Assignment Brief	
Course Name:	Web Application Development Using Python

This assignment brief provides the requirement for the capstone project for candidates enrolled in the **National ICT Upskilling Programme – Web Application Development Using Python**. The assignment provides learners with the opportunity to present evidence of their learning in the technical, soft skills, and English language components.

The learner's work will be assessed by the instructors according to the criteria specified herein. Successful candidates will be awarded a completion certificate. Learners who do not meet the pass criteria will be awarded an attendance certificate.

Submission Format

You are required to submit the following for the final evaluation of this assignment:

1. **A short technical report.**

   1.1. The report should not be more than 4 pages long.

   1.2. Include a diagram explaining the architecture of your application.

   1.3. Include an entity relationship diagram explaining your data model.

   1.4. Include a list of recommendation on could be enhanced or implemented in the next phase.

2. **A repository containing all of your assignment files for your assignment.**

   2.1. Create a GitHub repository called **HTU-ICTC6-CP-mysouq.**

   2.2. Commit your changes to Git often. Keep your commit messages short and descriptive.

   2.3. Do not commit your database file, but add some dummy test data in your schema.

Deliverables

You are required to submit the following deliverables by the due date noted in the table below.

Component	Deliverable	Deadline
Technical	• A technical analysis report. • A repository containing all files required for submission.	Sunday, January 31, 2021
English	Technical Report	Sunday, February 7, 2021
Soft Skills	Presentation	Tuesday, February 9, 2021

Learning Outcomes

Technical Skills

- Design a Flask-based web application for a marketplace where users can buy or sell items they no longer need.

- Design a data model for your application.

- Design a simple but intuitive user interface for your application.

Language Skills

- Structure writing – signaling main points and supporting details

- Write a strong thesis statement

- Write a strong introduction

- Write a strong conclusion

- Knowledge of the importance of titles and headings

Presentation Skills

- Speak clearly and at an understandable pace.

- Maintain goof eye contact with the audience.

- Be well-rehearsed, and well prepared

- Demonstrate a limited use of filler words ("umm", "Like", etc.)

- Use body language appropriately.

- Present within time limits.

- Be able to answer questions professionally.

- Be dressed appropriately.

Assignment Brief and Guidance

Scenario:

You have been recently hired as a full-stack Python developer at Innovative Business Solutions.

For your first assignment you are asked to build a web application for our online marketplace called **mysouq**.

Use the Flask web framework to design and build the following:

- **A web application client for the marketplace.**

User Stories:

Below is a list of user stories to help you better understand what should be implemented.

Buyers

- Buyers can sign up for **mysouq** by providing their full name, birthdate, a valid email, and a password.
- Buyers can login in using valid credentials.
- Buyers can edit their profile.
- Buyers can change their password.
- Buyers can browse all available items on **mysouq**.
- Buyers can add any items to their favourites list.
- Buyers can search for items based on any of the attributes available in the item.
- Buyers can sort all of the items based on the date they were added, or the price, in both ascending or descending order.
- Buyers can send buy requests on any available item on **mysouq**.
    - Items are not marked as sold until the reseller approves the buy request.
- Buyers can view previously sent buy requests along with their status (pending, approved, declined).
- Buyers can request to upgrade their account to a reseller level.
    - After the request is approved by an admin, the user can then sell items on **mysouq**.
    - If the request is approved or declined by an administrator, the user is notified in the notifications area.

Resellers

- Resellers can add items for sale to **mysouq**.
  - Resellers must provide a title, short description, price and a category for their item.
  - Resellers are not able to add new categories.
  - **Extra Credit** – Resellers can request a new category to be added but this request must first be approved by the admin before the newly recommended category can be used.
  - **Extra Credit** – Resellers can hide items from being visible for sale on **mysouq**.
- Resellers can edit any of their items for sale on **mysouq**.
- Resellers can view incoming buy requests in the notifications area.
  - Resellers can approve or decline any buy requests sent by any buyer for any of their items.
  - Resellers can approve buy requests only for items that are still available.
- Resellers can delete any of their items for sale on **mysouq**.
  - Items that have pending buy request cannot be deleted until all buy requests have been processed.

Administrators

- Administrators can remove items and users from **mysouq**.
  - **Extra Credit** – Notify the reseller when one of their items has been removed by an administrator.
- Administrators can add new categories.
- Administrators can approve or decline new category requests from resellers.
  - **Extra Credit** – Notify the reseller when one of their new category requests has been approved or declined by an administrator.
- Administrators can disable the account for any user.
  - Login attempts with disabled accounts must show an error message instructing the user to contact the support service provider.
- **Extra Credit** - Administrators can enable maintenance mode, which will route all user requests to page with a message that the system is currently in maintenance mode and will be back online shortly.
- **Extra Credit** – Administrators can view a high-level report of the marketplace.
  - How many users?
  - How many resellers?
  - How many items?

General Notes

- Use a pen and a paper to **keep track of your information**.
- Use draw.io to draw a simple class diagram for your data model.
  - Track the diagram in your git repository.
  - Keep your data model consistent and update it when you change your code.
- Use draw.io to draw a simple wireframe for your project.
  - Track the wireframe in your git repository.
- Refer to the available documentation for any of the used frameworks or languages.
- Adhere to Python language naming conventions. Follow the separation of concerns rule.
- Partial credit **may** be given for an incomplete but correct and working solution.
- Please follow the submission criteria mentioned above.
- You may use Bootstrap, Tailwind CSS, or any other CSS framework to properly design your user interface.
- **Extra Credit –** Add a proper README file to your project.

Technical Component Passing Requirements:

Based on the high-level assessment rubric below you are required to cross:

- **70%** to pass.

- **90%** to receive merit.

- **100%** to receive a distinction.

Assessment Rubric (Technical Component)	
Aspect	**Percentage**
Flask Web Client	40%
Proper UI/UX	20%
Code Review Checklist (code quality and maintainability)	20%
Technical Analysis	20%

Assignment Learning Outcomes and Assessment Criteria (Writing Skills-English)		
Pass	**Merit**	**Distinction**
LO1: Participants show structure and organization		
Simple composition with evidence of a beginning and an end. Organizational plan is evident with paragraphing, introduction and conclusion. Contains a weak thesis statement in the introductory paragraph. Contains a conclusion which does not re-state thesis but does not give suggestions. Shows some awareness of audience or purpose. Task fulfillment adequate.	Complete composition with evidence of a beginning and an end. Shows evidence of a clear introductory paragraph and a concluding paragraph. Contains a good thesis statement in the introductory paragraph. Conclusion re-states thesis and gives simple suggestions. Shows good awareness of audience and purpose. Task fulfillment satisfactory.	An effective, well-developed composition with a strong and clear introduction and conclusion. Organizational plan is logical and focused. Contains a strong thesis statement in the introductory paragraph. Conclusion re-states thesis and supplies strong suggestions. Clearly shows a strong awareness of audience and purpose. Task fulfillment exemplary.
LO2: Participants show coherence and cohesion		
Contains a sense of direction, but may lack focus. May not progress in a logical order. Some ideas or evidence may be lacking / inappropriate, and	Contains a sense of direction. Progresses in a logical order. Ideas or evidence is appropriate and supporting ideas are suitable. Some transitional devices are used.	Contains a strong sense of direction and is focused on the topic. Progresses in a logical order. Accurate and effective use of transitional devices / linking words.

more specific supporting ideas may seem desirable. Some transitional devices are used but may not be very effective. Task fulfillment adequate.	Task fulfillment satisfactory.	Task fulfillment exemplary.

LO3: Participants show strong content

Attempts to address the topic, but gives no relevant supporting details. Message not clearly communicated to the target reader. Point of view not clear or lacks relevance. Uses imprecise language. Uses only basic / limited vocabulary repetitively, or uses vocabulary which may be inappropriate for the task. Task fulfillment adequate.	Addresses the topic, but relies on generalities rather than specifics. A point of view may be evident, but arguments may lack clarity, relevance or supporting details. May use imprecise language, but uses an adequate range of vocabulary for the task. Attempts to use less common vocabulary but with some inaccuracy. Task fulfillment satisfactory.	Addresses the topic using specific supporting details, and examples. Clear point of view evident with relevant ideas and supporting details. Uses a wide range of vocabulary fluently and naturally to convey meaning, and to successfully complete the writing task. Task fulfillment exemplary.

LO4: Participants show grammatical range and accuracy

Contains sentences that are generally clear but may lack variety and complexity. Contains errors in grammar / usage / punctuation / capitalization, and/or spelling that may be distracting to the	Contains sentences that are generally clear but may lack variety and complexity. Contains errors in grammar / usage / punctuation / capitalization, and/or spelling	Contains sentences that are clear and show variety in structure, both simple and complex. Contains few or no errors in grammar/usage / punctuation / capitalization, and/or spelling.

reader but does not interfere with meaning. Task fulfillment adequate.	that are adequate but do not interfere with meaning. Task fulfillment satisfactory.	Task fulfillment exemplary.

Assignment Learning Outcomes and Assessment Criteria (Presentation-English)		
Pass	**Merit**	**Distinction**
LO1: Use well prepared visual aids written in English		
Visual aids are adequately prepared, informative, effective but distracting. Some grammatical or spelling errors that hamper meaning.	Visual aids are well prepared, informative, effective. Minor grammatical and spelling errors are a little distracting.	Visual aids are well prepared, informative, effective, and not distracting. No grammatical or spelling errors.
LO2: Participants use good language skills		
Good language skills and pronunciation are used with some hesitation that may interfere slightly with communication. Speaker uses a low or monotonous voice tone.	Good language skills and pronunciation are used with little hesitation. It does not interfere greatly with communication. Speaker uses an adequately animated voice tone.	Excellent language skills and pronunciation are used with no hesitation and clear communication. Speaker uses a clear, audible voice.
LO3: Participants use suitable variety of content		
Speaker uses limited vocabulary and expressions with some grammatical errors.	Speaker uses adequate vocabulary and expressions with only occasional grammatical errors.	Speaker uses a variety of vocabulary and expressions with minimal errors.