Comprehensive Exercise Report

Team ETIK of Section <<000>>

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Requirements/Analysis

Week 2

Journal

The following prompts are meant to aid your thought process as you complete the requirements/analysis portion of this exercise. Please respond to each of the prompts below and feel free to add additional notes.

- After reading the client's brief (possibly incomplete description), write one sentence that describes the project (expected software) and list the already known requirements.
    - **Description:** A second-hand marketplace platform for Riga, designed to help students (starting from age 16) and businesses learn to grow their economy, make money for themselves, and easily buy and sell pre-owned fashion and accessories through a user-friendly mobile application.
    - **Known Requirements:**

  1. User Accounts & Authentication – Secure registration, login, and profile management.
  2. Listing System – Users can upload product images, descriptions, and set prices.
  3. Search & Filters – Advanced search with category, brand, size, and price range filters.
  4. Secure Payment System – Integrated online payment and escrow service to ensure safe transactions.
  5. Chat & Notifications – In-app messaging and notifications for buyer-seller communication.
  6. Order Management – Status tracking for buyers and sellers.
  7. Delivery & Pickup Options – Shipping integration or local pickup coordination.
  8. Admin Panel – Moderation tools, analytics, and customer support management.
  9. Review & Rating System – Users can rate sellers and provide feedback.
  10. Multi-Language Support – Support for at least Latvian and English.
  11. Product Controller – A controller who will verify the safety, condition, and whether the product is new or used before listing it for sale.

- After reading the client's brief (possibly incomplete description), what questions do you have for the client? Are there any pieces that are unclear? After you have a list of questions, raise your hand and ask the client (your instructor) the questions; make sure to document his/her answers.

  1.
  Interviewer: How do you currently buy or sell second-hand items (like clothes, accessories, etc.) in Riga?
  Interviewee: I usually use platforms like Facebook Marketplace and local groups. Sometimes I also check out some international sites like eBay, but it can be tricky with shipping fees and language barriers.

  2.
  Interviewer: What challenges do you face when using existing platforms for second-hand shopping or selling?
  Interviewee: The biggest issue is the lack of trust. It's hard to know if the item is in good condition or if the seller is reliable. Plus, there's a lot of spam and irrelevant posts that make browsing frustrating. In

addition, there's no such a application for selling&buying second hand in Riga. Also I couldn't help but mention, I study away from my parents since I was 15-16 years old. For me, such an application could saved my life to earn some money on my own.

3.
Interviewer: How important do you think it is for students, especially from the age of 16, to have a platform that helps them make money and learn about growing their own economy?
Interviewee: It's really important! A lot of students don't have access to part-time jobs, and an easy-to-use platform for selling things would not only help them earn some extra money but also teach them valuable business skills. Like I mentioned before, I could do something on my own with this application. Beside that, it will really help me to understand and give me to encourage to improve the business skills.

4.
Interviewer: Would you find it helpful to have a specific platform for selling and buying and also focused on second-hand items where products are reviewed for safety and condition before being listed?
Interviewee: Yes, definitely! Knowing that items have been checked for safety and condition would make me feel much more confident in buying second-hand goods. It would eliminate a lot of the stress that comes with uncertainty

5.
Interviewer: How do you feel about the idea of a product controller verifying items before they are available for sale? Do you think it would help build trust with buyers?
Interviewee: I think it's a great idea. It would definitely help build trust and ensure the platform maintains a good reputation. Sometimes it's hard to trust that items are as described or photographed orginially, so having someone check them would make the buying experience much smoother.

6.
Interviewer: What features would you expect or find useful in a second-hand marketplace app designed for students and young entrepreneurs?
Interviewee: I'd like to see features like easy payment processing, secure chat options for negotiating, and a good review system for buyers and sellers. Also, some educational content about managing finances and selling skills would be awesome.

7.
Interviewer: Would you be interested in selling products through an online platform that offers the opportunity to build your own small business? If so, what kind of products would you want to sell?
Interviewee: Yes, I'd be interested. I know that 16 years old me also interested in this application but I am still interested in such a kind of act. I'd probably sell clothes, books, or tech gadgets. It would be cool to have the chance to grow a small business and maybe even offer unique or homemade items to other students.

8.
Interviewer: How much do you think a platform like this could help you manage your finances or teach you about entrepreneurship?
Interviewee: It could really help me get better at budgeting and pricing products. We normally had a entrepreneurship class back in RTU 2nd year. But having a way to track sales and expenses would definitely teach me about entrepreneurship and managing money in a practical way.

9.

Interviewer: What do you think about the multi-language support (Latvian and English) in such a platform? Would that be an important feature for you?

Interviewee: Yes, that would be really important. Since many students speak both Latvian and English, it would be great to have the platform accessible in both languages. It would also attract international students who might want to use it. Just an addition I could say that it should also contain Russian.

10.

Interviewer: What concerns or improvements would you suggest for a platform that aims to support students in making money and learning to manage their economy?

Interviewee: I'd like to see low fees or no fees for students, especially for new users. The platform should be intuitive and not complicated. It might also be nice to have educational resources for entrepreneurship, like tips for pricing products or how to create a good product description. But I am sure that you can do that.

- Does the project cover topics you are unfamiliar with? If so, look up the topics and list your references.
    - Some libraries needs to be studied (i.e. UI libraries)
- Describe the users of this software (e.g., small child, high school teacher who is taking attendance).
    - - Main users of this software will be the people who want to sell any second hand materials or handmade products from home. It can be anybody starting from the age of 16 regardless the education level or gender. .
- Describe how each user would interact with the software
    - Seller: Sellers will be able to create their shop pages and manage them like a social media account. Sellers can advertise their products and contact buyers, they can also contact and work with other shops.
    - Buyers: Buyers will be able to search and find the advertisements of products, contact with sellers and buy stuff online. They will also be able to comment on products.
- What features must the software have? What should the users be able to do?
    - <<Insert answer>>
- Other notes:
    - <<Insert notes>>

Software Requirements

<<Use your notes from above to complete this section of the formal documentation by writing a detailed description of the project, including a paragraph overview of the project followed by a list of requirements (see lecture for format of requirements). You may also choose to include user stories.>>

Black-Box Testing

Instructions: Week 4

Journal

Remember: Black box tests should only be based on your requirements and should work independent of design.

The following prompts are meant to aid your thought process as you complete the black box testing portion of this exercise. Please review your list of requirements and respond to each of the prompts below. Feel free to add additional notes.

- What does input for the software look like (e.g., what type of data, how many pieces of data)?
    - <<Insert answer>>
- What does output for the software look like (e.g., what type of data, how many pieces of data)?
    - <<Insert answer>>
- What equivalence classes can the input be broken into?
    - <<Insert answer>>
- What boundary values exist for the input?
    - <<Insert answer>>
- Are there other cases that must be tested to test all requirements?
    - <<Insert answer>>
- Other notes:
    - <<Insert notes>>

Black-box Test Cases

Use your notes from above to complete the black-box test plan section of the formal documentation by writing black box test cases (other than actual results since no program currently exists). Remember to test each equivalence class, boundary value, and requirement.

Test ID	**Description**	**Expected Results**	**Actual Results**

Design

Instructions: Week 6

Journal

Remember: You still will not be writing code at this point in the process.

The following prompts are meant to aid your thought process as you complete the design portion of this exercise. Please respond to each of the prompts below and feel free to add additional notes.

- List the nouns from your requirements/analysis documentation.
    - <<Insert answer>>
- Which nouns potentially may represent a class in your design?
    - <<Insert answer>>
- Which nouns potentially may represent attributes/fields in your design? Also list the class each attribute/field would be a part of.
    - <<Insert answer>>
- Now that you have a list of possible classes, consider different design options (***lists of classes and attributes***) along with the pros and cons of each. We often do not come up with the best design on our first attempt. Also consider whether any needed classes are missing. These two design options should not be GUI vs. non-GUI; instead you need to include the classes and attributes for each design. Reminder: Each design must include at least two classes that define object types.
    - <<List at least two design options with pros and cons of each>>
- Which design do you plan to use? Explain why you have chosen this design.
- List the verbs from your requirements/analysis documentation.
    - <<Insert answer>>
- Which verbs potentially may represent a method in your design? Also list the class each method would be part of.
    - <<Insert answer>>
- Other notes:
    - <<Insert notes>>

Software Design

<<Use your notes from above to complete this section of the formal documentation by planning the classes, methods, and fields that will used in the software. Your design should include UML class diagrams along with method headers. ***Prior to starting the formal documentation, you should show your answers to the above prompts to your instructor.***>>

Implementation

Instructions: Week 8

Journal

The following prompts are meant to aid your thought process as you complete the implementation portion of this exercise. Please respond to each of the prompt below and feel free to add additional notes.

- What programming concepts from the course will you need to implement your design? Briefly explain how each will be used during implementation.
    - <<Insert answer>>
- Other notes:
    - <<Insert notes>>

Implementation Details

<<Use your notes from above to write code and complete this section of the formal documentation with a README for the user that explains how he/she will interact with the system.>>

Testing

Instructions: Week 10

Journal

The following prompts are meant to aid your thought process as you complete the testing portion of this exercise. Please respond to each of the prompts below and feel free to add additional notes.

- Have you changed any requirements since you completed the black box test plan? If so, list changes below and update your black-box test plan appropriately.
    - <<Insert answer>>
- List the classes of your implementation. For each class, list equivalence classes, boundary values, and paths through code that you should test.
    - <<Insert class>>
        - <<Insert needed tests>>
    - <<Insert class and tests for each class>>
- Other notes:
    - <<Insert notes>>

Testing Details

<<Use your notes from above to write your test programs and complete this section of the formal documentation by creating a list of your test programs along with descriptions of what they are testing. You will also complete the black-box test plan by running the program and filling in the Actual Results column.>>

Presentation

Instructions:Week 12

Preparation

The following prompts are meant to aid your thought process as you complete the presentation portion of this exercise. It is recommended that you examine the previous sections of the journal and your reflections as you work on the presentation as it is likely that you have already answered some of the following prompts elsewhere. Please respond to each of the prompts below and feel free to add additional notes.

- Give a brief description of your final project
    - <<Insert answer>>
- Describe your requirement assumptions/additions.
    - <<Insert answer>>
- Describe your design options and decision. How did you weigh the pros and cons of the different designs to make your decision?
    - <<Insert answer>>
- How did the extension affect your design?
    - <<Insert answer>>
- Describe your tests (e.g., what you tested, equivalence classes).
    - <<Insert answer>>
- What lessons did you learn from the comprehensive exercise (i.e., programming concepts, software process)?
    - <<Insert answer>>
- What functionalities are you going to demo?
    - <<Insert answer>>
- Who is going to speak about each portion of your presentation? (Recall: Each group will have ten minutes to present their work; minimum length of group presentation is seven minutes. Each student must present for at least two minutes of the presentation.)
    - <<Insert answer>>
- Other notes:
    - <<Insert notes>>

<<Use your notes from above to complete create your slides and plan your presentation and demo.>>