Northeastern University
London

Assessment Brief: Coursework 2023-24

Assessment Details

Course Title:	Web Services
Course Code:	LCSCI7224
Course Leader:	Amil Mohanan
Level:	7
First or Second Sitting:	1
Assessment Title:	Project
Assessment Number:	AE2
Assessment Type:	Documentation and Code
Restrictions on Time/Length:	Code and up to 2000-word reflective essay (+/- 10%)
Individual/Group:	Groups of 2 or 3
Assessment Weighting:	50%
Issue Date:	13 May 2024
Hand in Deadline:	9 August 2024, 13:00
Planned Feedback Deadline:	28 calendar days after hand in deadline
File format accepted:	Text file formats for report (.odt or .pdf)
Mode of Submission:	Online
Anonymous Marking:	No

Assessment Task

Your task is to develop a feed-reader website that combines multiple RSS feeds into a chronological list that allows the user to read individual articles.

You do not need to maintain an inbox of read and unread articles to a database like a feed-aggregator. The application only needs to let users aggregate feeds into a single list they can view from the website. Your application should allow users to add articles to a list of saved articles.

You can use a package such as rss-parser from npm to convert RSS feeds (in XML) to JSON. Alternatively, you could also develop a microservice in Flask to fetch and convert RSS feeds to JSON using a Python package such as atoma.

Requirements

The web application should have six distinct pages: The homepage, login, feed, article, save articles and settings pages. The user must be able to access each page via relevant links within the site.

Homepage

The landing page of your web application should display generic information and prompt users to login to the site.

Once a user has logged in, this page should display a list of all the user's feeds. Opening the homepage should trigger a refresh of all user feeds on the server.

Login/Registration Page

This page should allow users to sign up for the website and login to use the service. Users trying to reach protected routes on the website should be redirected to this page.

Feed Page

When a user clicks on a feed, the feed page should display a list of all articles from a given feed. This page should include the article's title, description, and a link to the full article in the article page. Users should also be able to add articles to a saved articles list from the feed view.

Article Page

The article page should display a full article information from a feed. This page should include the article's content and any other relevant metadata. Users should also be able to save the article to a saved articles list.

Saved Articles Page

This page should contain a list of all articles that have been saved by the user.

Settings Page

Users should have access to a settings page where they can manage their account. This page should contain options to add and remove feeds that the user is subscribed to.

Pages and Styling

You should consider the user experience when designing the interface, the application should be easy and efficient for users to accomplish tasks. All pages must comply with WCAG 2.1 AA and employ a responsive design that is usable on the desktop, tablet and mobile devices. The design of the content should be consistent across the web application.

You must use appropriate semantic markup for your HTML and you are free to use CSS and/or JavaScript frameworks for your components. Navigation should be clear on every page, providing options for navigating back to parent pages and other parts of the application.

Back-End

You should use a full-stack JavaScript framework for the web application. URLs used in the application should capture the relationship between the entities of your application. You should use a database such as SQLite to store data for the application using an appropriate data model for storing data required for the application. Use path and query parameters and the appropriate HTTP verbs for creating, deleting, reading and updating data on the application database.

Assessment Criteria

Your submission should include the following:

- Up to 200 word discussion of the architecture of the application showing the overall design of the system using component or sequence diagrams, database schema, data flow, user interface wireframes or API specification that is produced by the group. This should be submitted as part of the individual report. (T4d)
- A joint contribution statement detailing the individual contributions by each group member which will be used to scale the marks alongside contributions to the project repository
- Source code for the application
    - This should contain a readme file which documents how to run the application (K1d, K2d)
    - Application source code must be well documented and arranged according to the conventions of the framework used (S1d, S3d, S4d)
- Up to 1800 word report (a separate report must be submitted by each member of a group) detailing how the application meets the requirements including references to any libraries used (T2d, T4d, K2d, K3d, S1d, S2d, S4d)
    - You should discuss the architecture of the web application, and explain how you have integrated different tools and technologies to build your site. (K3d)
    - The report should discuss the development tools that facilitated the development of the application. You should also discuss how any tools

  such as version control, testing and Continuous Integration were used during the development of the site (T1d, S4d)

  - Your report should contain a discussion of the design decisions for the page including the considerations you have made for usability and accessibility. It should also discuss the steps you have taken to assess and minimise the environmental impact of your application. (K3d)
  - The report should identify the benefits and limitations in the technologies used and propose areas where the site could be further developed (S1d, K4d)

Work should be submitted as a compressed archive containing the required files and a link to the repository detailed in the assessment criteria on the VLE.

If this project is completed as a group, each student must submit a separate 1500 word report that meets the criteria above, this individual piece of work makes up 50% of your overall grade. The other 50% is determined by group work as follows:

Report Quality (Individual) 40% - Report 10% - English Proficiency	Report discusses all required areas as specified.
Product and Documentation (Group) 25%	Includes, readme file and documentation inside the source code and its organisation. Application must execute when following instructions in readme. Includes the discussion on system architecture.
Pages and Styling (Group) 10%	The page and styling will be evaluated against the criteria in the requirements. HTML will be checked using the W3C Markup Validator and Accessibility will be tested using the WAVE Accessibility Evaluation tool.
Database and Web Services (Group) 10%	Includes the database and a working web service application.
Other Requirements (Group) 5%	Includes all other requirements such as the navigation, user experience and architectural requirements.

Submitting Assessments

You will have an opportunity to present your architecture design as a group and receive formative feedback during the course. Work should be submitted as a compressed archive containing the required files and a link to the repository detailed in the assessment criteria on the VLE.

Marking

The University uses two common assessment marking schemes – one for undergraduate and one for postgraduate – to mark all taught programmes leading to an award of the University.

More detailed information on the common assessment marking scheme and the criteria can be found in the Course Syllabus, available on the University’s VLE.

Learning Outcomes

This assessment will enable students to demonstrate in full or in part the learning outcomes identified in the Course Descriptor.

On successful completion of this assessment, students should be able to:

Knowledge and Understanding

K1d Master practical methods and techniques of the Web development process, from inception to implementation and deployment.

K2d Understand software development issues of integrating multiple scripting languages, tools, assorted data technologies, and Web interaction.

K3d Evaluate the technical, social and management aspects of Web development using industry standards.

K4d Identify capabilities and limitations in Web development and services, and propose directions for further innovation.

Subject-Specific Skills

S1d Critically assess a Web-based software problem and recognise the correct components (JavaScript, CSS, Web services) suitable for solving it, and propose ways to integrate them into an existing project.

S2d Critically review and analyse key developments in Web development.

S4d Become a sophisticated Web developer, familiar with the latest tools, libraries and industry standards.

S3d Design and develop original software for data-driven, interactive websites.

Transferable Skills

T3d Learn effectively and independently new topics and tools related to Web development.

T4d Create extensive documentation of goals, plans, design decisions, accomplishments, and user guidelines and communicate them to both technical and non-technical audiences.

T2d Consistently apply an excellent level of technical proficiency in written English, using an advanced application of scholarly terminology, that demonstrates the ability to deal with complex issues both systematically and with sophistication

T1d Lead or participate in team projects.

Accessing Feedback

Students can expect to receive feedback on all summative coursework within 28 calendar days of the submission deadline. The 28 calendar day deadline does not apply to work submitted late. Feedback can be accessed through the Turnitin assessment link on the course page. Further instructions on submitting an assessment and accessing feedback can be found on the University's VLE.

Late Submissions

Students are reminded to submit their assessment in the correct format and ahead of the published deadline. Deadlines are strict and Canvas uploads made remotely might not be immediate, we therefore strongly recommend that students upload their work to Canvas in good time before the deadline. If assessments are submitted late without approved Extenuating Circumstances, there are penalties:

- For assessments submitted up to two days late: any mark of 40% or higher will be capped at 40% for undergraduate students. Any mark of 50% or higher will be capped at 50% for postgraduate students. Any mark below 40% for undergraduate students and below 50% for postgraduate students, will stand.
- Students who do not submit their assessment within two days, and have no approved extenuating circumstances, are deemed not to have submitted and to have failed that assessment element. The mark recorded will be 0%.
- Late penalties are calculated differently for some types of portfolios. Please read the Assessment Brief of your portfolio carefully.

For further information, please refer to AQF7 Part C in the Academic Handbook.

Extenuating Circumstances

The University's Extenuating Circumstances (ECs) procedure is in place if there are genuine circumstances that may prevent a student submitting an assessment. If the EC application is successful, there will be no academic penalty for missing the published submission deadline.

Students are normally expected to apply for ECs in advance of the assessment deadline. Students may apply for consideration of ECs retrospectively if they can provide evidence that they could not have done so in advance of the deadline. All applications for ECs must be supported by independent evidence.

Students are reminded that the ECs procedure covers only short-term issues (within 21 days leading to the submission deadline) and that if they experience longer-term matters that impact on learning then they must contact Student Support and Development for advice.

Under the Extenuating Circumstances Policy, students may defer an assessed element on only one occasion and may request an extension on a maximum of two occasions.

For further information, please refer to the Extenuating Circumstances Policy in the Academic Handbook.

Academic Misconduct

Any submission must be a student's own work and, where facts or ideas have been used from other sources, these sources must be appropriately referenced. The Academic Misconduct Policy includes the definitions of all practices that will be deemed to constitute academic misconduct. This includes the use of artificial intelligence (AI) where not expressly permitted within the assessment brief, or in a manner other than specified. Students should check this policy before submitting their work. Students suspected of committing Academic Misconduct will face action under the Policy. Where students are found to have committed an offence they will be subject to sanction, which may include failing an assessment, failing a course or being dismissed from the University depending upon the severity of the offence committed. For further information, please refer to the Academic Misconduct Policy in the Academic Handbook.

Version History

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<tr><th>Version number</th><th>Date approved</th><th>Date published</th><th>Owner</th><th>Location</th><th>Proposed next review date</th></tr>
<tr><td>4.0</td><td>March 2023</td><td>March 2023</td><td>Registrar</td><td>VLE/ Faculty Resources Page</td><td>March 2024</td></tr>
<tr><td>3.0</td><td>August 2022</td><td>August 2022</td><td>Registrar</td><td>VLE, Faculty Resources Page</td><td>July 2023</td></tr>
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<tr><td>Referenced documents</td><td colspan="5">AQF7 Academic Regulations for Taught Awards; Extenuating Circumstances Policy; Academic Misconduct Policy; Course Syllabus</td></tr>
<tr><td>External Reference Point(s)</td><td colspan="5">UK Quality Code Theme: Assessment</td></tr>
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