G2U – a second life for every treasure

Course ID.: CPE-334

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Revision History

Revision	Date	Author(s)	Description
v0.1	2023-04-21	Yuil Tripathee	First release, add outline
v0.2	2024-11-05	Tom Medhi Pan-nier	Add EU market evaluation

Abstract

We would like to think about it later.

Keywords: *We would like to think about it later.*

Terms, Acronyms, and Abbreviations

Keyword	Description
Δx	displacement from x_0 to x_1.
Δt	time taken from t_0 to t_1.

Keyword	Description	Keyword	Description
Δx	displacement from x_0 to x_1.	Δt	time taken from t_0 to t_1

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Part I

Project Description

Introduction

1.1 Background and Motivation

As of 2024, we stand in the face of turbulent geopolitics, frequent extreme weather events, and escalating living cost all around the world. And we chose to make a small step today towards a greater impact tomorrow. Unreasonable consumer demands is believed to be one of the leading factors that is keeping us behind on our goal of developing sustainable societies and planet. UN SDG goal 12 promotes sustainable consumption and production patterns, ensuring efficient use of natural resources.

This inspired us to found G2U. We are developing on online e-commerce platform where every treasure has a find its second life, to a new owner. Finding the gap in this nascent niche market, we intend to incorporate lean startup model to gain market knowledge & feedback to the maximum. Then, our agile engineering team will capitalize on the market input swiftly to capture the sizable market share.

1.2 Market study

1.2.a SEA Market

1.2.b EU Market

1.3 Scope of work

1.4 A dummy section
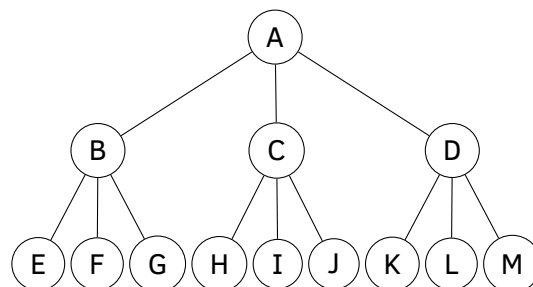

Figure 1.1: The proposed tree structure for the array implementation.

Project Management

TODO: Comparative analysis of each methodology and what they deliver

2.1 Incremental funding methodology

Used for high level decisions.

TODO: Lean startup and cash model [1]

Instagram acquisition story on 2012 on $ 1 billion having 13 full time employees only. CPC from $ 0.5 to $ 3.5, CPM for $ 2 to $ 20 and SPE from $ 0.03 to $ 0.08. [2]

TODO: Project management (lecture 1) -> define scope, timeline, budget.

TODO: Communication and Rationale Management.

2.2 Agile Method with Kanban Tool

Used for low level decision and workflow orchestration.

Part II

Requirements

Requirements Elicitation

3.1 Elicitation Techniques

TODO: Before analyzing the system, various technique are employed to gather its requirements.
TODO: Explain:

- Interviews

- Questionnaires

- Workshops

- Observation

- Prototyping

3.2 Stakeholders

3.3 Use Case Analysis

TODO: Here is a breakdown of the main use cases for the system, along with involved actors.

- Actors

- Use Cases

3.4 System Analysis - Data Flow

TODO: Data Flow diagram

3.5 Functional Design

TODO: Here are some functional requirements (example)

- User Registration

- Tutor Scheduling and Availability

- Online class

TODO: Translate this to user story when doing Kanban
TODO: Each functional requirements should have details and implementation in description list

3.6 Other Non-functional requirements

TODO: Quantize these requirements

- Scalability

- System Availability

- Security

- Usability

- Performance

3.6.a Mandated constraints

Examples include: Economics

3.6.b Regulatory compliance

Chapter **4**

Usability Requirements

[3]

Part III

Design and Development

Systems Analysis and Design

5.1 Software Analysis

5.1.a Class Diagram

TODO: class diagram

5.1.b Components Diagram

5.1.c Sequence Diagram

5.2 Systems Design

5.2.a Demonstration model

5.2.b Full scale production model

Implementation

Part IV

Test and Evaluation

Evaluation of Outcomes

7.1 Testing Methodologies

Testing -> Second part of the course!

7.2 Results

7.3 Discussion

Chapter **8**
Conclusion

8.1 Discussion

8.2 Future Work

8.3 Recommendation

References

[1] Steve Blank. Everything about lean startup in 12 minutes, July 2024. URL `https://www.youtube.com/watch?v=G-wwOK4X0lc`.

[2] Investor Relations at Meta (Previously Facebook). Press release - facebook to acquire instagram, April 2012. URL `https://investor.fb.com/investor-news/press-release-details/2012/Facebook-to-Acquire-Instagram/default.aspx`.

[3] Duolingo. Duolingo brand guidelines, December 2024. URL `https://design.duolingo.com/`. Accessed on 2024-12-04.