WEB601 Dynamic Web Technology Semester 2 2023

Assessment 1 – Web Application Development with Node.js and Collaborative Coding with GitHub			
Assessment title	Web Application Development with Node.js and Collaborative Coding with GitHub (Group Assessment)		
Due date 1	Friday, 8 September, at 5 PM	**Weighting**	20%
Submission details	Moodle Drop Box: • Electronic Word or PDF via Turnitin • Separate zipped folder containing evidence of task completion		
Learning outcomes	LO1: Apply fundamental aspects of web applications including HTTP to program a web functionality on the server. LO4: Use a version control workflow for team collaboration.		
Background	Web applications have assumed a central role in how we conduct daily activities in the digital age, from personal routines to business operations. This assessment, which is a requirement for the first-year Information Studies course, will give students the chance to learn about web application programming with a particular emphasis on the Node.js framework and HTTP protocols. Students will also learn about professional software development workflows, specifically how to use GitHub as a version control system.		

Assessment instructions:

The objective of this group project is to programme a specific web functionality on a server using Node.js, a well-known JavaScript runtime built on Chrome's V8 JavaScript engine. Understanding HTTP (Hypertext Transfer Protocol), which serves as the basis for all online data exchange, is necessary for this task. The team will use GitHub, a web-based hosting service for version control and collaboration that enables team members to work on the project from different locations, to simulate a real-world working environment.The objective of this group project is to programme a specific web functionality on a server using Node.js, a well-known JavaScript runtime built on Chrome's V8 JavaScript engine. Understanding HTTP (Hypertext Transfer Protocol), which serves as the basis for all online data exchange, is necessary for this task. The team will use GitHub, a web-based hosting service for version control and collaboration that enables team members to work on the project from different locations, to simulate a real-world working environment.

Assessment Conditions:

Understanding the following conditions is important before starting the assessment:

- ✤ The use of AI generator tools is not permitted for this assessment. Your work ought to demonstrate how well you comprehend and use the course material.
- ✤ All sources must be properly cited using the APA 7th Edition reference style, regardless of whether they are books, online sources, or oral or written communications.
- ✤ The task must be completed in groups, highlighting the value of cooperation and teamwork in software development.

Assessment Instructions and Tasks:

Task 1- LO1: Designing a Web Functionality

(Submission format will both Word document with screenshots from your group repository and the Zip folder of the GitHub repository)

Your group is tasked with using the Node.js framework to build a straightforward web functionality. You have the option of making this a login system, a comment section, or a data retrieval system. The GET, POST, PUT, DELETE, and other HTTP methods should be considered in the design.

Task 2 -LO1: Implementation of Web Functionality

(Submission format will both Word document with screenshots from your group repository and the Zip folder of the GitHub repository)

Use Node.js to implement the design from Task 1 by writing server-side code. Ascertain that the code is clear, effective, and properly commented. Understanding how to write JavaScript for the server environment and how HTTP methods work in this setting are prerequisites for this stage.

Task 3-LO4: Version Control with GitHub

(Submission format will both Word document with screenshots from your group repository and the Zip folder of the GitHub repository)

Making a GitHub repository for your project is the next step after implementing your web functionality. To replicate a team-based coding project in the real world, all participants must contribute to the repository. Understanding how to push, pull, merge, and settle conflicts in a GitHub repository will be necessary for this.

Task 4- LO1&LO4: Documentation

(Submission format will be Word document with screenshots from your group repository)

Write a report outlining the steps you took, the functionality of the website's design, any obstacles you encountered, how you overcame them, and the lessons you learned from the project. Make sure all sources are correctly cited using the APA 7th Edition referencing format.

Task 5 – LO4: Presentation

Create a presentation outlining your project that lasts 10 minutes. The purpose of the functionality, your process, the responsibilities of each team member, and a demonstration of the functionality should all be included in the presentation.

Reminder: The project's due date is one month from the day it was assigned. Project materials must be submitted through the university's submission portal, including all code, GitHub repositories, reports, and presentations.

Marking Rubric for Assessment <mark>1</mark>

Assessment due date	<mark>Friday 8, September 2023 at 5pm</mark>		
Ākonga names		Ākonga ID numbers	

Performance Criteria	Level of Achievement				Mark
	Pass with distinction (A- to A+)	**Pass with merit** (B- to B+)	**Pass** (C- to C+)	**No Pass** (E to D)	
Task 1 & LO1: Designing a Web Functionality	Presents a comprehensive design of a web functionality with excellent application of HTTP protocols and Node.js framework.	Presents a solid design of a web functionality with good application of HTTP protocols and Node.js framework, but there may be minor errors or omissions.	Presents a basic design of a web functionality with satisfactory application of HTTP protocols and Node.js framework, but there are noticeable errors or omissions.	Presents an inadequate design of a web functionality with poor or no application of HTTP protocols and Node.js framework.	/10
	8-10 marks	6-7 marks	5 marks	0-4 marks	
Task 2 & LO1: Implementation of Web Functionality	Demonstrates an exceptional level of proficiency in implementing the design into functional server-side code using Node.js. The code is efficient, well-commented, and error-free.	Demonstrates a good level of proficiency in implementing the design into functional server-side code using Node.js. The code is mostly efficient and well-commented but may contain minor errors.	Demonstrates a satisfactory level of proficiency in implementing the design into functional server-side code using Node.js. The code is somewhat efficient and commented but contains noticeable errors.	Demonstrates a lack of proficiency in implementing the design into functional server-side code using Node.js. The code is not efficient or well-commented and contains significant errors.	/10
	4-5 marks	3-3.5 marks	2.5-3 marks	0-2 marks	
Task 3 & LO4: Version Control with GitHub	Demonstrates outstanding skills in version control using GitHub, with all members contributing equally and effectively to the repository. Excellent understanding of push, pull, merge, and conflict resolution processes.	Demonstrates good skills in version control using GitHub, with all members contributing to the repository. Good understanding of push, pull, merge, and conflict resolution processes, with minor errors.	Demonstrates satisfactory skills in version control using GitHub, with all members contributing to the repository. Adequate understanding of push, pull, merge, and conflict resolution processes, but with noticeable errors or omissions.	Demonstrates poor skills in version control using GitHub, with unequal contribution among members. Lacks understanding of push, pull, merge, and conflict resolution processes.	/5
	4-5 marks	3-3.5 marks	2.5-3 marks	0-2 marks	
Task 4 & LO1, LO4: Documentation	Creates an exceptional report, detailing the process, challenges,	Creates a solid report, detailing the process, challenges, solutions, and	Creates a satisfactory report, detailing the process, challenges, solutions, and learnings to a basic	Creates a poor report, lacking details on process, challenges, solutions, and	/10

	solutions, and learnings in detail, with flawless APA7 citation style.	learnings well, with good use of APA7 citation style but minor errors.	level, with adequate use of APA7 citation style but noticeable errors.	learnings, with many errors or omissions in APA7 citation style.	
	8-10 marks	6-7 marks	5 marks	0-4 marks	
Task 5 & LO4: Presentation	Delivers an exceptional presentation that is well-structured, clear, and engaging, with a comprehensive explanation and demonstration of the project.	Delivers a solid presentation that is generally well-structured and clear, with a good explanation and demonstration of the project, but with minor errors or omissions.	Delivers a satisfactory presentation that is adequately structured and clear, with a basic explanation and demonstration of the project, but with noticeable errors or omissions.	Delivers a poor presentation that lacks structure and clarity, with a minimal explanation and demonstration of the project	/5
	8-10 marks	6-7 marks	5 marks	0-4 marks	
Total					**/40**
Comments	**NOTE:** Your performance on each of the tasks listed in the assignment instructions will be assessed using the rubric below. The assignment requires equal participation from each student, and each student's performance will be evaluated in light of the group's overall effort.				