Diploma in Full Stack Development
Year 1 (2024/25)
PF

Assignment **(40%)**

Interactive Application

OVERVIEW

Requirement: To conceptualize, propose, create and develop an Interactive Experience.

Goal: To utilize the programming concepts and APIs to create an interactive application that resolves to aid an online experience.

LEARNING OBJECTIVE

- Conceptualize a creative experience
- Build front-end development skills

Interactive Application

Based on your proposed design concept, create a console or web application based on the prototype approach. Adopt relevant APIs (where applicable) for usage in the application. This could be using HTML APIs or 3rd Party APIs.

Possible Theme 1: Digital Literacy / Inclusion / Wellness
Imagine when and how you learn tech. Was it a friendly environment? Have you taught tech / tech tools to someone much older/younger than you?
Example: How can you use tech to educate or enrich people's lives (Digital Literacy)?
Example: How can you make tech be inclusive for old or young (Digital Inclusion)?
Example: How can one embrace technology to promote good habits/combating the cyber addict / gamer in you? (Digital wellness)

Possible Theme 2: Inflation
Example: Educating users on inflation and share ways on how to beat inflation on money saving tips etc.

Possible Theme 3: Propose Your own.
Maybe a Quiz application for kids or elderly using APIs and database coupled with 3D for rewards and of course gamification features?
Do something meaningful that helps people or aids the world

GUIDELINES

The Big Idea Overall. Go BIG.

Your proposal will be assessed based on the following criteria:

1. Originality and thoroughness in explanation of concept
2. Interpretation and manifestation of the theme
3. Rationale behind design and concept
4. Thorough considerations to wholesome user interaction

END GOAL: Interactive Application

Your end product will be assessed based on the following criteria:

1. Technical production, smoothness of flow, through testing to ensure no bugs
2. Visual, textual cues used allowing for feedback
3. Interactivity and Engagement value of prototype

You may want to ask yourself the following questions as you go along:

- What kind of users will be using the application?
- Interactivity of application, am I using suitable typography, color schemes
- API usage

DUE DATE

Assignment is due on **1st Jun 2024 Sat**

KEY DELIVERABLES

1. To create an interactive web application for the proposed idea
2. Design, develop and implement an interactive web application using JavaScript with optional HTML/CSS
3. Implement front-end interactivity, using core JavaScript, JavaScript libraries and/or Application Programming Interfaces (APIs)
4. Apply source code management practices
5. Utilize appropriate APIs or external API to interface with the application
6. Design a front-end web application based on sound design principles, accessibility
7. Document proper Testing plans made
8. Demonstrate and document the development process through version control
9. Deploy an interactive application to Github

Programming Fundamentals (PF) Submission		
Item(s)	**Naming Convention**	**Submission Channel**
1	PF_NameOfApp.zip	Github repository and Brightspace.
2	README.md See sample *(https://github.com/immalcolm/interactivedev-readme-template)*	
3	Github Page (link to be written in the README.md)	Your site should be hosted on a Github Page URL E.g https://<username>.github.io/<nameof App>

** You may want to upload all other relevant working files (into cloud services) as a form of backup*

SUBMISSION CHECKPOINTS

DUE DATE

1st Jun 2024 Sat

PF
▪ User Experience (30%) ▪ Technical Implementation (55%) ▪ Source Code Management Pitch (15%)

A Grade

Site Goals

- Application is functional and fulfils most/all of the goals
- Website is completely cross browser compatible across platforms and devices.

Coding

- Code is well written and has sufficient comments. All codes are written in consistent manner and follows proper naming conventions. No hard coding.
- HTML code is readable with good HTML semantics.
- Comments written in file sufficiently to explain the purpose of code segments
- HTML and CSS codes are validated with no issues.
- Program is bug free

Version control

- Project is well managed in GitHub with sufficient commits and comments. Readme for project is well documented.

File management

- Files follow proper file naming conventions
- Good file organization, files are neatly sorted in proper files and folders.

API & JavaScript Interaction

- Good use of JavaScript to add meaningful interactions to the application.
- Quality usage of API with appropriate application to the use case. Handle the API usage properly.

User Experience

- Visuals are appealing and suitable for website, images used are of good quality,
- Great user experience and webpages flow very well in terms of application idea. Site design is intuitive and very functional.

Checkpoint

- Checkpoint submission complete and shows meaningful progress.
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B Grade

Site Goals

- Application is functional and fulfils goals
- Website is somewhat cross browser compatible across platforms and devices with minor deviations

Coding

- Code is well written and has some comments. All codes are written in consistent manner and follows proper naming conventions. Some hard coding.
- HTML code is readable with good HTML semantics.
- Comments written in file sufficiently to explain the purpose of code segments
- HTML and CSS codes validation has some minor issues
- Program has some minor bugs

Version control

- Project is managed in GitHub with decent amount of commits and comments. Readme for project is somewhat documented.

File management

- Files follow proper file naming conventions
- Decent file organization, files are sorted in proper files and folders.

API & JavaScript Interaction

- Use of JavaScript to add some interactions that is somewhat useful to the application.
- Good usage of API and display API knowledge

User Experience

- Visuals are suitable for website, images used are of good quality,
- Good user experience and webpages flow very well in terms of application idea. Site design is intuitive.

Checkpoint

- Checkpoint submission complete and shows some progress.

C Grade

Site Goals

- Application decently fulfils site goals
- Website works on one browser. No cross platforms and device compatibility

Coding

- Code has minimal comments. All codes are written in inconsistent manner and no proper naming conventions. Hard coding.
- No html semantics.
- HTML and CSS codes validation has glaring issues
- Program contains bugs

Version control

- Project is managed in GitHub with some commits and comments. Readme for project is briefly written.

File management

- Decent file naming conventions

API & JavaScript Interaction

- Use of JavaScript to add some interaction for the website
- Simple API usage

Visual Aesthetics and User Experience

- Visuals are decent.
- Decent user experience and webpages flow well in terms of application idea. Site design is acceptable

Checkpoint

- Checkpoint submission done, but could have done more.

D Grade

Site Goals

- Application fulfils some site goals
- Website is buggy but able to work to certain extent

Coding

- Code has minimal comments. All codes are written in inconsistent manner and no proper naming conventions. Hard coding.
- No html semantics.
- HTML and CSS codes validation has glaring issues and major warnings
- Program contains many bugs and broken links

Version control

- Project is in GitHub with a few commits and comments. Readme for project written in a paragraph or two.

File management

- Missing files, Bad naming conventions

API & Javascript Interaction

- Interaction works but buggy
- Simple copy of the API documentation with little variation

Visual Aesthetics and User Experience

- Visuals are glaring, bad color contrast.
- Bare user experience and buggy site. No site design

Checkpoint

- Checked in with minimal done

LATE SUBMISSION

Late submission will be **penalised** (10% of the marks for each day late after 12 noon). Submission will not be accepted after 5 days (including weekends and public holidays) from the date of submission.

PLAGIARISM AND COPYRIGHT ISSUES

Plagiarism means, “copying any part of a source, and then submitting it, claiming that it is your own work.”

Please ensure that all the works submitted by you are not copied from other sources. Any attempt to plagiarize will be dealt with severely, and it may result in your failing the module.

If you have made any references to certain materials, make sure you cite the sources by acknowledging and providing the information necessary to find the source (e.g. Title and author of book, Internet links, etc)

DUE DATE

Assignment is due on **1st Jun 2024 Sat**