VIT®

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

SE LAB
DIGITAL ASSIGNMENT 1

Slot: L22 + L23

Course Code: CSE3001

Course Title: Software Engineering

Submitted To: Prof. Akila Victor

GiGe - Give and Get

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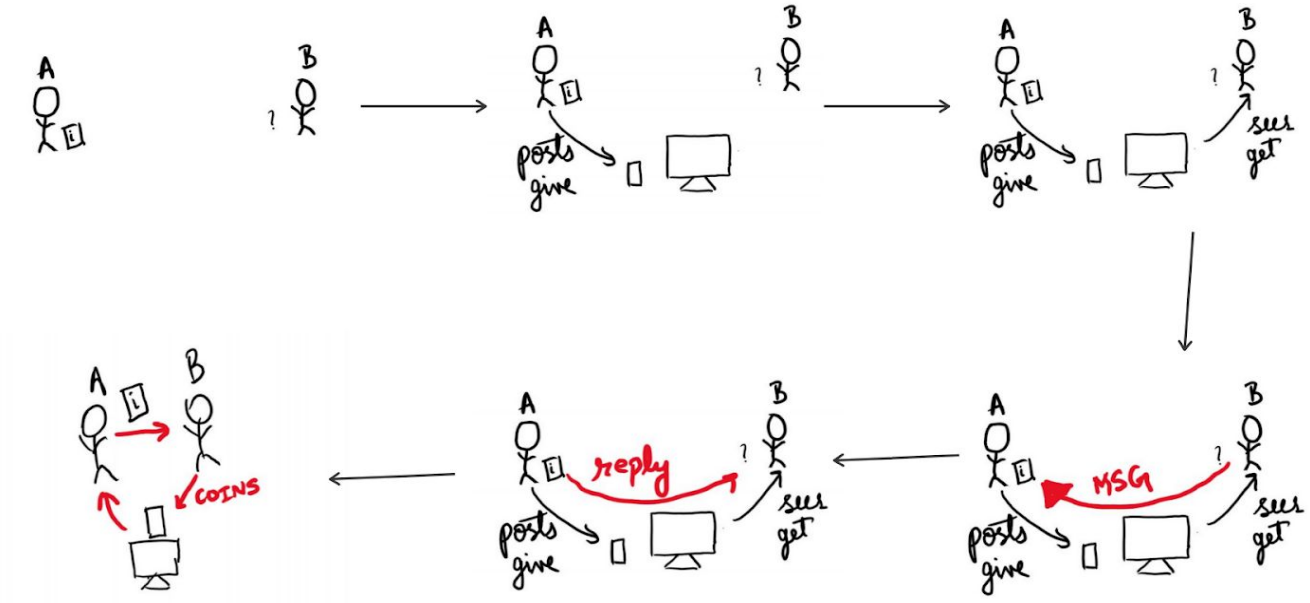
Problem Statement

Students often find themselves in the need of daily essentials and that too at an affordable price. Also, there are some students that have too much stuff that they don't even use now.
GiGe provides a quick and simple solution to this problem by enabling the users to share their goods in exchange for Gicoins.
It is basically an ecosystem that thrives on people helping each other. The coins are used to measure how much one is helping others.



Methodology

GiGe is a platform for sharing goods and services among students using a Coin system. Coins can be purchased as well as earned. The coins have certain properties of cryptocurrencies.
Students who "give" earn coins and can spend those coins to "get" things they need.
In "get", you spend Gicoins by getting some items, and in "give", you earn Gicoins by giving your items to another user. That item can be almost anything like books, video games, assignments, electronics, projects, cycles, sports goods, etc.

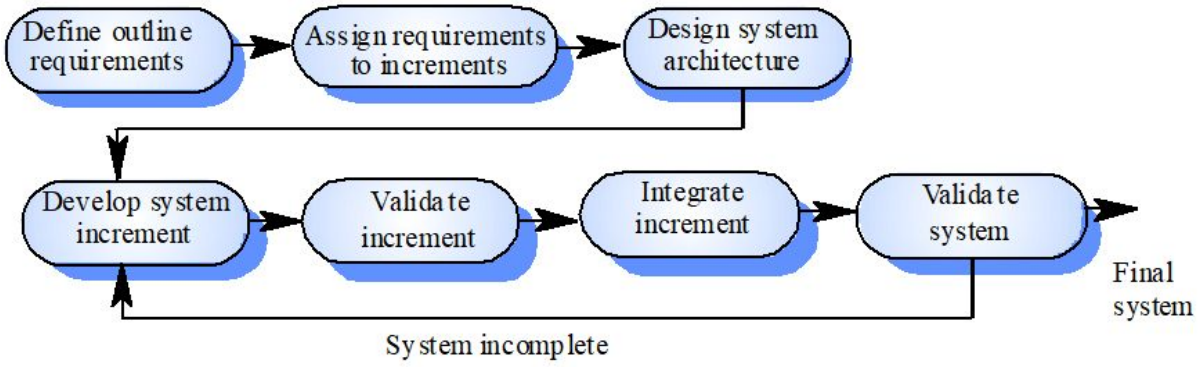
Main Features of the Site:

1. Login/Logout/Account creation
2. Product Sell/Give Mode
3. Product Buy/Get Mode
4. User Reviews and Ratings for Products and services
5. Messaging other users
6. Searching for products and services
7. Transaction Maintenance(Gicoin transactions made safe by Cryptography)
8. Account View
    a. Wallet: GiCoins left and spent
    b. Product Selling History
    c. Product Purchase History

Process model

Incremental development

- Rather than deliver the system as a single delivery, the development and delivery is broken down into increments with each increment delivering part of the required functionality
- User requirements are prioritized and the highest priority requirements are included in early increments



When to use Incremental models?

- Requirements of the system are clearly understood(YES- we have defined requirements properly)
- When demand for an early release of a product arises(YES)
- When software engineering team are not very well skilled or trained(YES-we are learning Software Engineering)
- Such methodology is more in use for web application and product-based companies(YES- web-based and product-based)

Feasibility

1. Technical Feasibility

In Technical Feasibility current resources both hardware software along with required technology are analyzed/assessed to develop the project.

The project's goals and objectives are acceptable and feasible from a technical point of view. On completion the project should be a web application with software tools used listed below:

- HTML
- CSS
- JavaScript
- Django
- MongoDB(DataBase)

Designing Tool:

- Figma
- Yed Graph Editor
- Draw.io

Development Tool:

- Visual Studio Code
- GitHub

Hence we conclude that the project is technically feasible.

For hardware, any computer with internet connection/access to the web and sufficient memory availability should suffice.

2. Operational Feasibility

Operational feasibility assesses the range in which the required software performs a series of levels to solve business problems and customer requirements.

For the management of the project and collaboration, we'll use online meeting platforms such as Microsoft Teams and Google Meet, also we are using G-Suite products such as Docs, Tasks, Slides, etc.

The project is expected to be easy to access and understand. The main target for the project will be young campus students who understand and take to new technologies easily and without showing much hesitation. So they can easily use the website to pay for products and services offered by others using Gicoins and as the students will be from the same college they can easily exchange goods for coins.

3. Economic Feasibility

In an Economic Feasibility study, the cost and benefit of the project are analyzed to decide whether the necessary software can generate financial profits for an organization.

All of the software and technologies used for development are free to use and learn/implement.

If the project is deployed to the real world on completion, initially free domain providers such as Blue Ocean Hosting will be used. Based on the response and acceptance of the project it may be shifted to a paid server service.

In the initial phases, the market targeted will be students in various universities and colleges. The website will be free to use for all users and at the time of account creation each user will get some Gicoins to begin with, these coins can be spent and earned by exchanging between students

4. Legal Feasibility

Legal Feasibility of a project is analyzed from a legal point of view. Overall it can be said our project "GiGe- Give and Get" is legal and ethical by all requirements as we are not doing anything illegal or unethical on or with the platform.

Project Functionalities:

First Iteration:

1. Welcome landing Page:
   Consisting of general information about the website(project)
   Navigation bar consisting of essential links of the site
   Footer consisting of developer(team) details

2. Login Page:
   Takes 2 input fields, User Id and Password, after validation, if found, the user is logged in, else they have to sign up.
   The navigation bar and footer will still exist.

3. Sign Up Page:
   Input fields for all details such as user id, email, name, contact number, password, etc.
   Validation on input values, if passed added to the database.
   The navigation bar and footer will still exist.

Second Iteration:

4. Dashboard (Get Mode) :
   A grid-type view of all available products on the campus. Details of the product are gotten from the database.
   The navigation bar is modified, profile dropdown button giving the option of **mode, account, and logout**. Search field added which takes input and searches for the key in the database.
   Footer remains unchanged.

5. Select “Get” or Select Product Page:
   If a user clicks on a product, its specific page is opened giving access to images if available and additional details.
   Navbar is still displayed, along with the footer.

An option is given to proceed with the purchase. The giver of the product is seen and can be contacted from here.

6. Upload “Give” Page(Give Mode):
   The seller has to upload details and price and image of the product in a form containing input fields as required.

7. Give Status:
   Status display of all items uploaded by the seller.
8. Account Page

Third Iteration:

9. Communication Page:

Both the giver and borrower are giving the means to connect to each other. [If possible we will implement messaging on the page]

10. Transaction Page:

Each user gets a Wallet that shows the balance of coins. Also previous transactions and payment details. Every user gets 1000 coins at the time of account creation.

Task List and Schedule: (Iteration 1)

Task Name	Description	Duration (in days)	Dependency	Member Responsible
T1	Design LANDING PAGE	1		Aaditya Pareek Atul Agarwal
T2	Frontend of Landing Page	2	T1	Atul Agarwal Aaditya Pareek Tanmay Bansal
T3	Design Of Login/Signup Page	1		Aaditya Pareek Atul Agarwal
T4	Frontend of Login/Signup Page	2	T3,T2	Atul Agarwal Aaditya Pareek Tanmay Bansal
T5	Form Validation, Client Side	2	T4	Atul Agarwal Aaditya Pareek Tanmay Bansal
T6	Login/Signup Backend Dev	2	T5	Tanmay Bansal Aaditya Pareek Atul Agarwal
T100	Documentation 1	3	T6	Tanmay Bansal Aaditya Pareek Atul Agarwal

Task List And Schedule(ITERATION 2):

Task Name	Description	Duration (in days)	Dependency	Member Responsible
T7	Account Page Design	1	T6	Aaditya Pareek Atul Agarwal
T8	Account Page Frontend	1	T7	Atul Agarwal Aaditya Pareek Tanmay Bansal
T9	Account Page Backend	1	T8	Tanmay Bansal Atul Agarwal Aaditya Pareek
T10	Dashboard page design	1		Aaditya Pareek Atul Agarwal
T11	Frontend Dashboard	2	T10	Atul Agarwal Aaditya Pareek Tanmay Bansal
T12	Product page design	1		Aaditya Pareek Atul Agarwal
T13	Product page frontend	2	T12	Atul Agarwal Aaditya Pareek Tanmay Bansal
T14	Search Function	1	T13	Tanmay Bansal Atul Agarwal Aaditya Pareek
T15	Backend for Dashboard and Product pages	2	T14	Tanmay Bansal Atul Agarwal Aaditya Pareek
T16	Design Upload	1	T15	Aaditya Pareek Atul Agarwal

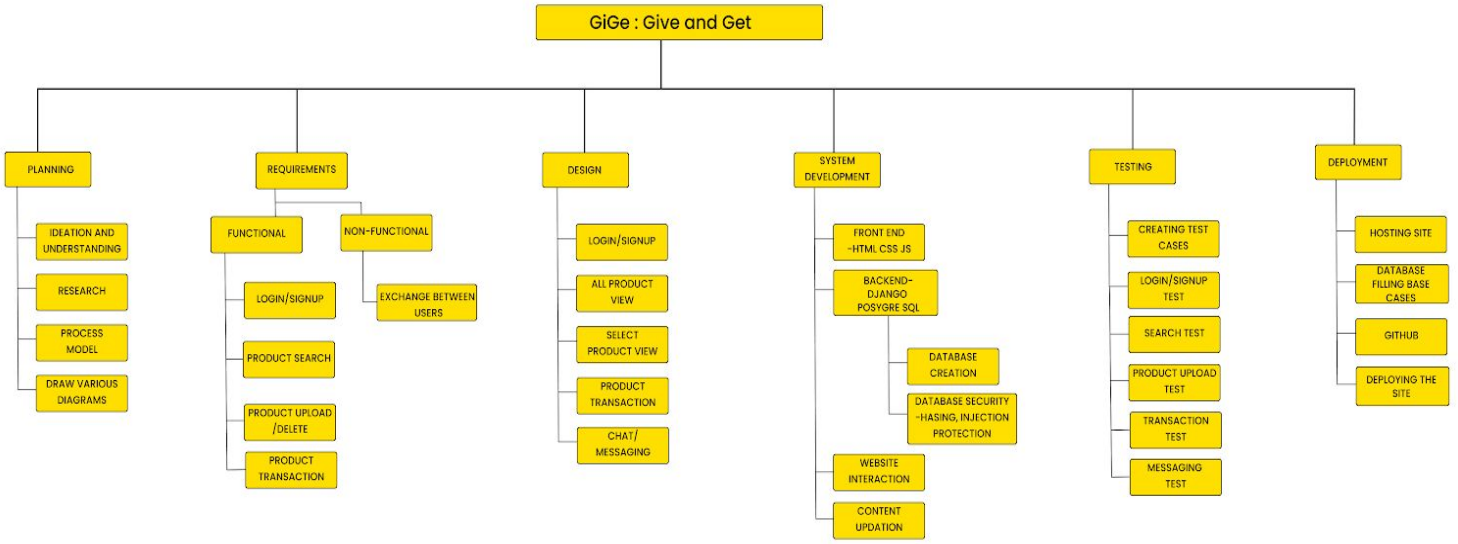
	Page and Status Check Page			
T17	Frontend for Upload and Status	2	T16	Atul Agarwal Aaditya Pareek Tanmay Bansal
T18	Backend for Upload	2	T17	Tanmay Bansal Atul Agarwal Aaditya Pareek
T19	Backend for Status Page	2	T17	Tanmay Bansal Atul Agarwal Aaditya Pareek
T101	Documentation 2	4	T18,T19	Tanmay Bansal Atul Agarwal Aaditya Pareek

Task Schedule: Iteration 3:

Task Name	Description	Duration (in days)	Dependency	Member Responsible
T20	Communication Page Design	1		Aaditya Pareek Atul Agarwal
T21	Communication Page Frontend	1	T20	Atul Agarwal Aaditya Pareek
T22	Communication Page Backend	3	T21	Tanmay Bansal Atul Agarwal Aaditya Pareek
T23	Transaction Page Design	1	T22	Aaditya Pareek Atul Agarwal
T24	Transaction Page Frontend	2	T23	Atul Agarwal Aaditya Pareek Tanmay Bansal
T25	Transaction Page Backend	3	T24	Tanmay Bansal Atul Agarwal Aaditya Pareek
T102	Final Documentation	4	T25	Tanmay Bansal Atul Agarwal Aaditya Pareek

WBS

WBS : WORK BREAKDOWN SYSTEM



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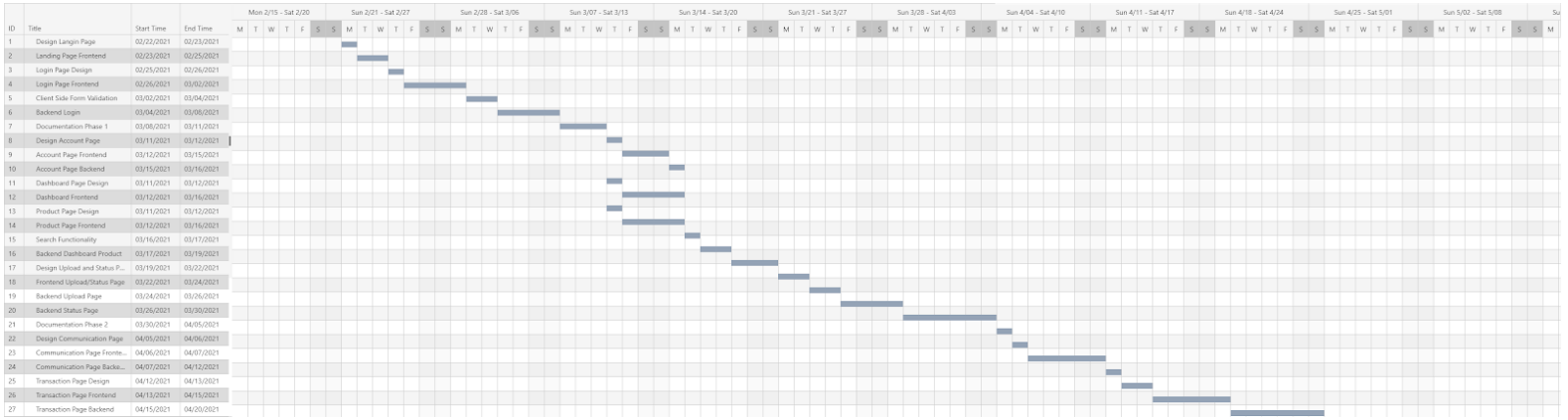
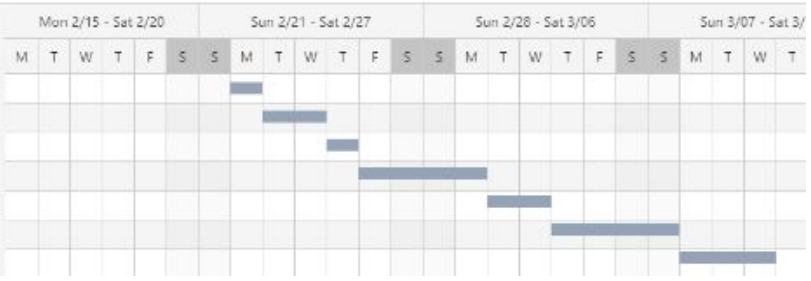


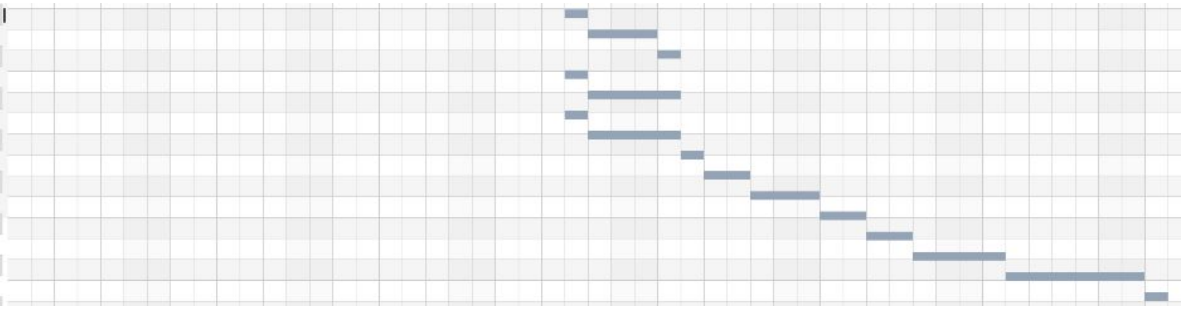
Increment 1

ID	Title	Start Time	End Time
1	Design Langin Page	02/22/2021	02/23/2021
2	Landing Page Frontend	02/23/2021	02/25/2021
3	Login Page Design	02/25/2021	02/26/2021
4	Login Page Frontend	02/26/2021	03/02/2021
5	Client Side Form Validation	03/02/2021	03/04/2021
6	Backend Login	03/04/2021	03/08/2021
7	Documentation Phase 1	03/08/2021	03/11/2021



Increment 2

8	Design Account Page	03/11/2021	03/12/2021
9	Account Page Frontend	03/12/2021	03/15/2021
10	Account Page Backend	03/15/2021	03/16/2021
11	Dashboard Page Design	03/11/2021	03/12/2021
12	Dashboard Frontend	03/12/2021	03/16/2021
13	Product Page Design	03/11/2021	03/12/2021
14	Product Page Frontend	03/12/2021	03/16/2021
15	Search Functionality	03/16/2021	03/17/2021
16	Backend Dashboard Product	03/17/2021	03/19/2021
17	Design Upload and Status P...	03/19/2021	03/22/2021
18	Frontend Upload/Status Page	03/22/2021	03/24/2021
19	Backend Upload Page	03/24/2021	03/26/2021
20	Backend Status Page	03/26/2021	03/30/2021
21	Documentation Phase 2	03/30/2021	04/05/2021



Increment 3

22	Design Communication Page	04/05/2021	04/06/2021
23	Communication Page Fronte...	04/06/2021	04/07/2021
24	Communication Page Backe...	04/07/2021	04/12/2021
25	Transaction Page Design	04/12/2021	04/13/2021
26	Transaction Page Frontend	04/13/2021	04/15/2021
27	Transaction Page Backend	04/15/2021	04/20/2021