C369 Graded Assignment

Background:

Financial services continue to transform with the rise of FinTech, particularly in digital payments. Emerging technologies/trends include:

- **Embedded Finance:** Financial services seamlessly integrated into everyday apps (e.g., buying insurance while booking travel).
- **Open Banking:** Secure sharing of financial data for personalized financial products and services.
- **AI-powered Fraud Detection:** Machine learning algorithms identify and prevent fraudulent transactions.
- **Blockchain Technology:** Secure and transparent record-keeping for financial transactions.

Your Assignment:

As a budding FinTech entrepreneur, you will create an online business proposal to address customer pain points or challenges in the financial services sector. The proposal must include at least one for the emerging technologies mentioned above. You will then create a prototype of the business website. Finally, you will bring the prototype to life as an interactive website mockup* using HTML, CSS, and JavaScript.

*Note: The interactive website mockup is required to demonstrate the solution and <u>does not need </u>to be fully functional with backend process integration.

You should start working on it once the GA is published. To help you complete the assignment successfully, plan early and ensure timely submission of the 4 milestone deliverables below.

Milestones:
1. **Week 5 (Submission): Problem Definition & Literature Review**
   - Identify a problem people face in the financial services industry.
   - Describe the people most affected by this problem (your target audience).
   - Review recent FinTech trends and propose solutions to address the problem you identified.
   - Indicate relevant MAS regulations and compliance requirements.
   - Prepare PowerPoint slides that should include:
     o Customer Pain Points
     o Target Audience
     o Proposed solution
     o Relevant MAS regulations
     o Reference Sources

2. **Week 7: Website Design (Export to PDF for submission):**
   - Update the PowerPoint slides (from Milestone 1 submission) to include the design of the Website for your business.
   - Use online tools like Canva or Figma etc. to create a visual representation of your website's layout and design. This does not involve any coding, just the visual aspects. The website design should include:
     o Home Page: Clearly explain your business idea and the financial service offered. This should be aligned with the proposed solution submitted in Week 4.
     o Service Description: Detail the service features with clear instructions for purchase.
     o Digital Wallet: Show Top-up and Payment with digital wallet. Demonstrate transaction flow and completion status.

   - Highlight features that address fraud prevention and anti-money laundering (AML) compliance (e.g., multi-factor authentication, identity verification).

   - Explain the emerging technologies employed in your solution.

3. **Week 11: Responsive Website (Submission):**
   - Based on the design (from Milestone 2 submission), develop a responsive website(using HTML, CSS, and JavaScript), so that its layout adjusts automatically to look good on different devices (laptops, tablets and phones), ensuring a seamless user experience.
   - Use of tools such as WordPress, Wix etc. are not acceptable.

4. **Week 12: Cloud Deployment (Submission):**
   - Upload your website to a cloud platform (e.g., GitHub, AWS, Google Cloud Platform).
   - Update the website's URL in your PowerPoint slides (from Milestone 2 submission).

5. **Week 13: Presentation:**
   - Present your FinTech business proposal and website demonstration.
   - Be prepared to explain your chosen technology, security measures, and compliance with MAS regulations.
   - Discuss potential future integrations and applications of your FinTech solution.

Deliverables and presentation

In each of the milestones, you should document and prepare to present to your lecturer what you have completed.

Note:
   - Diagrams/images should be included where appropriate.
   - For each milestone, you should submit the relevant deliverable to LEO.
   - Enhancements and improvements beyond what are indicated above will have marks awarded.

Milestone submissions
   - 4 milestone submissions
   - LEO submission folders: Weeks 5, 7, 11
   - Presentation: Week 13

Final submission
   - All deliverables (Powerpoint slides, prototype, webpages (all code, images, etc))
   - Signed Declaration of Compliance document
   - Date/Time: 4 August 2024, 2359h (Sun, end of week 12)
   - Final submission folder: SA 2.0

Grading Criteria

Grading Criteria	Weighting
Methods and procedures	30%
Interpretation and discussion	30%
Deliverable	40%

RESOURCES
General Fintech Trends:

- **Monetary Authority of Singapore (MAS):** https://www.mas.gov.sg/ (Explore FinTech initiatives and regulations)

- **World Economic Forum: The Future of Finance: How Blockchain and AI Will Disrupt Financial Services** Report: The Future of Finance: How Blockchain and AI Will Disrupt Financial Services (.pdf): https://www3.weforum.org/docs/WEF_The_future__of_financial_services.pdf

- **On the cusp of the next payments era: Future opportunities for banks** https://www.mckinsey.com/industries/financial-services/our-insights/the-2023-mckinsey-global-payments-report#/

Specific Technologies:

- **Embedded Finance:**
    - Article: The Rise of Embedded Finance https://www.forbes.com/sites/forbestechcouncil/2023/02/09/the-rise-of-embedded-finance-exploring-the-next-wave-of-digital-banking/?sh=17431374309d

- **Open Banking:**
    - https://www.openbanking.org.uk/ (Official website with resources on Open Banking standards and APIs)

- **AI-powered Fraud Detection:**
    - Understanding AI fraud detection and prevention strategies https://www.digitalocean.com/resources/article/ai-fraud-detection

    - Artificial Intelligence – How it's used to detect financial fraud https://www.fraud.com/post/artificial-intelligence

    - How AI is Used in Fraud Detection – Benefits & Risks https://datadome.co/learning-center/ai-fraud-detection/

    - Article: Blockchain and AI-Empowered Healthcare Insurance Fraud Detection: an Analysis, Architecture, and Future Prospects https://ieeexplore.ieee.org/abstract/document/9843995

- **Blockchain Technology:**
    - A review of Blockchain Technology applications for financial service https://www.sciencedirect.com/science/article/pii/S2772485922000606

    - Blockchain technology: transforming the future of banking https://www.dbs.com/blockchain/blockchain-technology-in-banking-how-are-banks-using-blockchain.html

- o Uses for Blockchain in the Financial Services Industry
  https://www.fool.com/investing/stock-market/market-sectors/financials/blockchain-stocks/blockchain-in-finance/#toc_impact-of-blockchain-on-the-financial-services-industry

- o Blockchain in Finance: What It Is and How It's Used
  https://builtin.com/blockchain/blockchain-banking-finance-fintech

Additional Resources:
- **Singapore FinTech Association
  (SFA):** https://singaporefintech.org/ (Connect with the FinTech community and access relevant events/reports)

- **FinTech News Websites:**
  - o FintechNewsSG
    https://fintechnews.sg/

  - o Top 10: Fintech Blogs with Insights & Innovations
    https://fintechmagazine.com/top10/top-10-fintech-blogs-with-insights-innovations

  - o The Paypers
    https://thepaypers.com/

  - o Crowdfund Insider
    https://www.crowdfundinsider.com/

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