: 5:00pm April 29, 20xx

- Use appropriate semantic HTML elements to organize and separate the content into different sections to improve the web accessibility of the web page. Also, you should maintain the structure of the web page be the same as in the original document.
- Add a floating menu to facilitate users navigating to different parts of the web page. Below is a sample implementation with a sticky menu which stays at the top of the page with the hover effect. This is just for your reference; you can have your design and features.

The screenshot shows the 'Overview' section of the project page. It includes the title 'CSIS0234 Computer Networks Programming Project', the total points 'Total 15 points', the version 'Version 1.1', and the due date 'Due date: 5:00pm April 29, 20xx'. A navigation bar at the top contains links: Top, Overview, Objectives, Background, Requirements, Submission, Grading Policy, Readings, and Plagiarism. The main heading is 'Programming Project – HTTP Proxy Server'. The 'Overview' section describes the project goal: to implement a web proxy server that forwards requests to a target web server. A diagram labeled 'Figure 1. HTTP Proxy Server' illustrates the flow: Client (Browser) sends a Request to http\_proxy, which then sends a Request to Target web server/another proxy, which returns a Response to http\_proxy, which finally returns a Response to the Client (Browser). The 'Objectives' section lists the goals of the exercise.

The screenshot shows the 'Background' section of the project page. It explains the HTTP protocol as a request/response protocol. It includes a diagram showing the flow of a request and response between a client and a server. The text describes the structure of a request message (request-line, message-header, blank line, message-body) and a response message (status-line, message-header, blank line, message-body). It provides an example of a request and response for downloading a web document. A terminal window shows a sample web request and response, including headers like 'GET /Chatserver.py HTTP/1.1' and '200 OK'. The 'Non-Persistent Connection and Persistent Connection' section discusses the differences between HTTP 1.0 and HTTP 1.1.

The screenshot shows the 'Submission' and 'Grading Policy' sections of the project page. The 'Submission' section describes the requirements for the program, including the file name 'http\_proxy.c' or 'http\_proxy.cpp', the use of in-line documentation, and the testing environment. The 'Grading Policy' section outlines the criteria for grading, including the documentation quality (High Quality [0.6/1] and Standard Quality [0.4/1]) and the connection to the target web server (Connect to target origin Web server [0.5/1.5]).

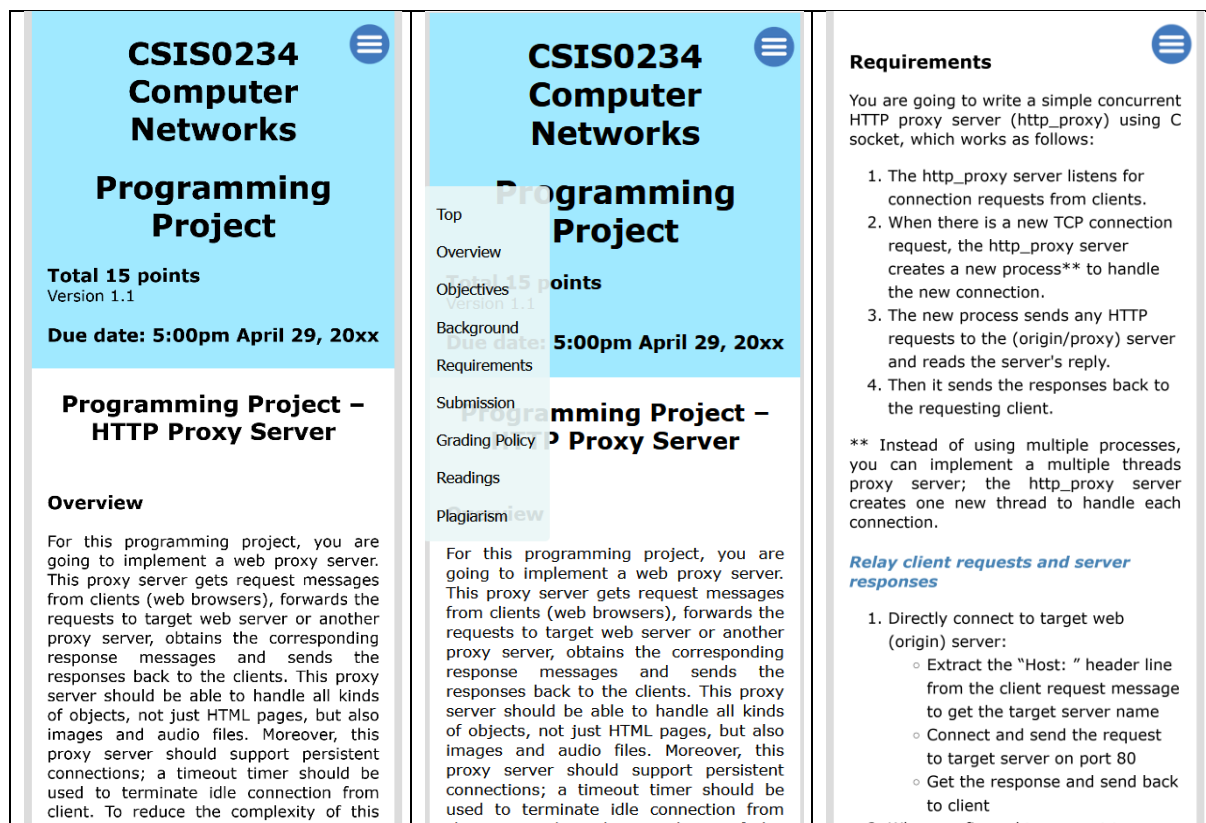
The screenshot shows the 'Readings' and 'Plagiarism' sections of the project page. The 'Readings' section lists the required reading materials, including 'Chapter 2.2 of Computer Networking - A Top-Down Approach' and 'Lecture 9'. The 'Plagiarism' section defines plagiarism as a serious offense and provides guidelines on how to avoid it, including the use of software tools to detect plagiarism.

- Apply suitable CSS styling to adorn the web page and make it nicely displays on a desktop browser with a screen width  $\geq 1000\text{px}$ .

6. Make sure the styling is consistent on different parts of the web page.

**Mobile Look** - Render the page on a mobile browser with a viewport width between 350px and 500px.

7. Hide the floating menu and add a menu icon to allow users to call out the floating menu. Upon clicking/touching the menu icon, the floating menu should smoothly slide in from the left within a duration of one to two seconds. Similarly, when users click/touch anywhere outside the menu icon and floating menu, the floating menu should slide out slowly and become hidden. Furthermore, clicking on an item in the floating menu should seamlessly navigate the browser to the corresponding section, while simultaneously causing the floating menu to slide out and hide itself.



8. Apply the responsive design to
  - a. Adjust the images appropriately.
  - b. Adjust the content to make it nicely displayed on the mobile device
  - c. Adjust the table layout (Grading Policy) appropriately.

#### Other requirements

9. Must place all the style rules in external stylesheet file(s).
10. Must place all the images and icon files in the images folder.
11. The structure of your website should be as follows:

```

.
├── images
│   ├── image1.png
│   ├── image2.png
│   └── menu-icon.ico
├── index.html
└── style.css
  
```

#### Grading Policy

##### Documentation [1 point]

High Quality [0.6/1]

- Include necessary documentation to clearly indicate the logic of the program
- Include necessary output messages for debugging and tracing of the execution flow

Standard Quality [0.4/1]

- Include required program and student's info at the beginning of the program
- Include minimal inline comments

##### Connect to target origin Web server [4 points]

- By setting Firefox or Chrome to use http\_proxy as the proxy server, after removing all cache contents in browser's cache, the browser can successfully download the documents/objects related to the four test cases. [2/4]

#### Testing platform

We should use Chrome and Firefox to test the web pages with two screen widths:  $350\text{px} \leq \text{vw} \leq 500\text{px}$  and  $\text{vw} \geq 1000\text{px}$ .

#### Submission

Organize your website folder as defined in task #11. Compress the folder of your website to the zip format and submit the zip file to the course's Moodle page. Please finish this assignment before **Feb 19 Monday 23:59**.

#### Grading Policy

Points	Criteria
1.0	[Task #1] Place all the contents in the single-paged web page
1.0	[Task #2] Include a header block
2.0	[Task #3] Use appropriate semantic HTML elements
1.5	[Task #4] Use of a floating menu for navigating to different parts of the web page
2.5	[Task #5] Apply suitable CSS styling to adorn the web page
2.0	[Task #7] Add a menu icon to hide/show the floating menu on the mobile view
2.0	[Task #8] Responsive design
-2.0	[Task #9] Not using external CSS file(s).
-2.0	[Task #10] Not placing all images in the images/ folder.

## Plagiarism

Plagiarism is a very serious academic offence. Students should understand what constitutes plagiarism, the consequences of committing an offence of plagiarism, and how to avoid it. ***Please note that we may request you to explain to us how your program is functioning as well as we may also make use of software tools to detect software plagiarism.***