



Dhirubhai Ambani
Institute of Information and Communication Technology

Renting System

Group 6

Subject: Software Engineering

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Course Project Mid Assessment

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1. Problem Statements - Renting System

Design a system where users can share the details of things which he/she wants to give for rent or request for the same.

2. Functional Requirements

Features for Buyer

- Sort & Filter
 - The user shall be able to search either all of the initial set of databases or select a subset from it.
- Show items in different categories
 - Users will show items in different categories. so, he/she can easily find items and improve accessibility.
 - The different categories like car, house, electronics, furniture, equipment etc.
- Show items in details
 - Users can see the specification of the product like specific model numbers, warranty period, etc.
 - Users can see photos, description and rating of that item under this feature.
- Give Rating and Review it
 - Users will be allowed to review and rating the product which he/she rents and give detailed information about that product.
- Request for Renter Details & Location
 - Buyer will request details of the seller like the seller's location, mobile-number and address.
- Add to Cart
 - Buyer will add one or more items to the cart and in future he/she will buy items.
- Wishlist a Product
 - The Buyer will add one or more items to the wishlist so he/she finds those items easily and he/she can add to cart these items.
- Payment Gateway
 - To carry out the payment transaction of the product and verify the payment.
- Buy a product
 - This basic feature allows the user to confirm his/her purchases and check his address and later redirect him/her to the payment gateway for further process.
- FAQ section, Help and Contact us
 - Shows some help regarding basic features of the system.
- View order history

- Shows the active as well as completed products that were rented by the user.
- Remind of end of renting period
 - It notifies the rentee about the end of the renting period.

Features for Seller

- Product list
 - In this window, sellers can check all available products which the buyer can buy, and compare his/her products with available that kind of products.
- Own Product List
 - Sellers can check his/her products which he/she uploads for renting.
- Rent a new product
 - Here, the user will be asked for details on the product he/she would like to sell. The details like product name, product price, condition, product photos.
 - Then the seller confirms and puts the product on rent.
- Manage product
 - A seller can manage products from a product list like he/she can update a price, picture, status, or any other description of the product.
- Remove the product from product-list
 - If a seller no longer wants to put a product on rent, he/she can remove the product from his/her product list.
- Check Statistics
 - number of users who viewed your product
 - When is the renting period ending for the rented product?
- Manage transactions / Payment
 - See his/her passbook, withdraw, etc on the system
- Manage Customer requests for details.
 - The customer can see the list of customers who have asked for the details of the product and subsequently, send them the details they asked for.

3. Non-Functional Requirements

- **Usability:** The system should be interactive for users to be comfortable. The help section should help to solve any issues and provide FAQs(Frequently Asked Questions).
- **Performance:** Need good quality servers for better performance and can handle a lot of traffic.
- **Security:** Need highly secure servers to prevent user data leaks. Every user is provided with a username and password to keep it secure.
- **Maintainability:** Need beta website for user testing and testing out new patches.
- **Availability:** The system needs to be available 24 hours and 7 days a week. If in case the system has some malfunctioning, the system should be available within 1-2 working days.
- **Database requirements:** Database of users and products are to be maintained.

4. Requirements Elicitation:

The Renting System is not a completely new concept, so building it from scratch would be like reinventing the wheel, so we focused on three main techniques of elicitation, for gathering most useful requirements. Three elicitation practices we exploited are as follows:

1. Brainstorming:

The inception of the project began with getting as many ideas we had regarding the Renting paradigm, and thinking them out loud in the discussions. Renting is not something people are alienated to, everyone being clear about the status quo, we had discussions on the basis of our experiences of giving out things on rents to others and how we faced different challenges in the existing scenario. Our discussions revolved around building a whole new system in the beginning. But there were issues regarding trusting online buying and security. During these discussions, we came across two significant points, first, the widespread popularity and user-friendliness of ecommerce websites and their similarities with the renting system. Second, getting an honest response from some people on what are the key requirements in the domain of the renting system. This led us to our next elicitation technique.

2. Analysis of Existing System:

The current market shows the easiness and fast moving growth of E-commerce websites throughout the world. Due to its prevalence amongst the users, most people are quite used to the features of these websites like searching and filtering products, adding products to wishlist and much more. So, working on making a renting system on the base of an ecommerce website will be a better option to work upon. The key features of an ecommerce website, which are quite necessary for the renting system too, are getting a sorted list of products with being able to get products of different categories, having a wishlist of products, integrating payment options and getting contact details of the seller. This will help in getting the skeleton ready for the renting platform. Now, comes the part of having some features which are specific for a renting system. For that we will take help of interviews.

3. Interviews:

Here, we wanted to get an idea about what are the requirements from the renting business perspective, and what are the key parameters sellers and buyers look for.

❖ Interview 1

IT Solutions: Roleplay interview with Tech Experts			
System: Renting System		Stakeholder: Seller	
Interviewee: Parth Patel Jeet Umat		Designation: CEO at TeQ.Prit Seller	
Interviewer: Parth Santoki Mihir Doshi		Designation: Product Manager Designation: Senior Developer	
Date: 20/03/2021	Time: 11:30 AM	Duration: 55m	Place: Google Meet
Purpose of Interview: Sharing our idea of the project - 'Renting System.' Discussion of seller problem with Tech experts & Seller			
Summary: In order to reach as many buyers as possible through websites especially nearby in my town. There should be some assurance regarding return of the product without any harm. There should be some privacy policy regarding getting seller details by buyers.			

There should be a functionality to view all the buyers who have visited their product.

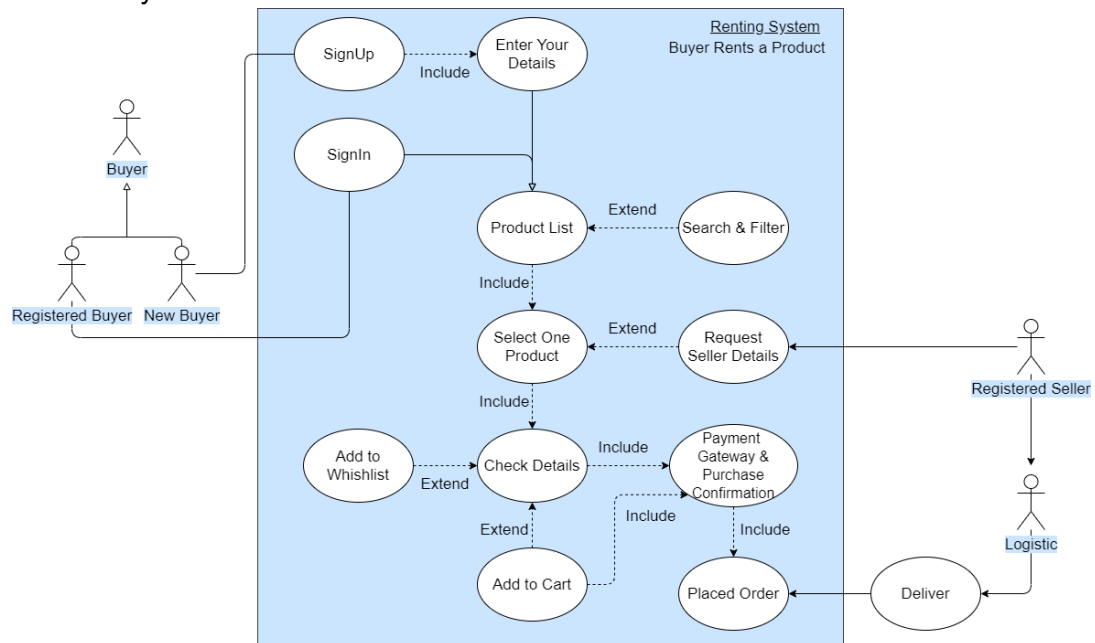
Renter would prefer giving his/her product to someone in surroundings or the same city to easily manage delivering and returning products.

❖ Interview 2

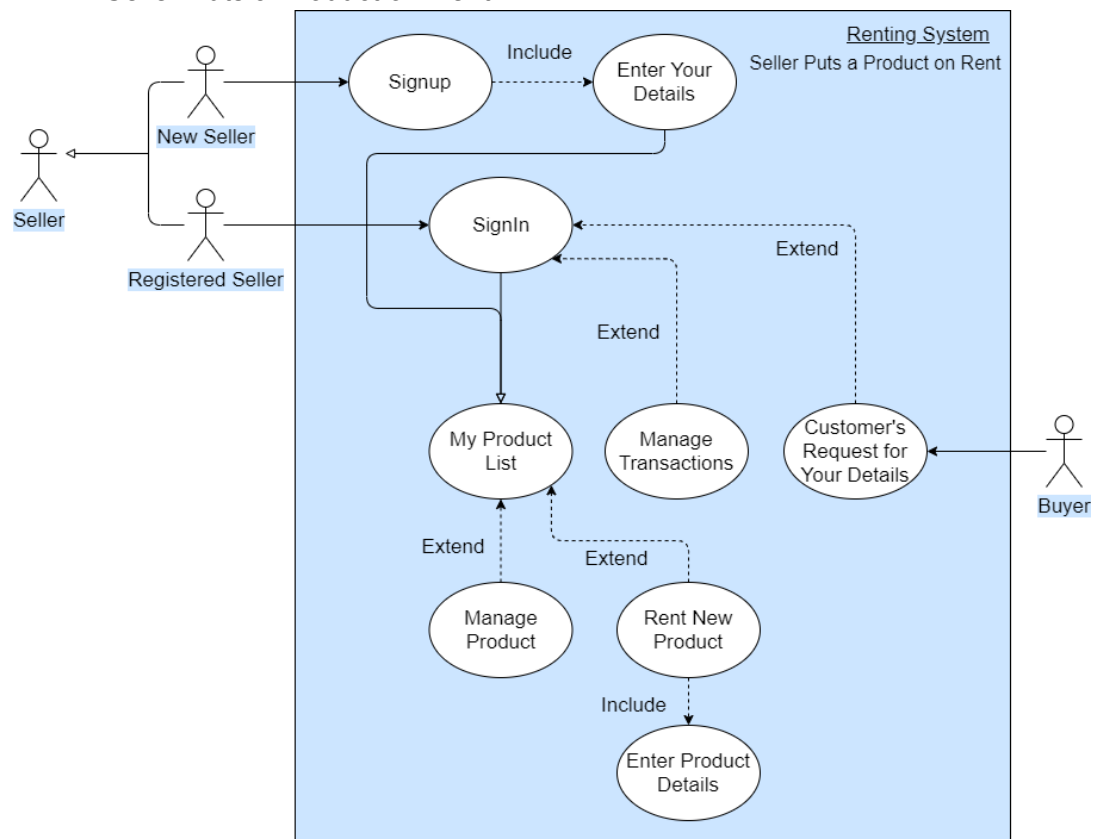
IT Solutions: Roleplay interview with Tech Experts			
System: Renting System		Stakeholder: Buyer	
Interviewee: Ayush Patel Deven Vachhani		Designation: Buyer CEO at Devsoftz	
Interviewer: Prayush Dave Prit Patel		Designation: Product Manager Designation: Senior Developer	
Date: 20/03/2021	Time: 11:30 AM	Duration: 55m	Place: Google Meet
Purpose of Interview: Sharing our idea of the project - ‘Renting System.’ Discussion of buyer problem with Tech experts & Buyer			
Summary: This type of system is very useful in domains of photography. There should be some way to assure the quality of the product shown on the website. There should to some seller verification to ensure that seller on the website is genuine There should be some mechanism to be implemented to assure the state of product at the time of delivery.			

5. Use Case Model

I. Buyer Rents a Product

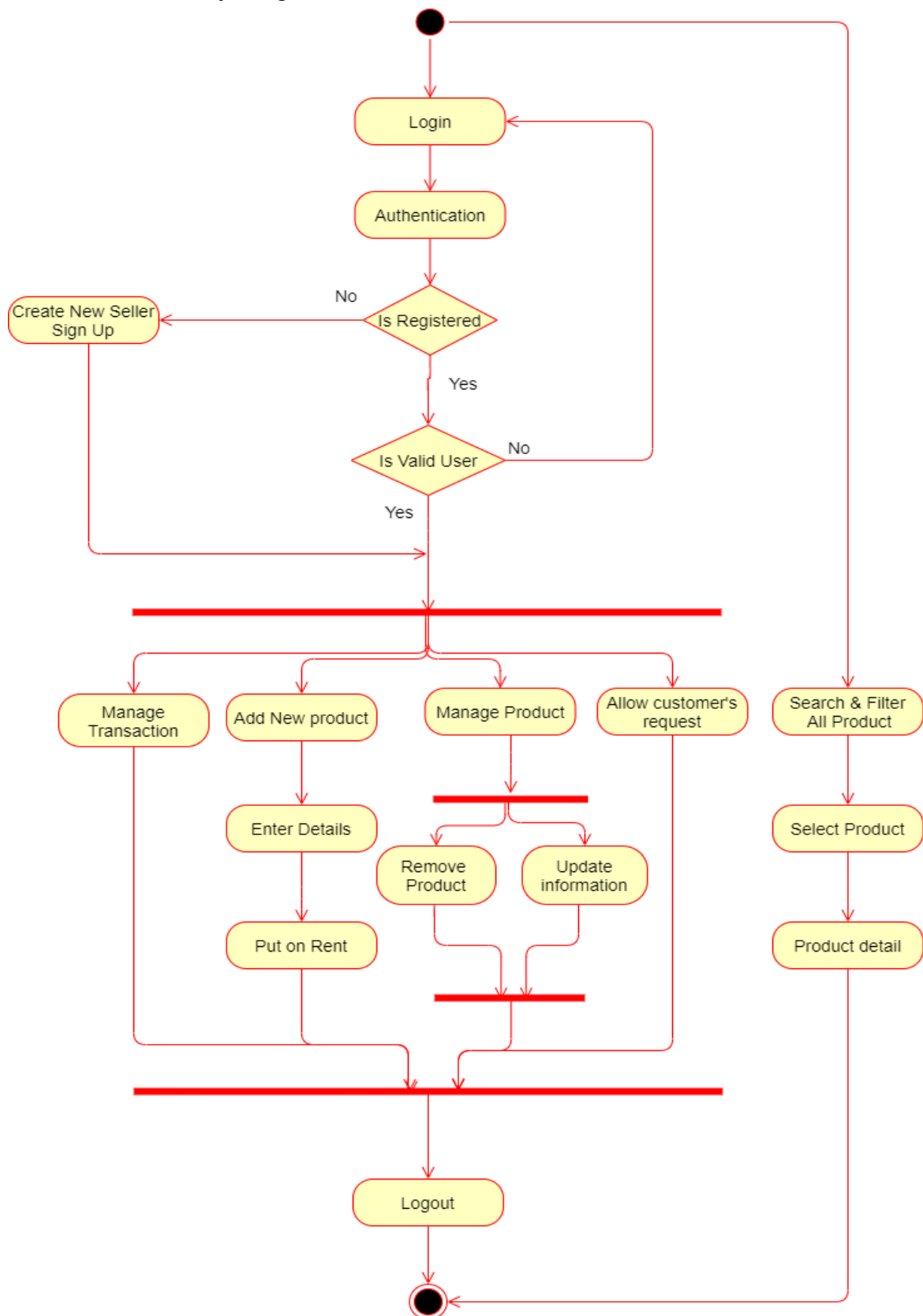


II. Seller Puts a Product on Rent

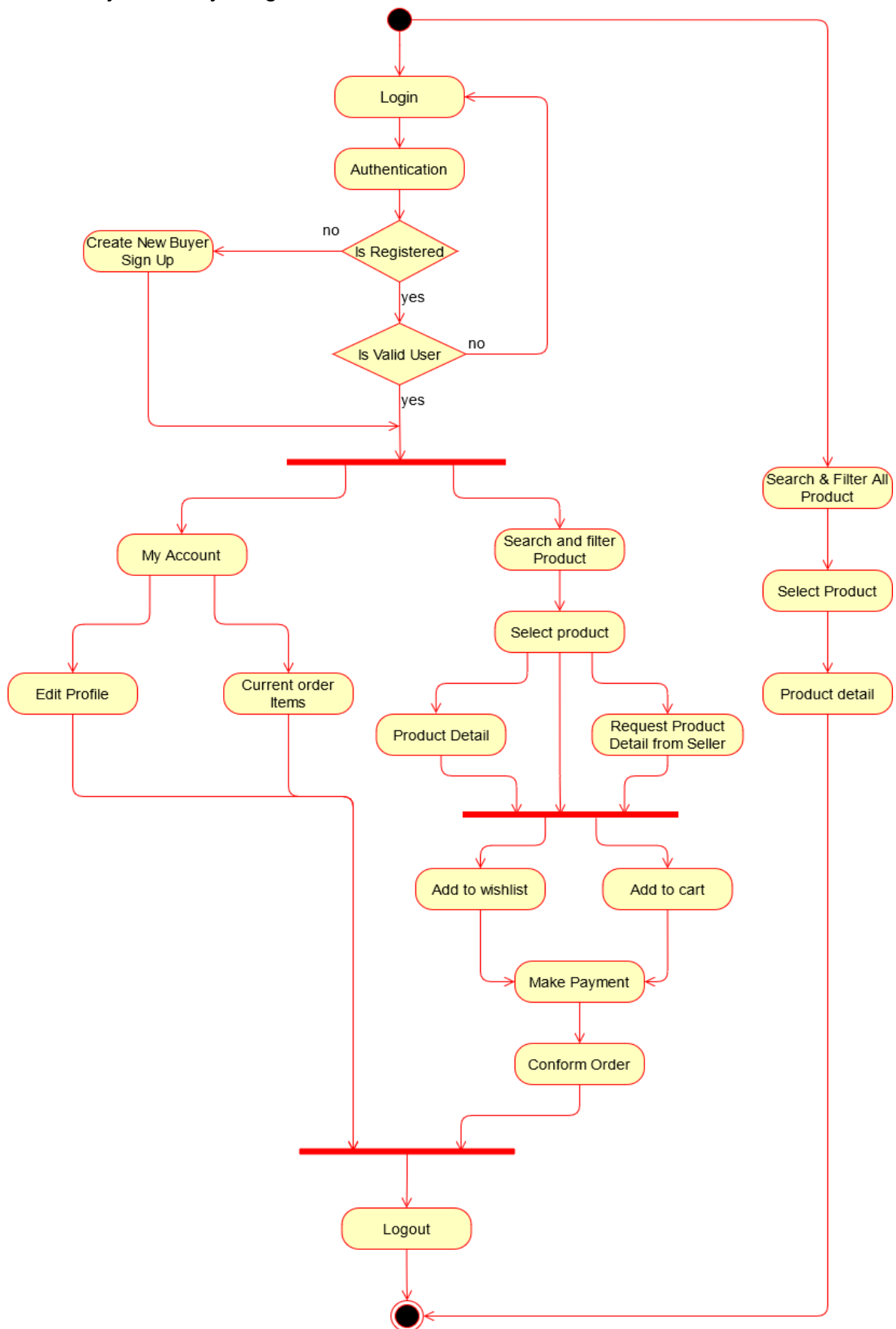


6. Activity Diagram

I. Seller Activity Diagram



II. Buyer Activity Diagram



7. Project Roadmap and Team Contribution

Name	ID	Worked Issue	Done PR
Prit Patel	201801261	#3	#7 , #16
Parth Santoki	201801257	#4	#8
Prayush Dave	201801021	#5	#10
Mihir Doshi	201801152	#6	#13
Utkarsh Asari	201801185	#6	#14
Nilay Mendpara	201801124	#5	#11
Ritika Lakdawala	201801226	#5	#12
Rishi Shivani	201801073	#6	#15
Chauhan Rahul	201801209	#6	
Dishant Goti	201801449	#5	#9

8. Github Repository

- Main Repository <https://github.com/RentingSystemSE/6-RentingSystem>
- Backend Repository <https://github.com/RentingSystemSE/Renting-System-Backend>
- Frontend Repository <https://github.com/RentingSystemSE/Renting-System-Frontend>