Denison College of Secondary Education

KELSO HIGH CAMPUS

ASSESSMENT TASK NOTIFICATION

Subject:
Year 12 Software Engineering

Topic:
Topic 1 – Programming for the Web

Type:
Practical project and folio

Issued:
Term 4 Week 3

Due Date:
Term 1 Week 2

Weighting:
30%

Teacher/s:
Mr Dingle

Task Description:

For this assessment you are to build a PWA for a client with the following requirements. Create a movie/game review app. Visitors can register new user accounts, login, and post their own reviews. Visitors that are not logged in, cannot post reviews. Reviews should include a title, review date, name of user reviewing, rating, and review text.

Requirements include:

- Follow the Agile Development Approach
- Describe in detail the project requirements in terms of functional requirements, non-functional requirements, constraints and acceptance criteria
- Plan the project using an IPO Chart, Storyboard, Data dictionary, and UML Diagram
- Create algorithms to plan the secure aspects of the app. These include user creation, user authentication, and authorisation.
- Maintain project versions using Git such as GitHub
- Build project using HTML, CSS, JavaScript, SQLite, and Python Flask (or equivalent)
- Store data in an SQL Database and make use of table relationships
- Utilise SQL to create, read, update and delete data
- Use secure methodologies, these include using appropriate password hashing, authorisation on functions/pages for users, and blocking Cross Site-Scripting (XSS)

Tasks are listed on the next page, marking criteria is on pages 3 and 4.

Outcome	Descriptor
SE-12-04	evaluates practices to safely and securely collect, use and store data
SE-12-06	justifies the selection and use of tools and resources to design, develop, manage and evaluate software

<u>Submission Instructions:</u> All content must be submitted via Google Classroom in full by the due date. If this assessment task does not meet expectations, parents will be notified and the student will be required to recomplete and resubmit the task.	

Tasks to complete

Outcome	Tasks to complete	Marks
SE-12-04	a) Describe project requirements	/5
SE-12-06	b) Create project planning (IPO Chart, Storyboard, Data dictionary, UML Diagram, Algorithms)	/10
SE-12-06	c) Build PWA using tools to create and maintain project	/12
SE-12-04	d) Plan and utilise SQL to manage data and relationships	/5
SE-12-04	e) Implement modern methods used to secure and protect user data	/5
	Total	/37

Marking guidelines						
Task	Mark	A	B	C	D	E
a) Describe project requirements	5	**5 marks** Outlines the following aspects of the project in detail: • Functional requirements • Non-functional requirements • Constraints • Acceptance criteria	**4 marks** Outlines the following aspects of the project in some detail: • Functional requirements • Non-functional requirements • Constraints • Acceptance criteria	**3 marks** Outlines the 3/4 of the following aspects of the project in some detail: • Functional requirements • Non-functional requirements • Constraints • Acceptance criteria	**2 marks** Outlines the 2/4 of the following aspects of the project in some detail: • Functional requirements • Non-functional requirements • Constraints • Acceptance criteria	**1 mark** Outlines the 1/4 of the following aspects of the project in some detail: • Functional requirements • Non-functional requirements • Constraints • Acceptance criteria
b) Create project planning (IPO Chart, Storyboard, Data dictionary, UML diagram, Algorithms)	10	**9-10 marks** Creates all required diagrams. Diagrams provided follow their appropriate standards. Diagrams are accurate, detailed, and match the requirements outlined in Task A.	**7-8 marks** Creates 4/5 required diagrams. Diagrams provided attempt to follow their appropriate standards. Diagrams are accurate, and match the requirements outlined in Task A.	**5-6 marks** Creates 3/5 required diagrams. Diagrams provided somewhat follow their appropriate standards. Diagrams attempt to match the requirements outlined in Task A.	**3-4 marks** Creates 2/5 required diagrams. Diagrams provided somewhat follow their appropriate standards.	**1-2 marks** Creates 1/5 required diagrams. Makes an attempt to represent the project.

Marking guidelines						
Task	Mark	A	B	C	D	E
c) Build PWA using tools to create and maintain project	12	**10-12 marks** Creates a PWA that works consistently across mobile, tablet and desktop formats. App meets all requirements outlined. Implements a service worker that enables the app to work both online and offline. Effectively utilises HTML, CSS, and JavaScript for the front-end and Python Flask to handle back-end operations. Creates a modular app that uses webpage templates. Maintains regular app versions using Git. Source code is organised and well documented.	**7-9 marks** Creates a PWA that works consistently across mobile, tablet and desktop formats with minor errors. App meets most of the requirements outlined. Implements a service worker. Effectively utilises HTML and CSS for the front-end and Python Flask to handle most back-end operations. Maintains somewhat regular app versions using Git. Source code is somewhat organised and documented.	**5-6 marks** Creates a PWA that works consistently across mobile, tablet and desktop formats with minor errors. App meets some of the requirements outlined. Attempts to implement a service worker. Uses HTML and CSS for the front-end and Python Flask to handle most back-end operations. Maintains irregular app versions using Git. Source code is somewhat organised but undocumented.	**3-4 marks** Creates a PWA that works consistently across mobile, tablet and desktop formats with major errors. App meets a few of the requirements outlined. Demonstrates a basic understanding of HTML and CSS for the front-end and Python Flask to handle back-end operations. Rarely maintains any app versions using Git. Source code is messy but undocumented.	**1-2 marks** App meets at least 1 requirement outlined. Demonstrates a limited understanding of HTML and CSS for the front-end and Python Flask to handle back-end operations. Source code is very messy.
d) Utilise SQL to manage data and relationships	5	**5 marks** All SQL statements are syntactically correct. Uses multiple SELECT statements to filter data. Uses the UPDATE statement correctly. Uses the DELETE statement correctly. Uses the JOIN statement correctly.	**4 marks** Most SQL statements are syntactically correct. Uses multiple SELECT statements to filter data. Uses the UPDATE statement correctly. Uses the DELETE statement correctly.	**3 marks** Some SQL statements are syntactically correct. Uses SELECT statement correctly. Uses the DELETE statement correctly.	**2 marks** Few SQL statements are syntactically correct. Uses SELECT statement correctly.	**1 mark** Attempts to write SQL statements are syntactically correct.

Marking guidelines						
Task	Mark	A	B	C	D	E
e) Implement methods to secure and protect user data	5	**5 marks** Blocks Cross Site Scripting on all webpages. Uses a modern hashing method to store user passwords. Uses a secure login method. Utilises authentication to limit non-registered user access.	**4 marks** Attempts to Block Cross Site Scripting on most pages. Uses an encryption or hashing method to store user passwords. Uses a somewhat secure login method. Utilises some authentication to limit non-registered user access.	**3 marks** Block Cross Site Scripting on a single webpage. Uses an encryption method to store user passwords. Utilises minimal authentication to limit non-registered user access.	**2 marks** Uses an encryption method to store user passwords.	**1 mark** Uses an inappropriate encryption method to store user passwords.