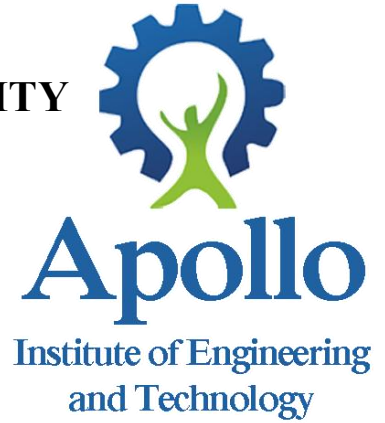




GUJARAT TECHNOLOGICAL UNIVERSITY

Chandkheda, Ahmedabad

Affiliated



Apollo Institute of Engineering & Technology

Anasan, Ahmedabad

A report on-

Smart Shopping

Under subject of

DESIGN ENGINEERING – 2B (2160001)

B. E. III, Semester – VI

(Computer Engineering)

Submitted by:

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Asst. Prof. Kajol Soni

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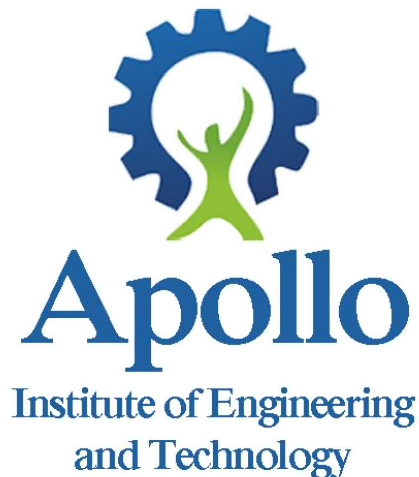
Asst. Prof. Naveen Kandwal

(Head of Department Computer Engineering)

Academic year
(2018-2019)

APOLLO INSTITUTE OF ENGINEERING & TECHNOLOGY

COMPUTER ENGINEERING



CERTIFICATE

This is to certify that the project entitled “Smart Shopping” has been carried out by “Patel Jaimin (151280107038), Patel Yash (151280107042), Soni Ram (151280107055), Vaghela Jaypalsinh (151280107058)” under my guidance in fulfillment of the Design Engineering – 2A, - 6th Semester, Degree of Bachelor of Engineering in Computer Engineering of Gujarat Technological University, Ahmadabad during the academic year 2017-2018.

Date:-_____

Prof. Kajol Soni
(Faculty Guide)

Prof. Naveen Kandwal
(Head of the Department)

CANDIDATE'S DECLARATION

We have finished our project report entitled "Smart Shopping" and submitted to our respective guide. We are in 4th semester and we have tried to give our best. We have done our work honestly and in a good way.

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Submitted to:
Apollo Institute of Engineering & Technology
Anasan, Ahmedabad.

ACKNOWLEDGEMENT

In this project the goal is to make easy and secure shopping and deliver a new customer shopping experience. It is smart because here the customer gets the product easily and securely. This project involve them in the process of mall's promotion and obtain deeper customer satisfaction. It also ensures customers comforts.

ABSTRACT

In this project the customer will get a good experience for the good shopping. The design of the web page will attracts customers. This project allows the customers to shop easily and securely. Here the customer can get their products easily. This project makes the customers comfortable to shop.

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1. INTRODUCTION

1.1 WHAT IS DESIGN THINKING?

- Design Thinking is a methodology used by designers to solve complex problems, and find desirable solutions for clients. A design mindset is not problem-focused, its solution focused and action oriented towards creating a preferred future. Design thinking draws upon logic, imagination, intuition, and systemic reasoning, to explore possibilities of what could be—and to create desired outcomes that benefit the end user (the customer).
- Design thinking refers to creative strategies designers utilize during the process of designing. Design thinking is also an approach that can be used to consider issues, with a means to help resolve these issues, more broadly than within professional design practice and has been applied in business as well as social issues. Design thinking in business uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity.
- Design Thinking in Education. Design Thinking is a mindset and approach to learning, collaboration, and problem solving. In practice, the design process is a structured framework for identifying challenges, gathering information, generating potential solutions, refining ideas, and testing solutions.
- Design thinking as a process for problem-solving. Unlike analytical thinking, design thinking includes "building up" ideas, with few, or no, limits on breadth during a "brainstorming" phase. ... One version of the design thinking process has seven stages: define research, ideate, prototype, choose, implement, and learn.

1.2 WHAT IS DATA?

- Computer data is information processed or stored by a computer. This information may be in the form of text documents, images, audio clips, software programs, or other types of data. Computer data may be processed by the computer's CPU and is stored in files and folders on the computer's hard disk.

1.3 WHAT IS DATA SECURITY?

- Data security refers to protective digital privacy measures that are applied to prevent unauthorized access to computers, databases and websites. Data security also protects data from corruption. Data security is an essential aspect of IT for organizations of every size and type.

2. AEIOU FRAMEWORK

2.1 Activities

- This portion contains the collection of all the activities which we have observed from first day till the last day of our observation.

AEIOU framework:

Activities

Group id: _____ Date: _____ Sheet No: _____


Project Name : **SMART SHOPPING**

General impressions / Observations

USE OF MOBILE **SHOPPING**

PAYMENT

Sketch/photo- Summary of activities



Elements, features and special notes

BASKET **TROLLEY** **GOODS**

2.2 Environment

AEIOU framework: Group id: Date: Sheet No:

Environment

Project Name : **SMART SHOPPING**

General impressions / Observations
(Style, materials & atmosphere)

CROWD **NOISY**

Elements, features and special notes

CONDITIONERS **COOL WEATHER**

Floor plan

```
graph TD;
    SS((Smart Shopping)) --- C1((Customers));
    SS --- C2((Atmosphere));
    SS --- C3((Mobile));
    SS --- C4((Convenience));
    SS --- C5((Security));
    SS --- C6((Help));
    SS --- C7((Location));
```

- Customers**: - Customers - Buy things - Online
- Atmosphere**: - Crowded - Noisy
- Mobile**: - Smart phone - Online payment - Usage around or product
- Convenience**: - Camera - Shopping & - Smartness - Computer
- Security**: - Cameras - Grades - Computers
- Help**: - IT Eng. - Managers - Suppliers
- Location**: - Fast Payment - Security - Payment - Etc.

Scene

2.3 Interactions


- Interaction between customers and video company is very important part of framework.
- This includes the conversation which we have done with people, objects during observation, and also the other people were doing.

AEIOU framework:

Group id: Date: Sheet No:

Interactions

Project Name : **SMART SHOPPING**

<p>General impressions / Observations (Who is interacting with whom, what?)</p> <p>CUSTOMERS PEOPLE</p> <p>STAFF MEMBERS</p>	<p>Scene of interection (How it is being done)</p> 
<p>Elements, features and special notes</p> <p>COMPUTERS CAMERAS</p>	

2.4 Objects

- This Section is completely filled up with all the nonliving things. Through this section we could also know many things.
- From this section we could know how different objects play role in the process and which also show the possibility of the problems.

AEIOU framework:

Group id: _____ Date: _____ Sheet No: _____

Project Name : **SMART SHOPPING**

Objects

General impressions / Observations (What components are involved?)	Inventory of key objects
CAMERAS	BANNERS
WRODS	SCANNERS
TROLLY	BILLING
COMPUTERS	COMPUTERS
Elements, features and special notes (How objects are relating to the activities?)	MOBILES
CAMERAS PROVIDS SECURITY	
TROLLY	
PRODUCT DETAILS IN COMPUTERS	

2.5 Users


- Users are the persons which are involved during the observation and in the observation. They are the persons who have played the Roll.

AEIOU framework:

Group id: Date: Sheet No:

Users

Project Name : SMART SHOPPING

General impressions / Observations (Who is present roles & responsibilities?)	Scene of users in context
<p>FAMILIES</p> <p>PUBLIC</p> <p>STUDENTS</p>	
<p>Elements, features and special notes (List of identified people involved)</p> <p>TEACHERS</p> <p>STUDENT</p> <p>BISNESS MAN</p>	

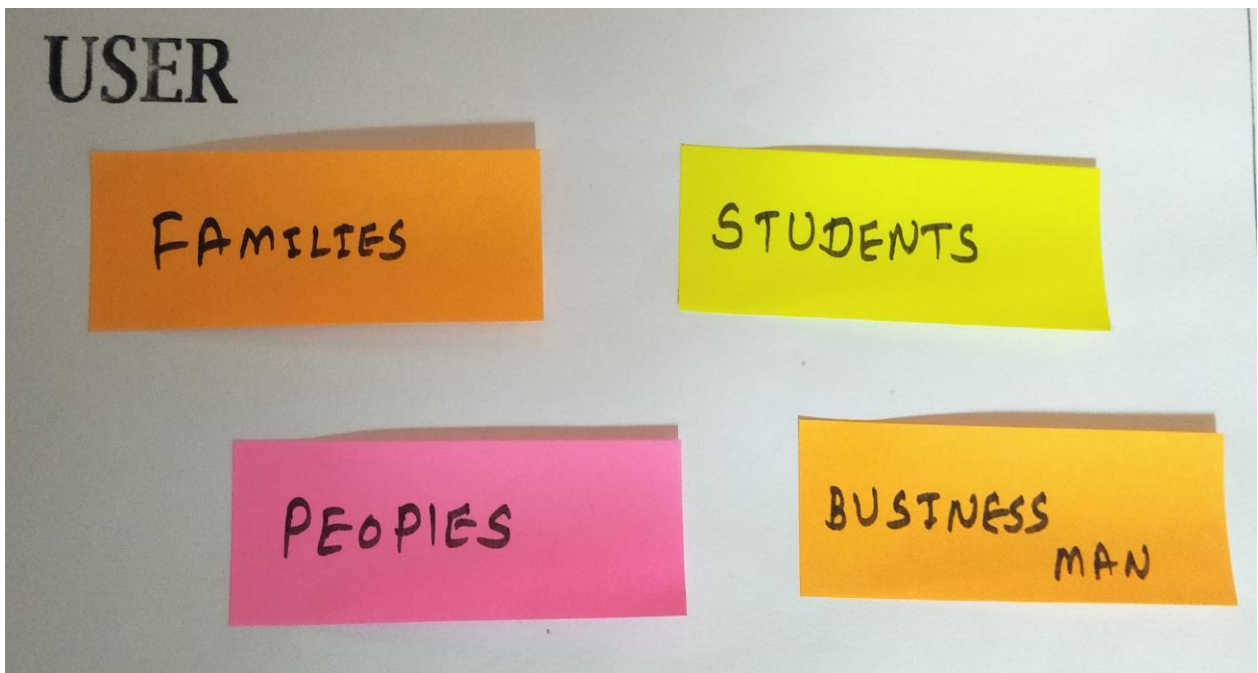
3. EMPATHY CANVAS

Empathy Mapping Canvas is made up of USERS (Who uses the product), STAKEHOLDERS (Who have the ownership of product), and ACTIVITIES (What kind of works can be done by this product).

3.1 Users

For our topic DATA SECURITY there are some users are as follows

- Student
- Families
- Peoples
- Business Man



3.2 Stack holders

We have different type of stakeholders are as follows

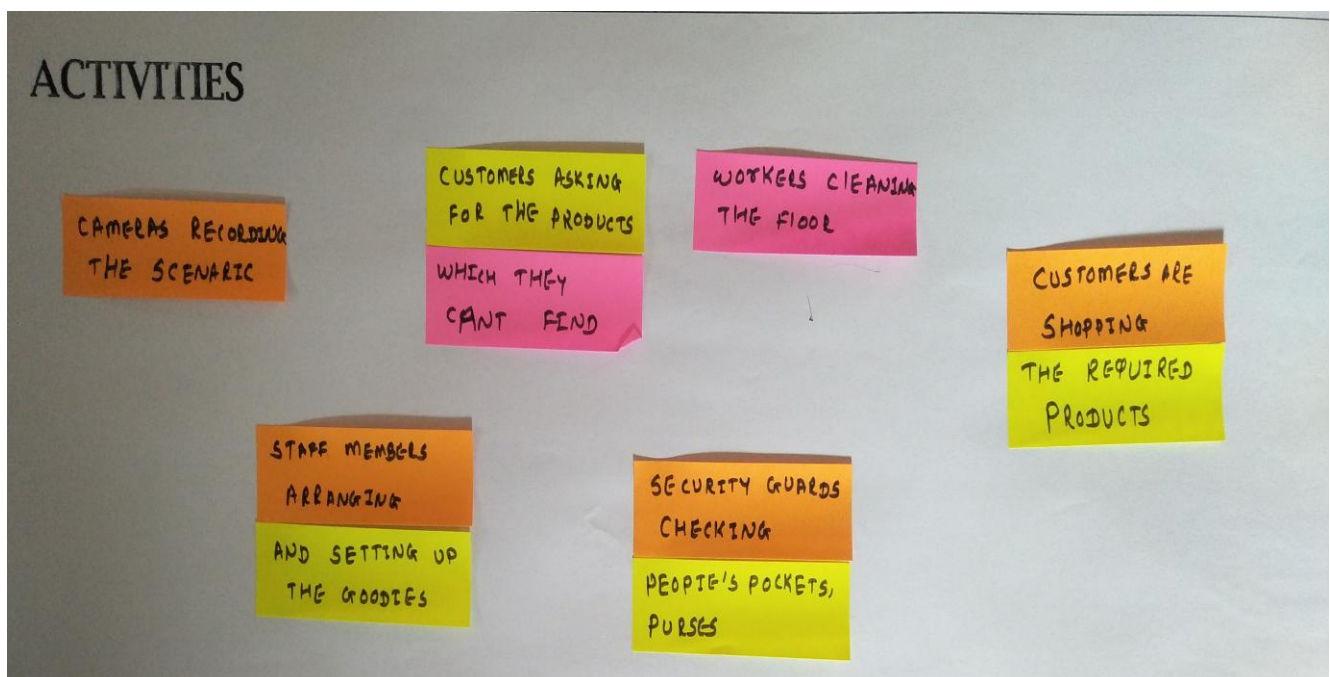
- Tables
- Computers
- Trolly
- Cameras
- Cold Storage
- Air Conditioner



3.3 Activity

The activities perform with the help of Data Security are as follows

- Cameras recording the scenario
- Customers asking for the products
- Workers cleaning the floor
- Customers are shopping the product
- Security guards checking peoples



3.4 Story Boarding

3.4.1 Happy story

3.4.2 Sad Story

HAPPY

A Woman who was in a hurry, Entered The mall and started to look for The Products That she wanted. she found her goodies in The Smart Shopping mall and without Wasting a time she done Her Payment by The Smart Payment System and went to her Work.

HAPPY

During our demonitization I got my Salary in digital money like Alice in Paytm. Then also I went to mall to purchase monthly stuff's like Snacks, shampoo, oil, muskies and many more things. But at The time of payment They all where accepting only digital transfer. So it Helped me a lot in Transaction. I finally got my products Comfortly and easily.

SAD

The gang of the little childrens Entered into The mall and started playing into The shopping area because of The wet floor one childrens slept and he lost his balance and fall down. The broods of The nearest Table also foul down and There was a loss of some products.

SAD

A man goes to mall and entered purchasing Products That he want. But at The time of payment his phones battery get dead and he failed to get all product and return home empty hand.

4. IDEATION CANVAS

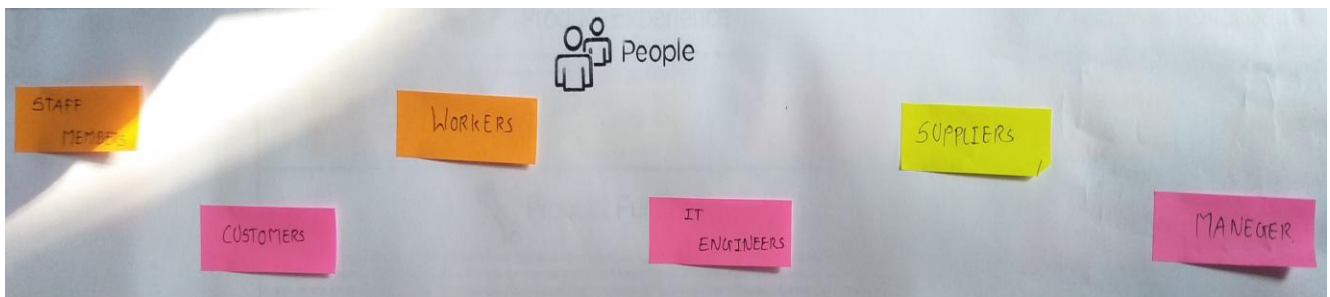
An ideation canvas is a rough whiteboard where ideas can be stretched into any limits or dimensions. Ideation session is not aimed at finding solutions to the defined problem. But to define the best possible problem and stretch out it's possible.

Ideation canvas is made up from PEOPLE (Who can use), ACTIVITIES (What kind of works can be done by this product), SITUATION /CONTEXT /LOCATION (On which place this technology can be use), PROPS.

4.1 People:

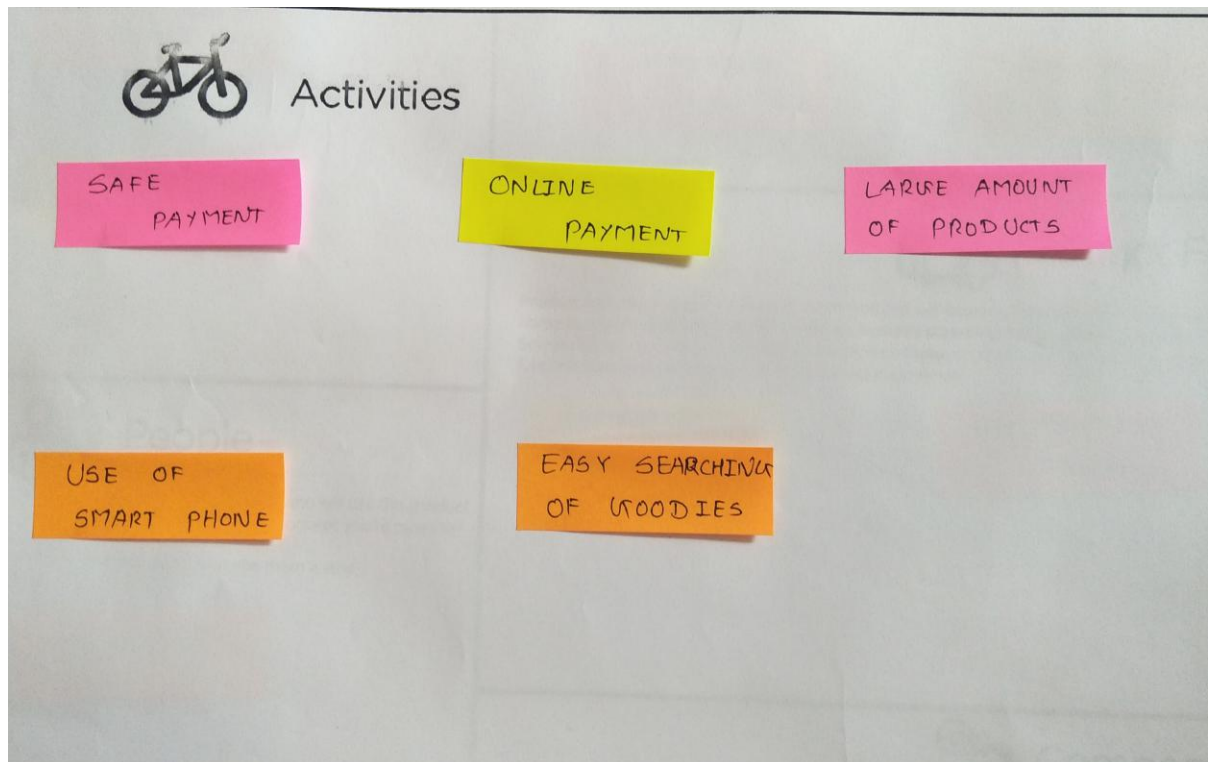
Peoples who are work with this project:

- Staff Members
- Customers
- Workers
- IT Engineers
- Suppliers



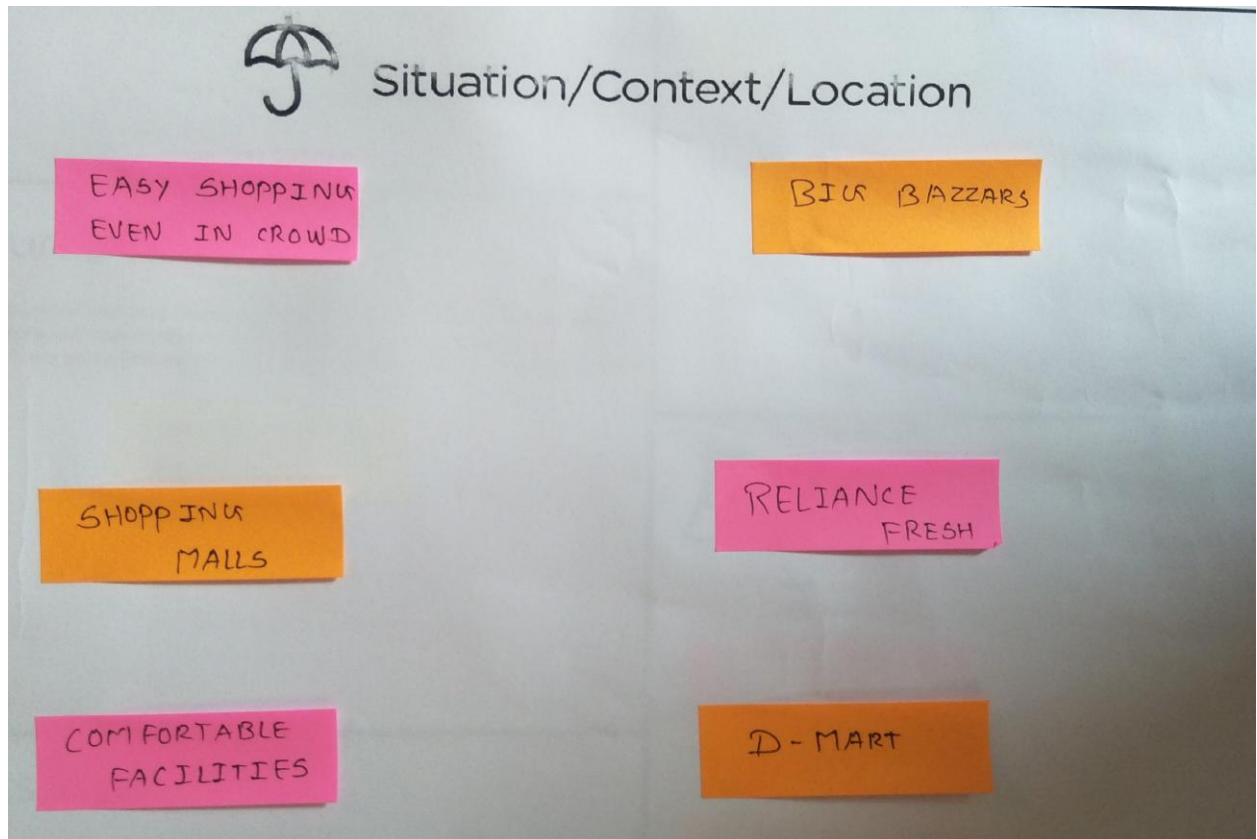
4.2 Activities:

- Safe payment
- Online payment
- Large amount of product
- Use of smart phone
- Easy searching of goodies



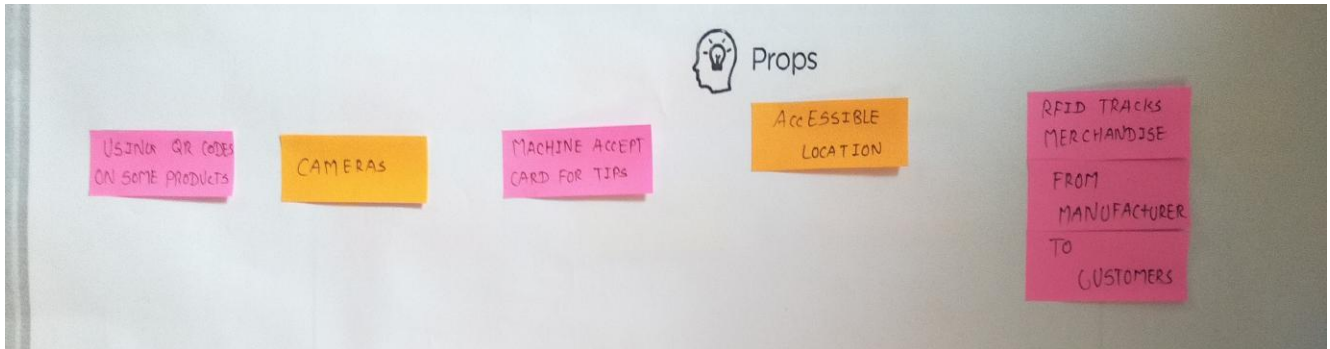
4.3 Situation/Context/ Location:

- Easy shopping in crowd
- Big Bazzars
- Shopping Malls
- Reliance fresh



4.4 Props:

- Using QR code
- Cameras
- Machine accept card
- Accessible Location



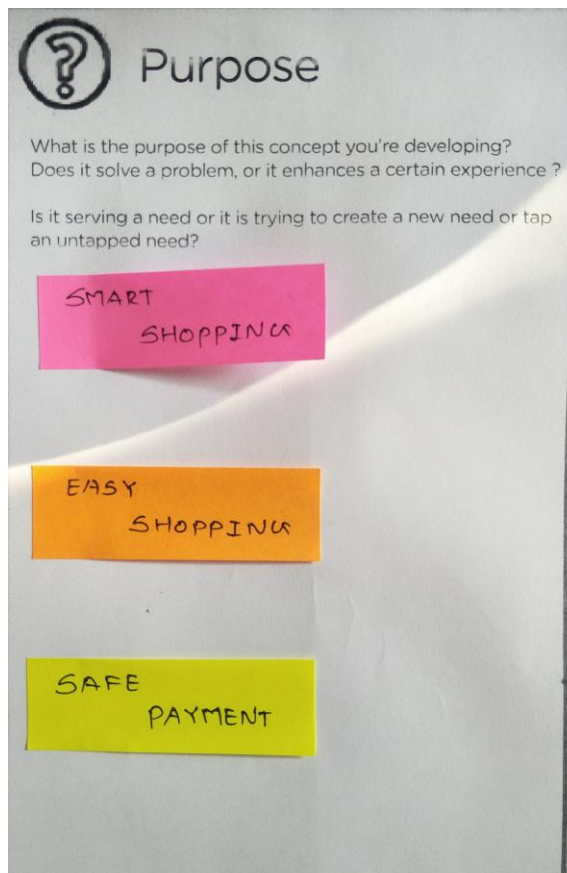
5. PRODUCT DEVELOPMENT CANVAS

A product development canvas is the ground where in the best possible ideas after the ideation session are pitched and nurtured to develop.

Product development canvas made up of PURPOSE (Why this technology needs to be invented), PEOPLE (Who can use), PRODUCT EXPERIENCE (How is experience by using this product), PRODUCT FUNCTIONS (Main functionality of this product), PRODUCT FEATURES (features of this product), COMPONENTS (What kind of hardware/software has been used), REJECT/REDESIGN/RETAIN (Decision or advice of customer), CUSTOMER REVALIDATION.

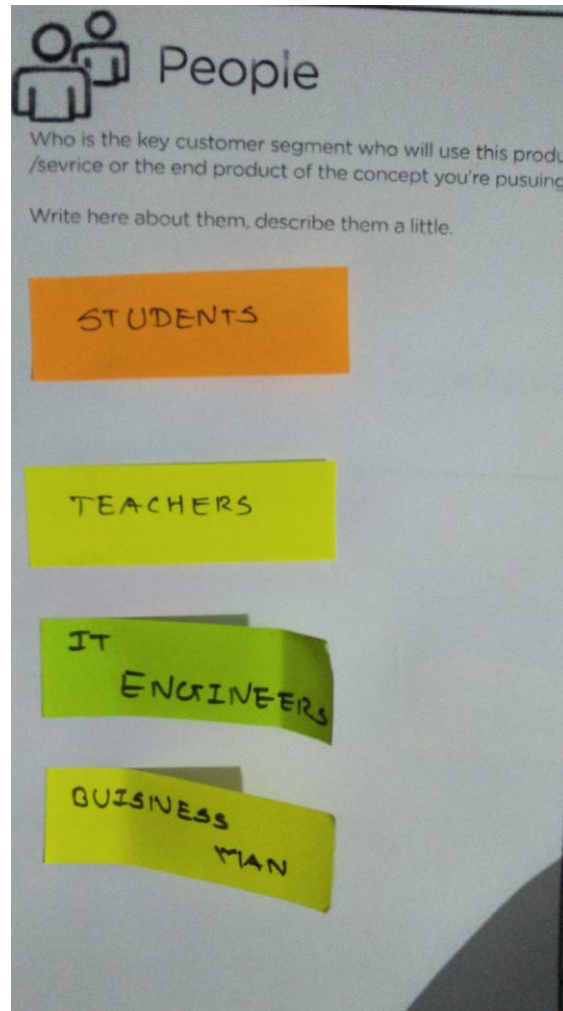
5.1 Purpose:

- Smart shopping
- Easy shopping
- Safe payment



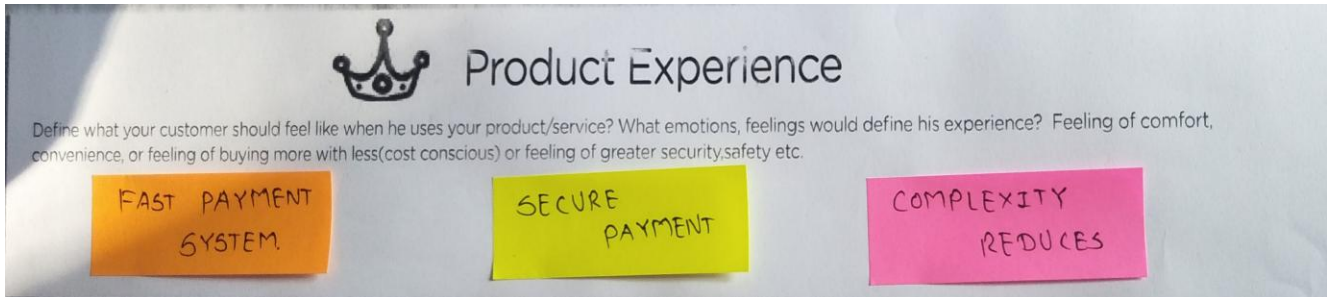
5.2 People:

- Student
- Teachers
- IT engineers



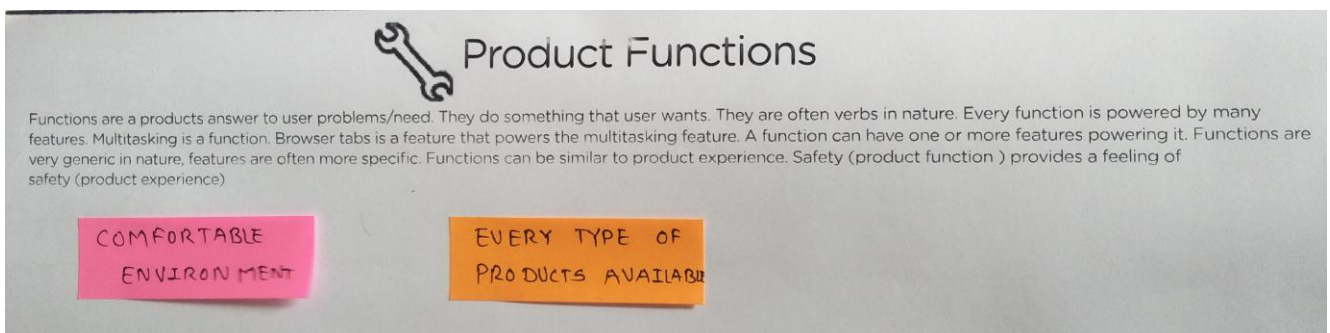
5.3 Product Experience:

- Fast payment system
- Secure payment
- Complexity reduce



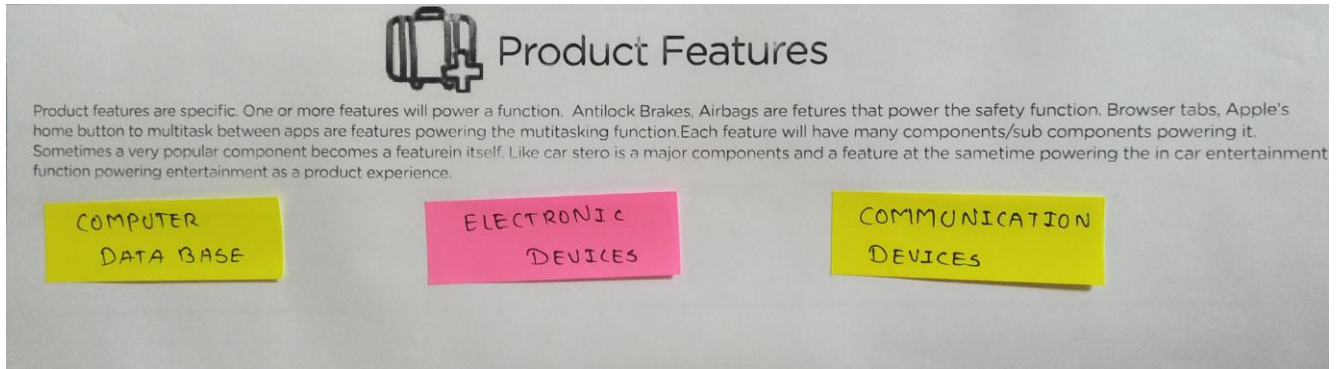
5.4 Product Functions

- Comfortable environment
- Every type of product available



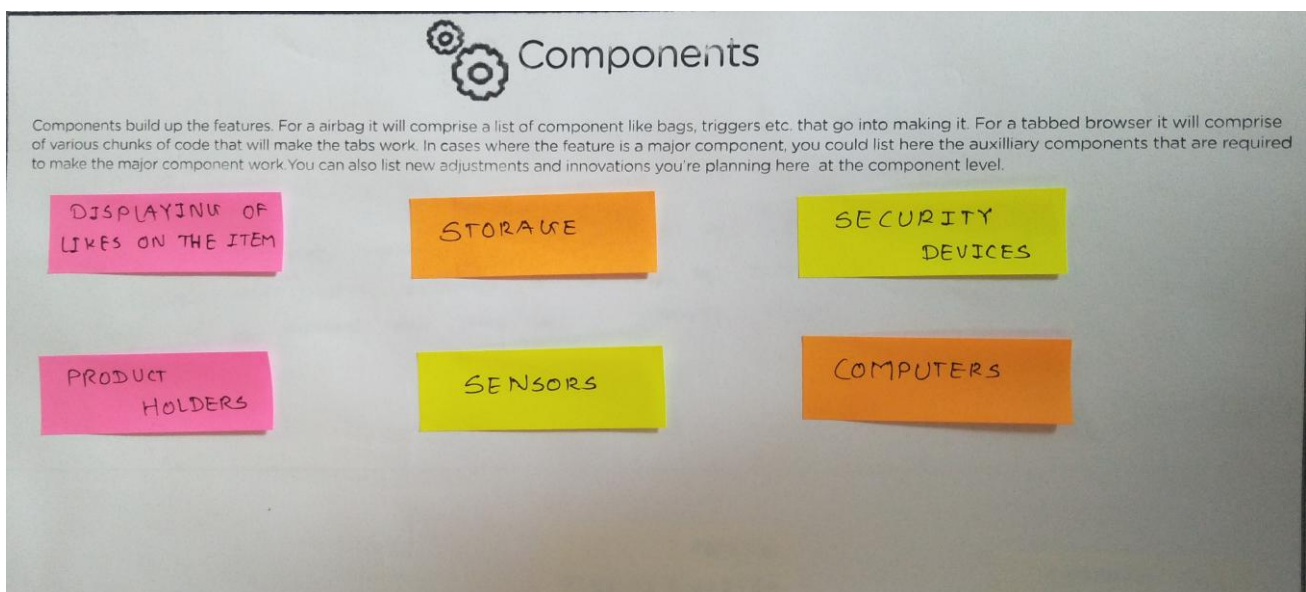
5.5 Product Features:

- Computer database
- Electronic devices
- Communication devices



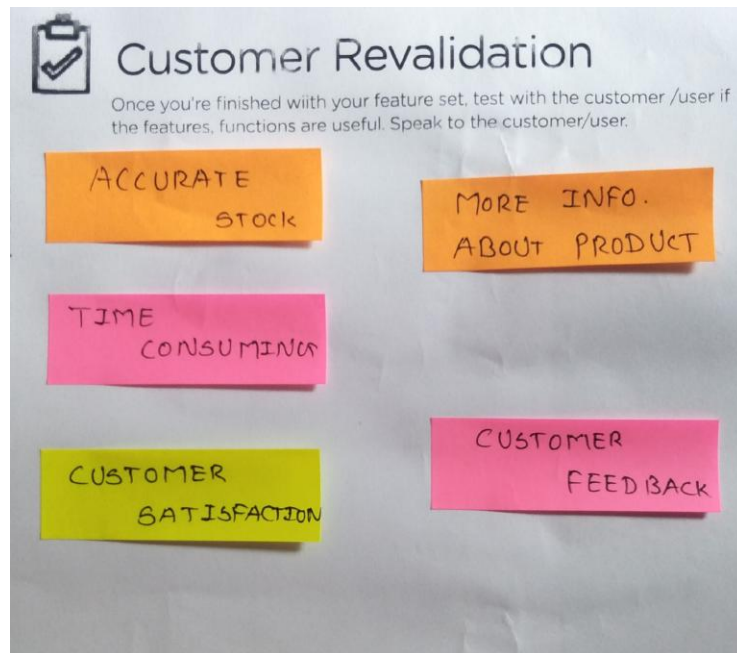
5.6 Components:

- Storage
- Security devices
- Product holders
- Sensors
- Computers



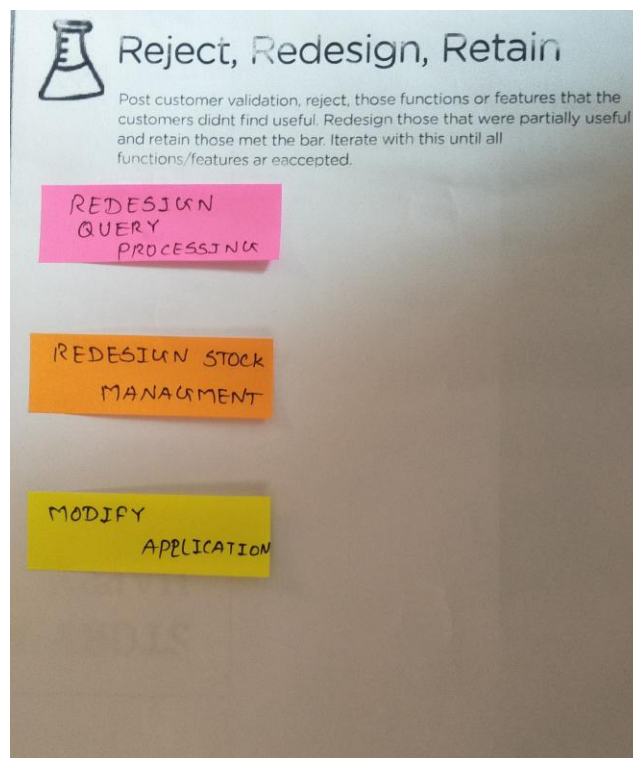
5.7 Customer Revalidation:

- Accurate stock
- Time consuming
- Customer satisfaction

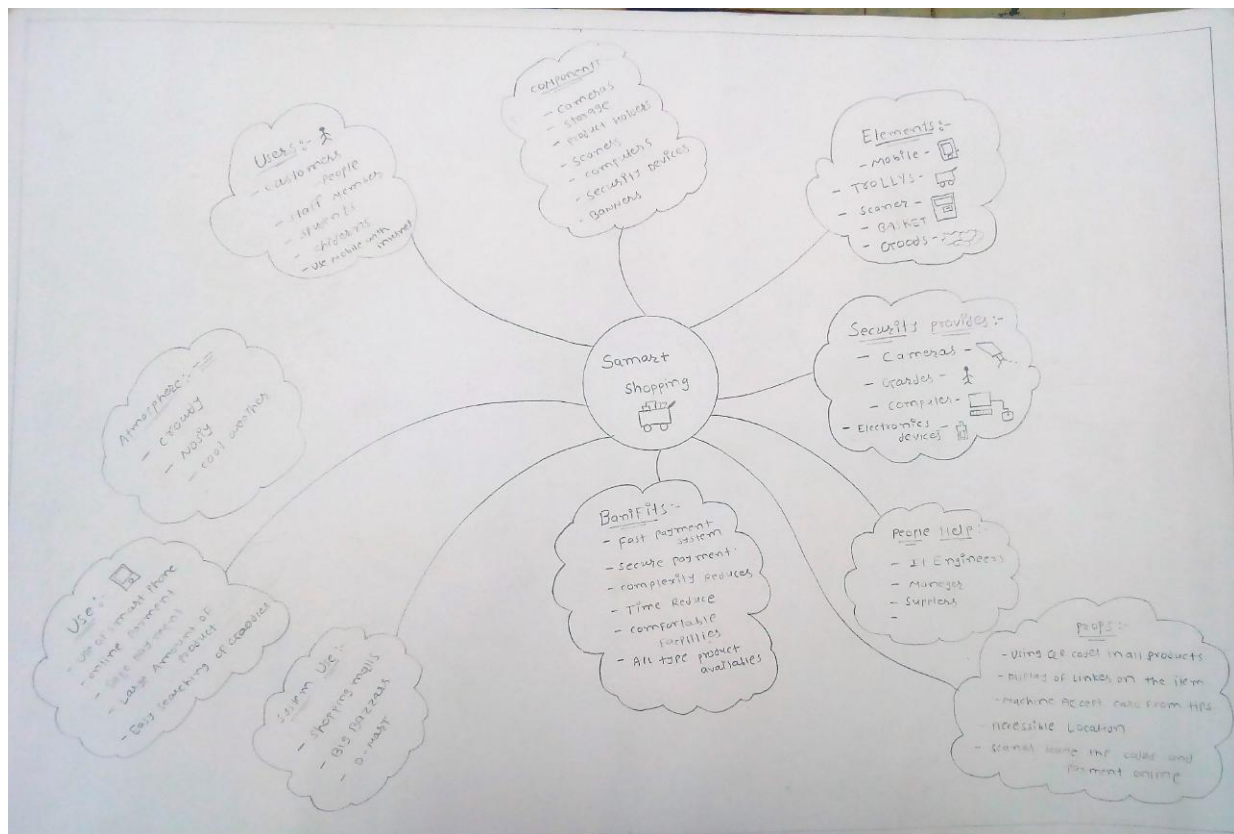


5.8 Reject/Redesign/Retain:

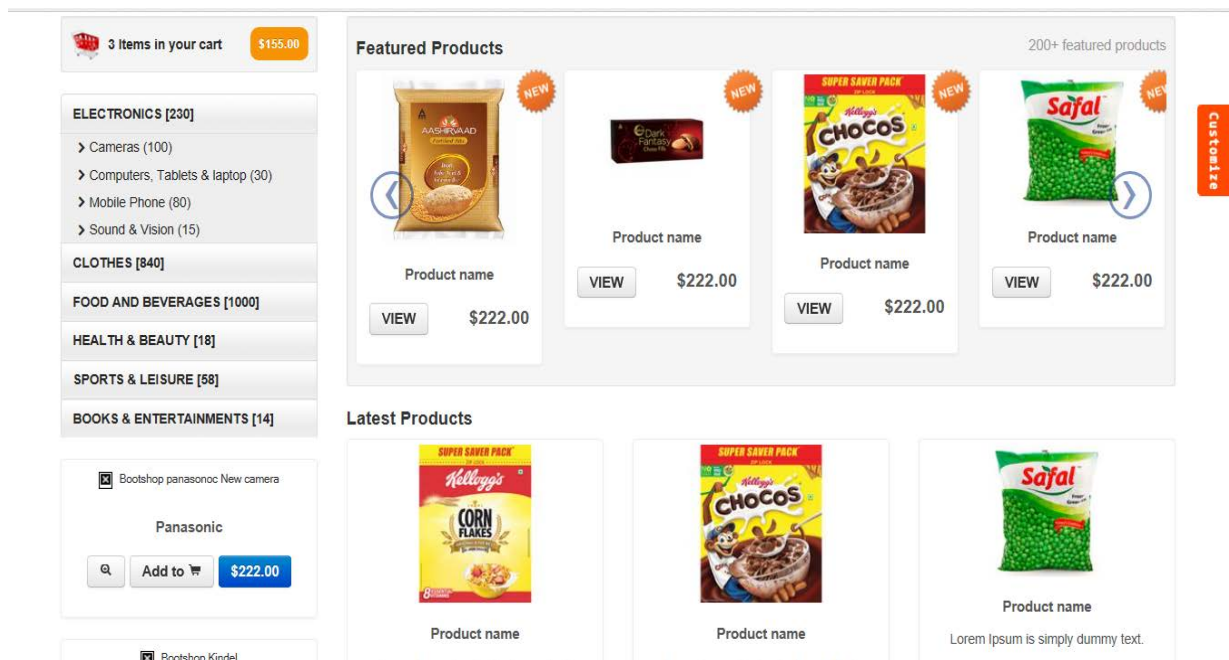
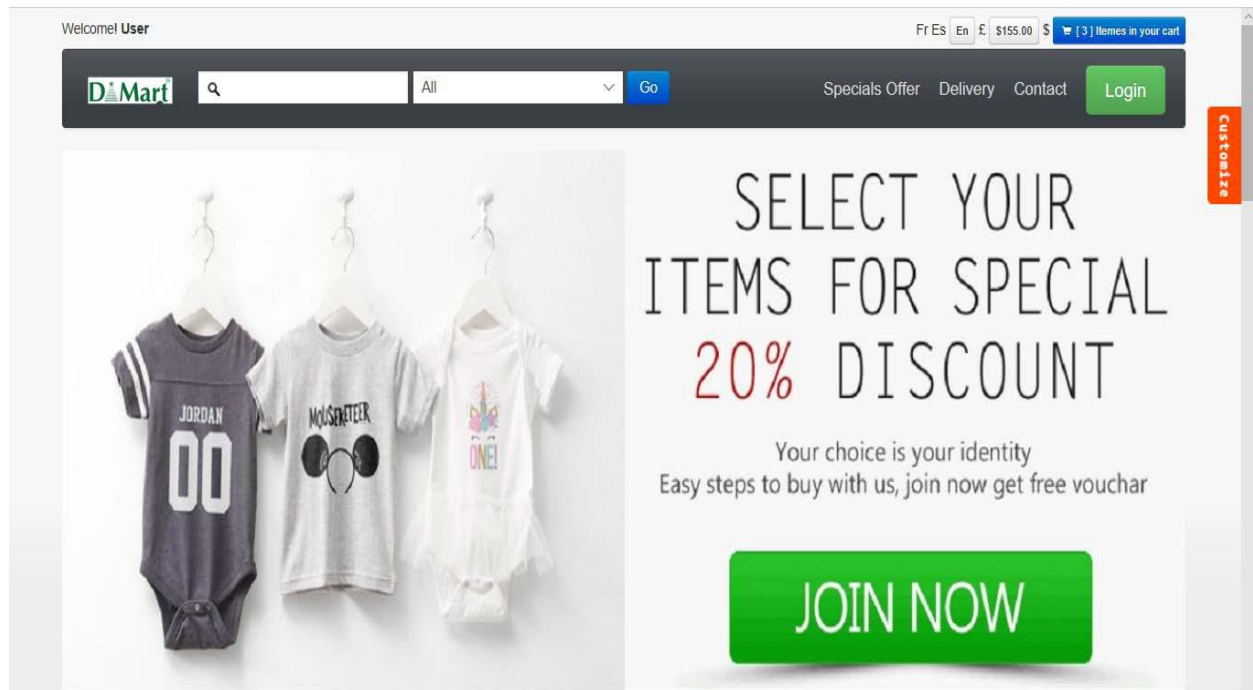
- Redesign query processing
- Modify application



6. FLOWCHART



7. WORKING MODEL IMAGES



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8. REFERENCES

- Amazon Go
- Bigbasket