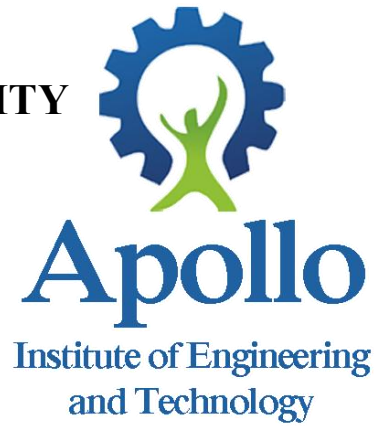




GUJARAT TECHNOLOGICAL UNIVERSITY

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:

Sr.	Name of student	Enrolment no.
1.	Patel Jaimin	151280107038
2.	Patel Yash	151280107042
3.	Soni Ram	151280107055
4.	Vaghela Jaypalsinh	151280107058

Asst. Prof. Kajol Soni

(Department of Computer Engineering)

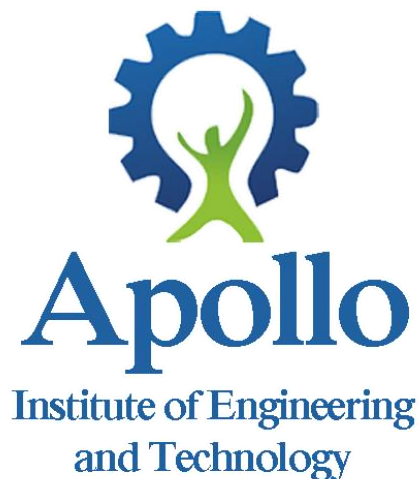
Asst. Prof. Naveen Kandwal

(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.

First Candidate's Name : Jaimin Patel
Branch : Computer Engineering
Enrollment No. :151280107038
Signature :

Second Candidate's Name : Yash Patel
Branch : Computer Engineering
Enrollment No. :151280107042
Signature :

Third Candidate's Name : Soni Ram
Branch : Computer Engineering
Enrollment No. :151280107055
Signature :

Fourth Candidate's Name : Jaypalsinh Vaghela
Branch : Computer Engineering
Enrollment No. : 151280107058
Signature :

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.

INDEX

Sr. No.	Topics	Page
1.	Introduction	1
	1.1 What is design thinking...?	1
	1.2 What is Data?	2
	1.3 What is Data Security?	2
2.	AEIOU FRAMEWORK	3
	2.1 Activities	3
	2.2 Environment	4
	2.3 Interactions	5
	2.4 Object	6
	2.5 User	7
3.	Empathy Canvas	8
	3.1 Deciding users	8
	3.2 Stack holders	9
	3.3 Activity	10
	3.4 Story	11
	3.4.1 Happy story	11
	3.4.2 Sad story	11
4.	Ideation canvas	12
	4.1 People	12
	4.2 Activates	13
	4.3 Situations / Context / Location	14
	4.4 Props	15
5.	Product development canvas	16
	5.1 Purpose	16
	5.2 People	17
	5.3 Product experience	18
	5.4 Product functions	18
	5.5 Product feature	19
	5.6 Component	19
	5.7 Customer Revalidation	20
	5.8 Reject/Redesign/Retain	20
6.	Flowchart	21
7.	Working Model Images	22
8.	References	25

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));
    C1 --- C1L["- cameras"];
    C1 --- C1R["- shopping & scanning"];
    C1 --- C1B["- computers"];
    C2 --- C2L["- crowds"];
    C2 --- C2R["- noisy"];
    C3 --- C3L["- smart phone"];
    C3 --- C3R["- online payment"];
    C3 --- C3B["- usage around"];
    C3 --- C3BB["or product"];
    C4 --- C4L["- fast"];
    C4 --- C4R["- payment"];
    C4 --- C4B["- security"];
    C4 --- C4BB["payment"];
    C4 --- C4BBB["etc."];
    C5 --- C5L["- cameras"];
    C5 --- C5R["- grades"];
    C5 --- C5B["- computers"];
    C6 --- C6L["- IT Eng."];
    C6 --- C6R["- managers"];
    C6 --- C6B["- suppliers"];
```

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
WOODS	SCANNERS
TROLLY	BILLING
COMPUTERS	COMPUTERS
CAMERAS PROVIDES SECURITY	MOBILES
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 PUBLIC</p> <p>STUDENTS</p>	
<p>Elements, features and special notes (List of identified people involved)</p> <p>TEACHERS STUDENT</p> <p>BISNESS MAN</p>	

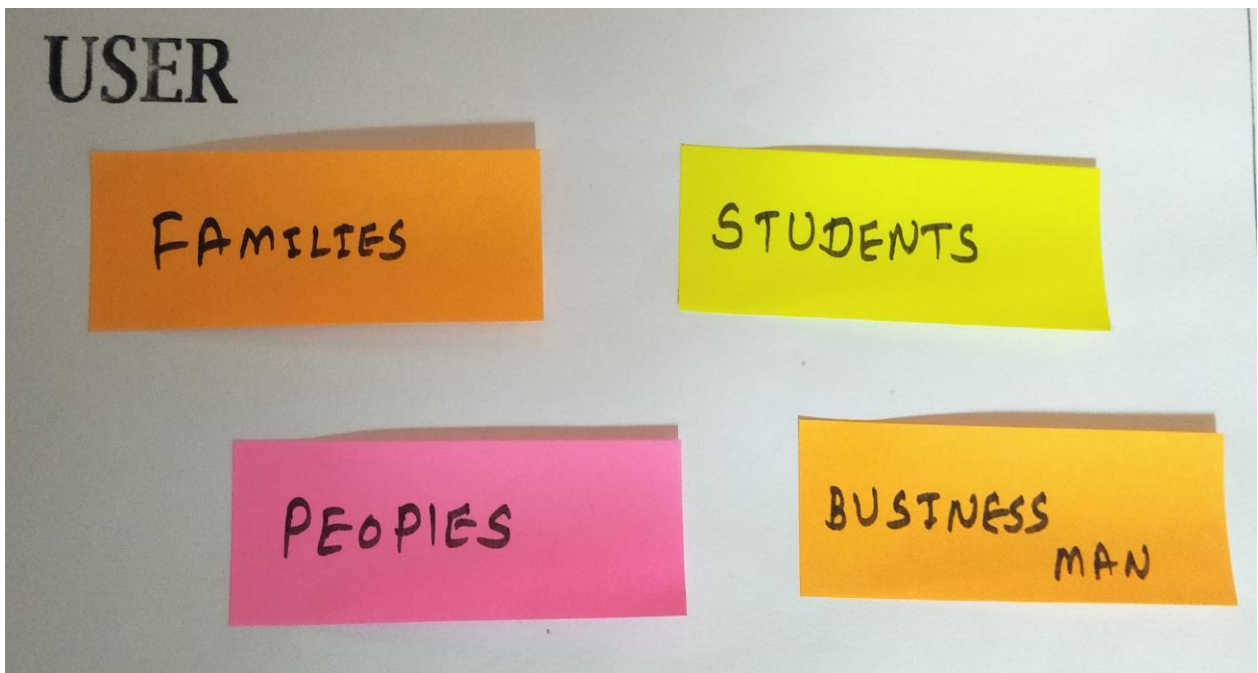
3. EMPATHY CANVAS

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

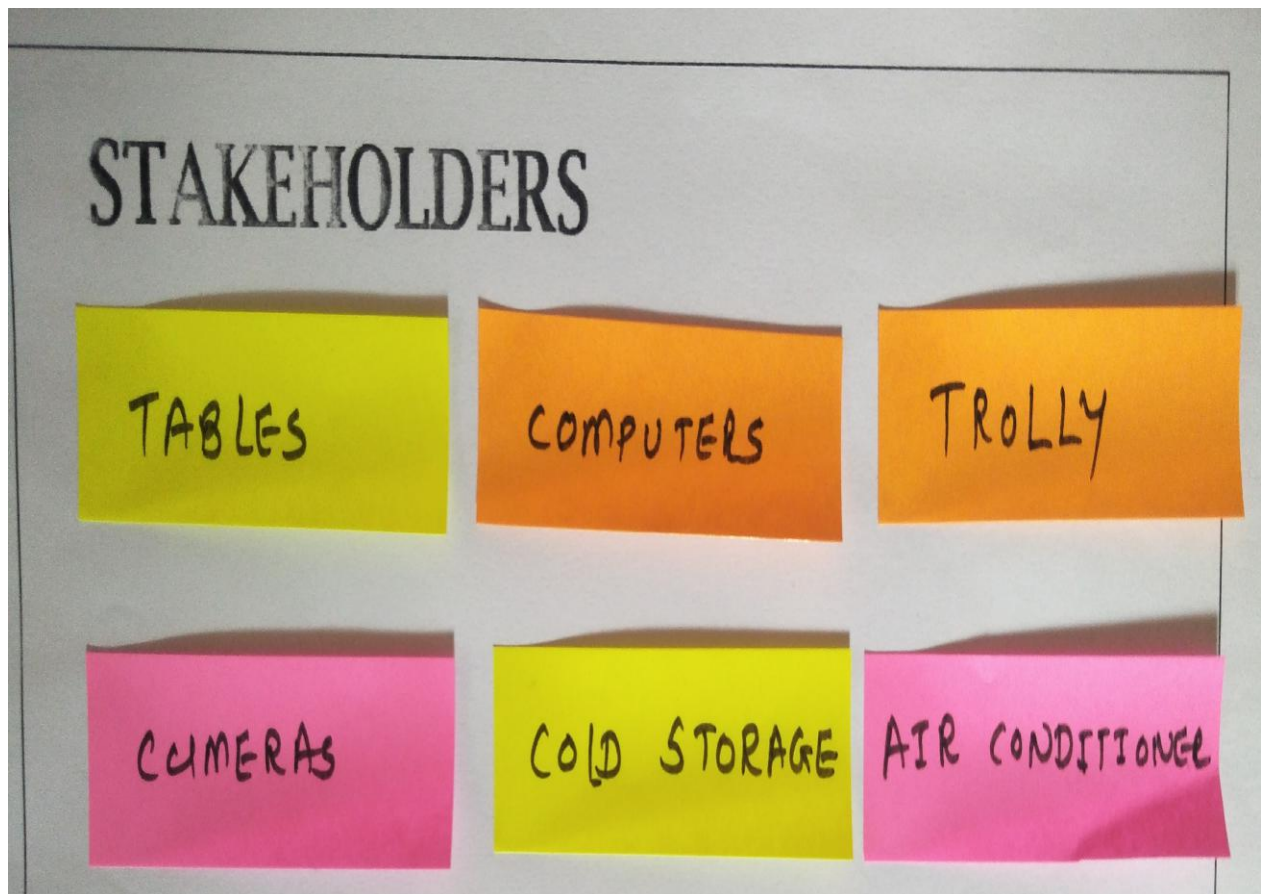
- Student
- Families
- Peoples
- Business Man



3.2 Stack holders

We have different type of stakeholders are as follows

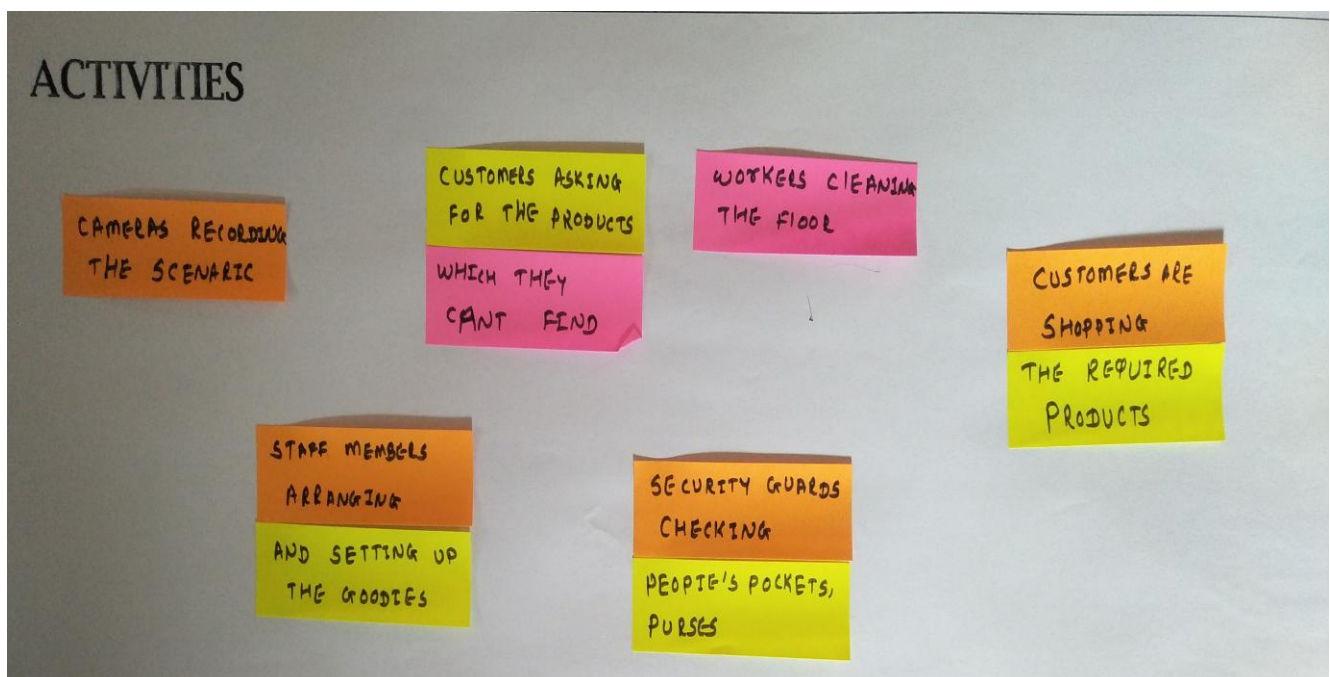
- Tables
- Computers
- Trolly
- Cameras
- Cold Storage
- Air Conditioner



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, muscals 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 fall 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

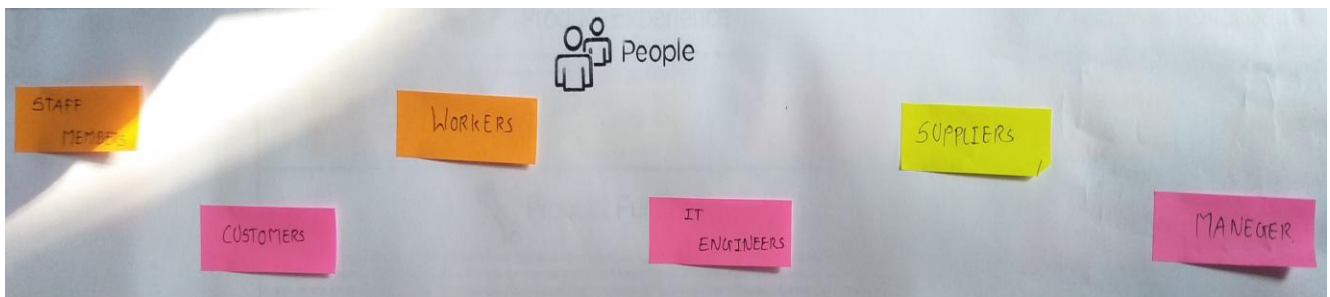
An ideation canvas is a rough whiteboard where ideas can be stretched into any limits or dimensions. Ideation session is not aimed at finding solutions to the defined problem. But to define the best possible problem and stretch out it's possible.

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:

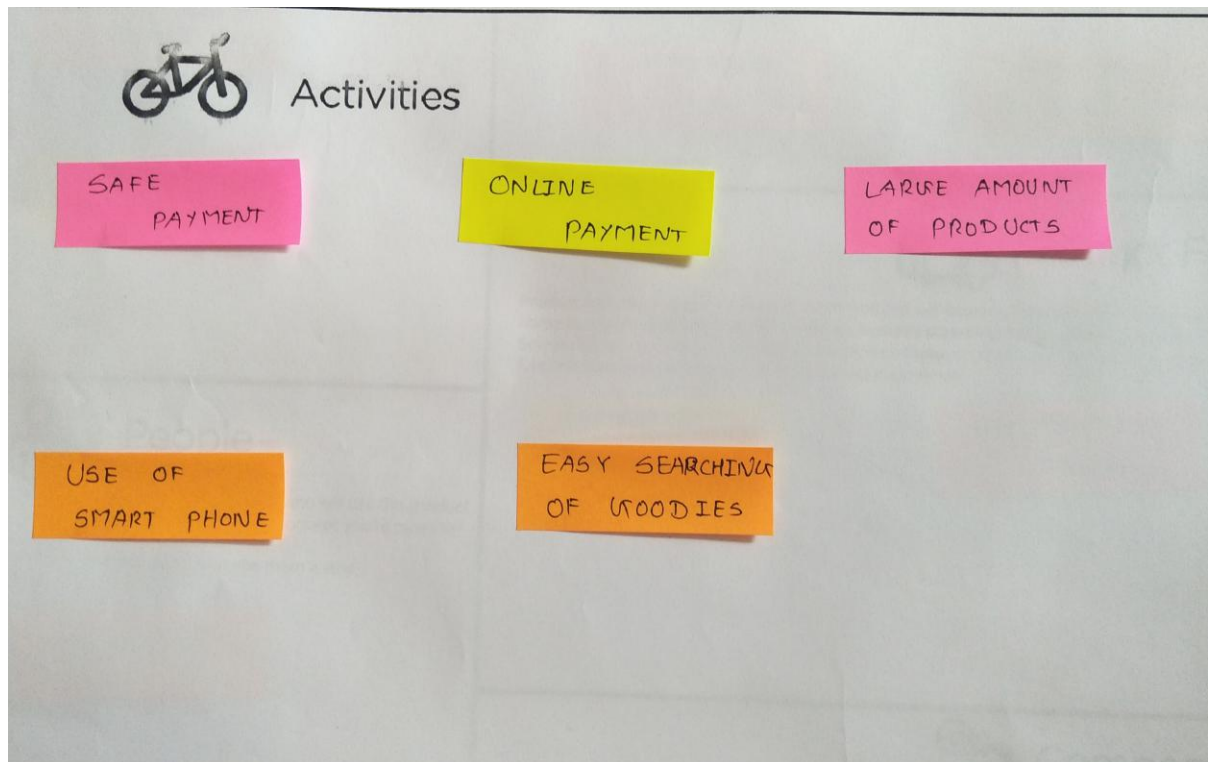
Peoples who are work with this project:

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



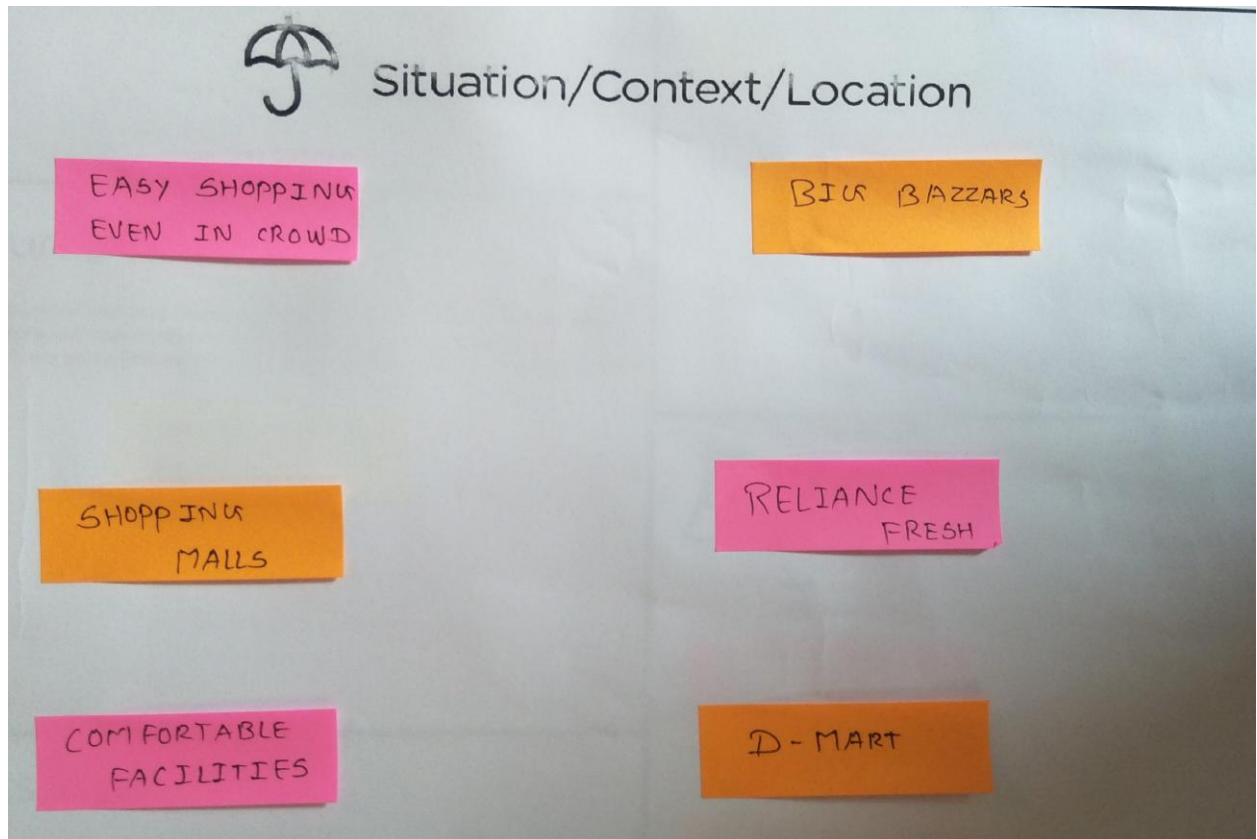
4.2 Activities:

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



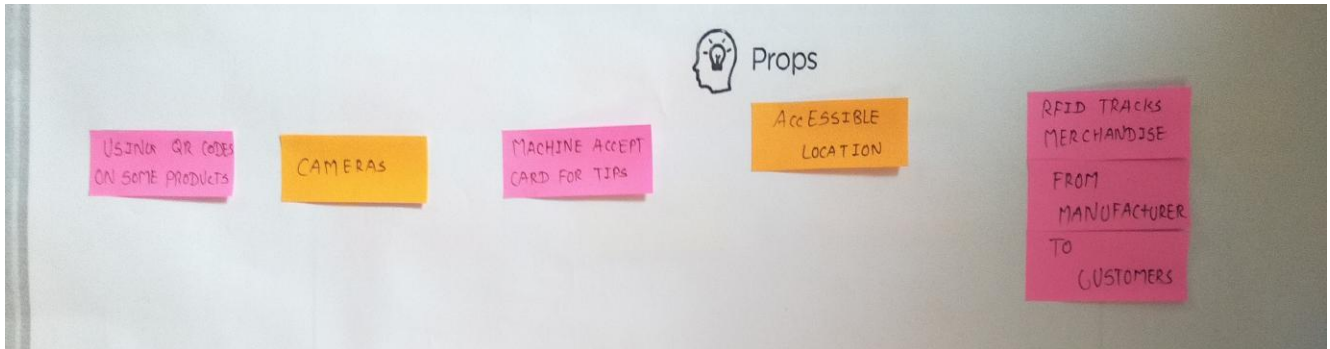
4.3 Situation/Context/ Location:

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



4.4 Props:

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



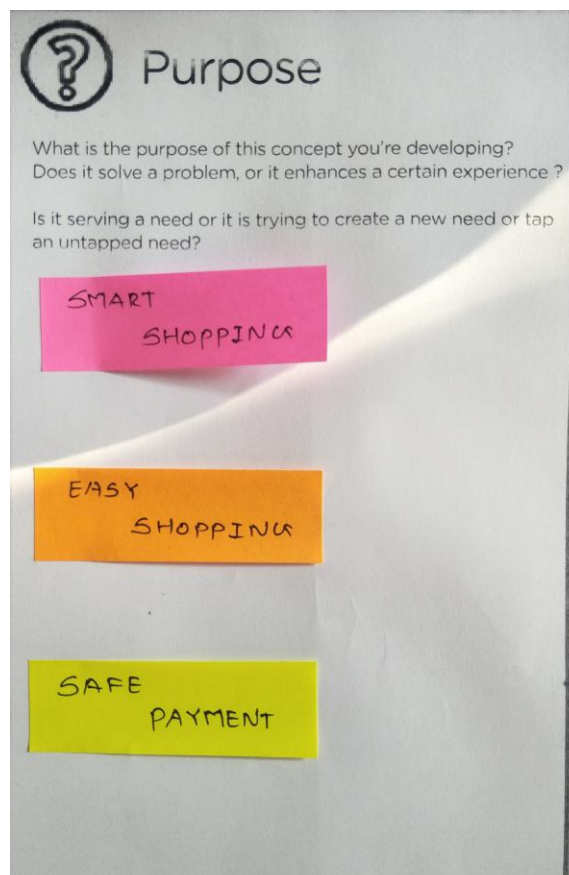
5. PRODUCT DEVELOPMENT CANVAS

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.

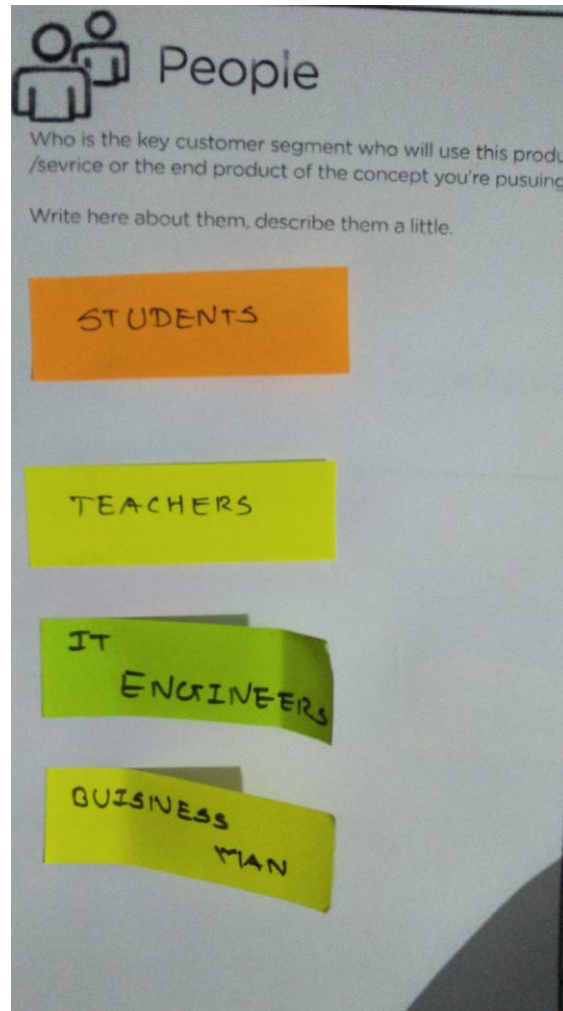
5.1 Purpose:

- Smart shopping
- Easy shopping
- Safe payment



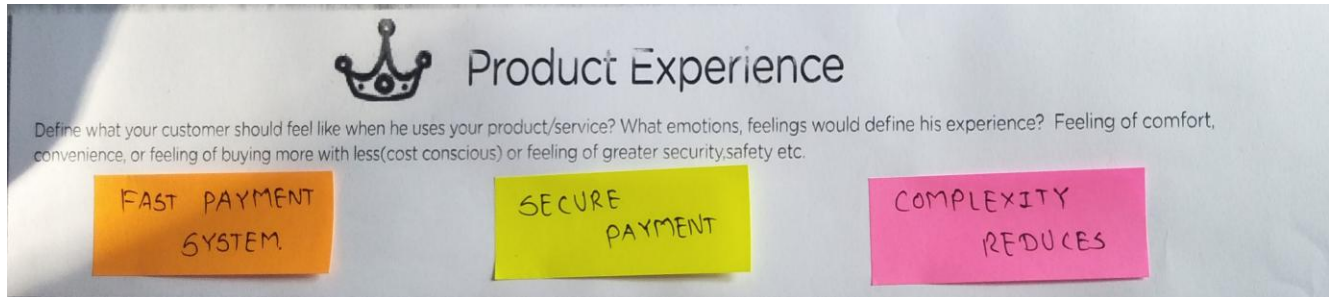
5.2 People:

- Student
- Teachers
- IT engineers



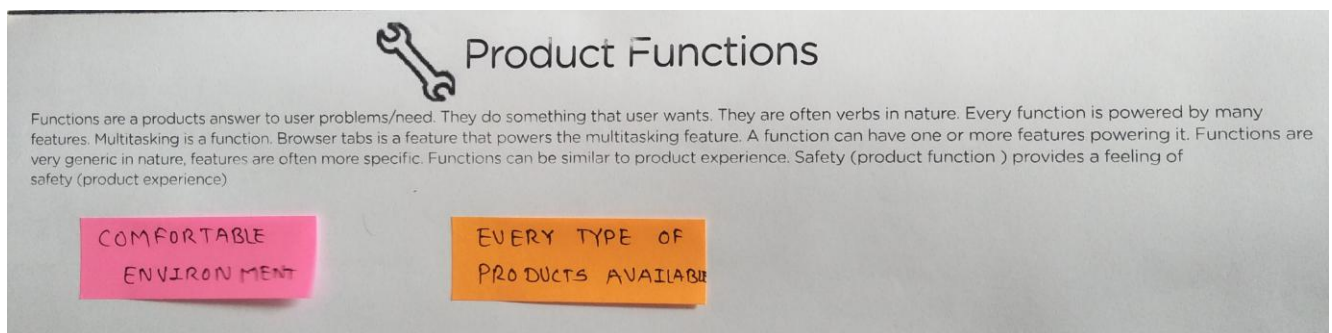
5.3 Product Experience:

- Fast payment system
- Secure payment
- Complexity reduce



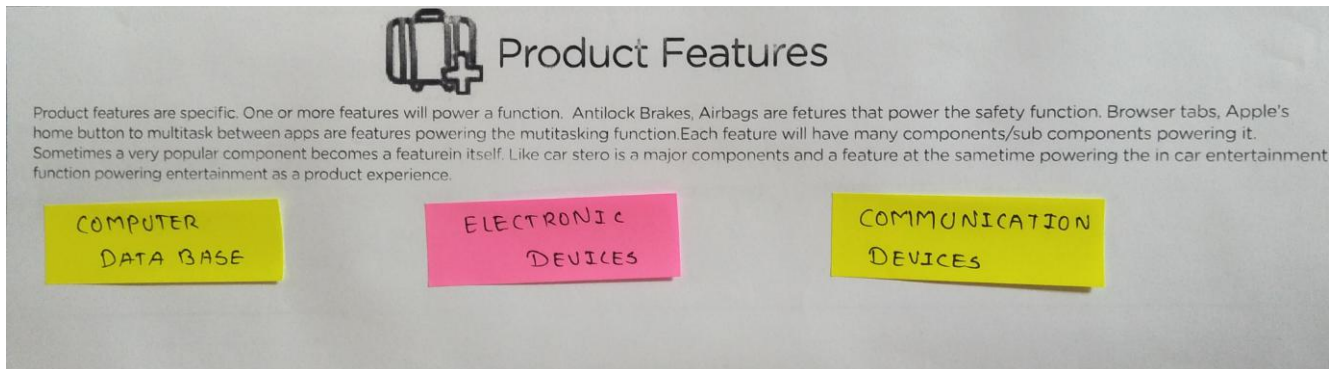
5.4 Product Functions

- Comfortable environment
- Every type of product available



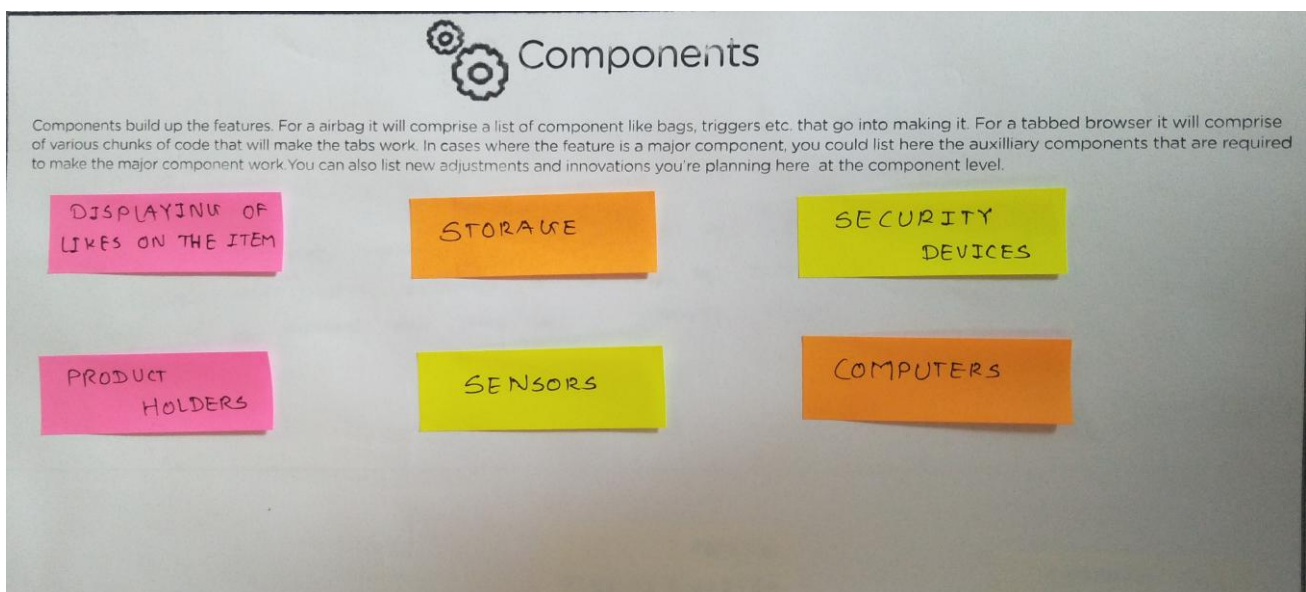
5.5 Product Features:

- Computer database
- Electronic devices
- Communication devices



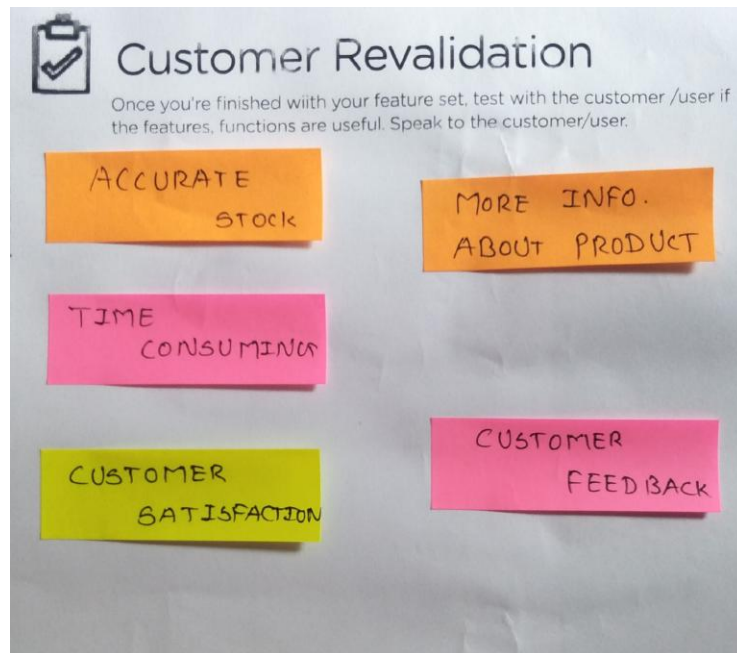
5.6 Components:

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



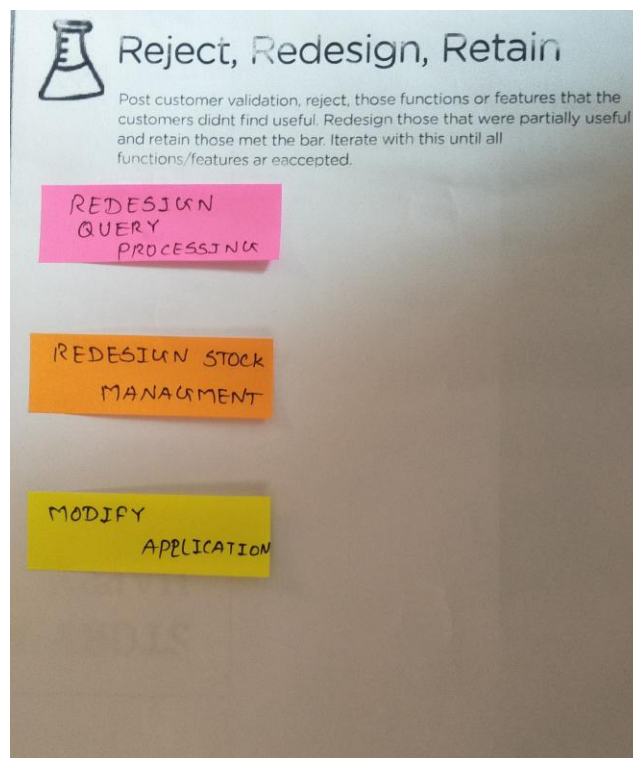
5.7 Customer Revalidation:

- Accurate stock
- Time consuming
- Customer satisfaction

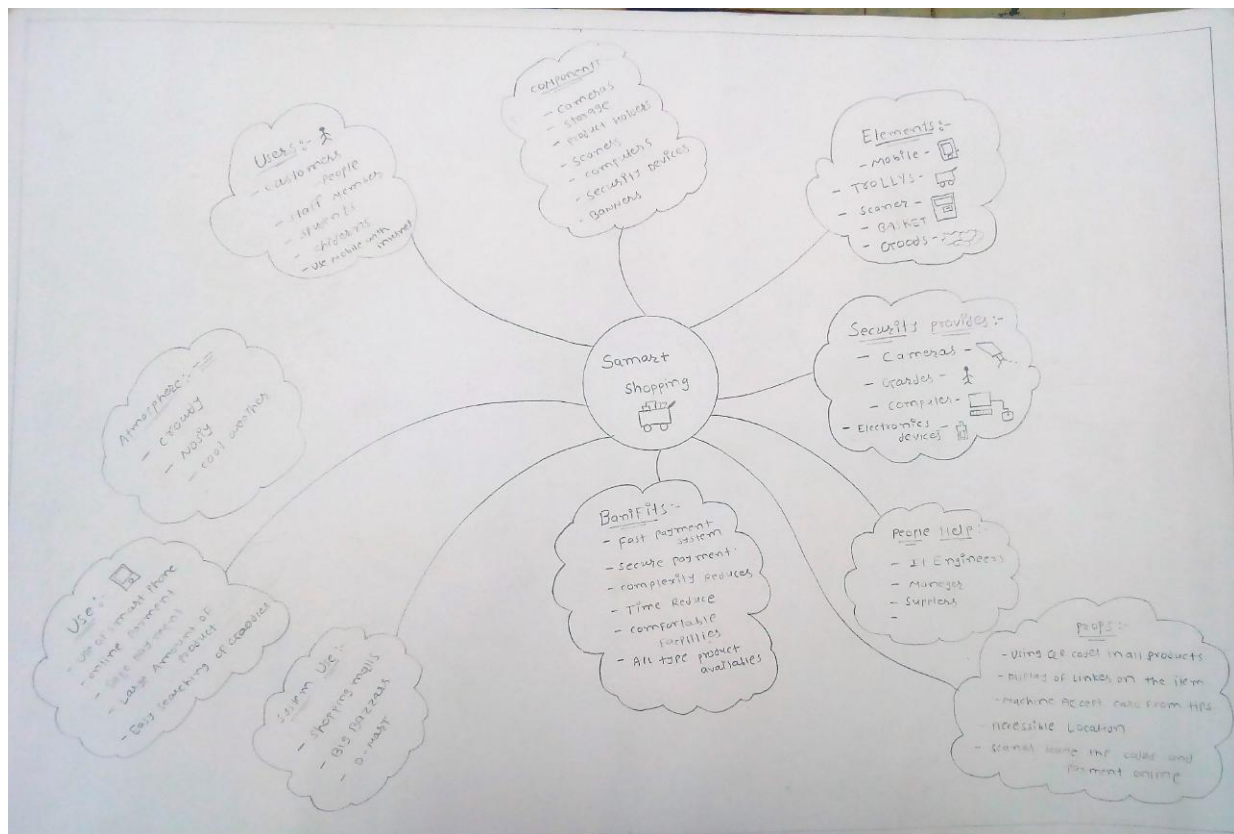


5.8 Reject/Redesign/Retain:

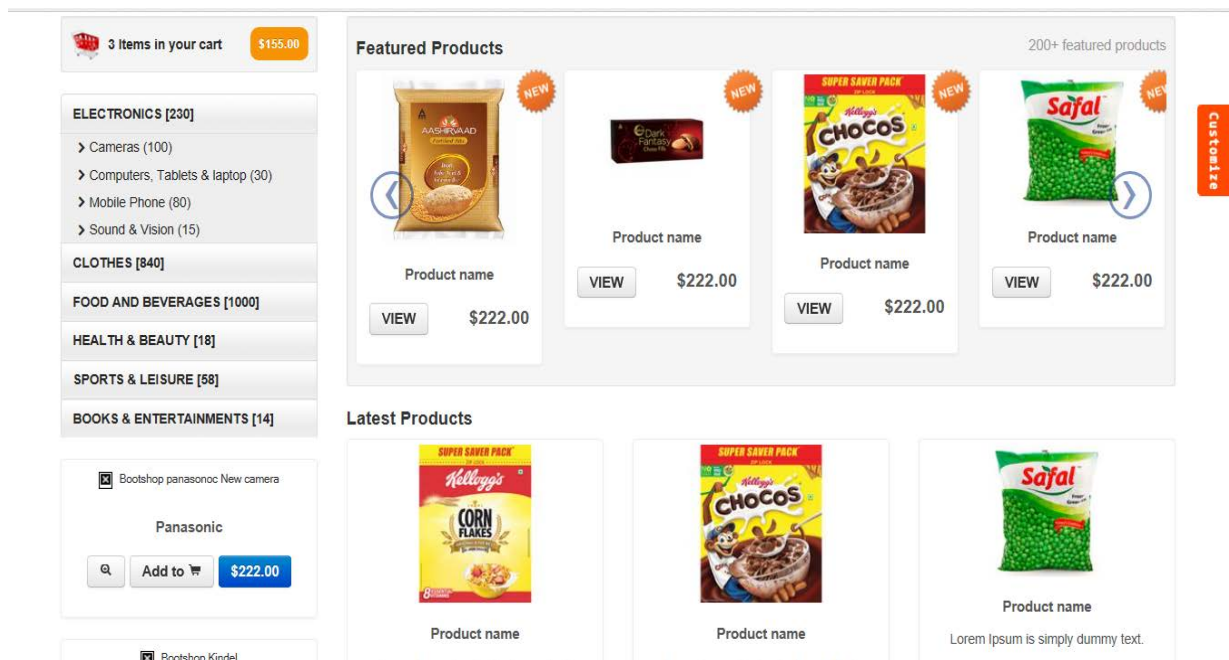
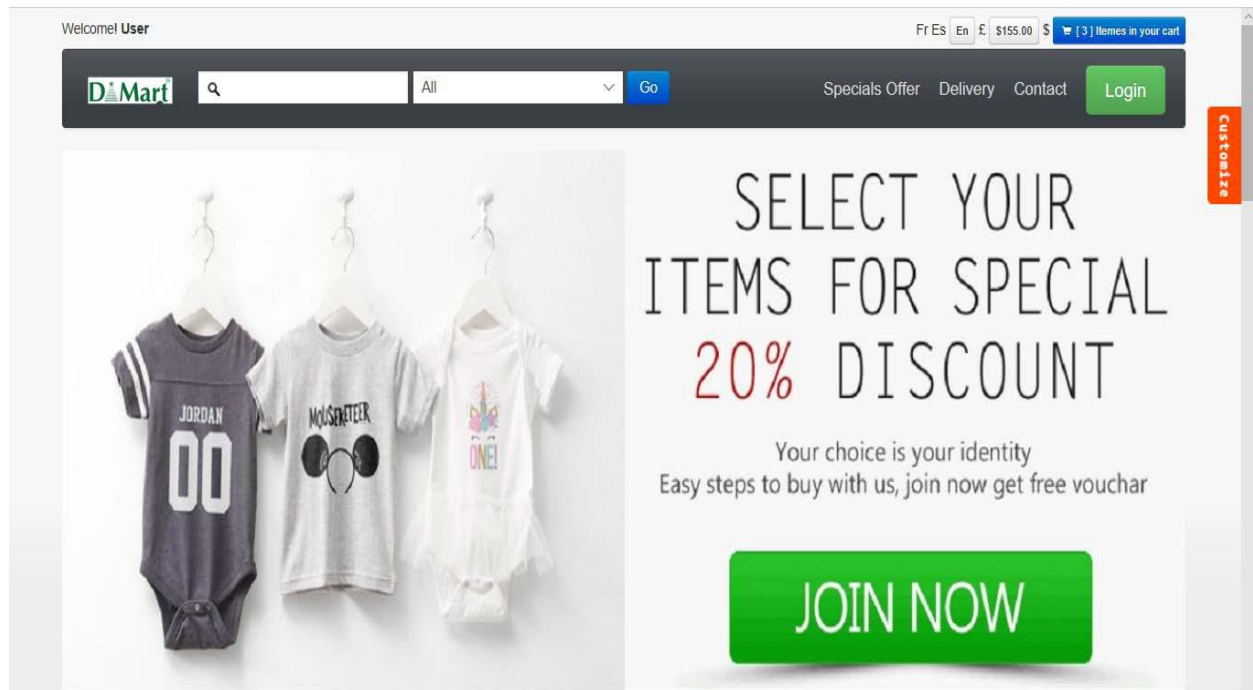
- Redesign query processing
- Modify application



6. FLOWCHART



7. WORKING MODEL IMAGES



Welcome! User

Fr Es En £ \$155.00 \$ [3] Items in your cart

fresh All [Specials Offer](#) [Delivery](#) [Contact](#)

SELECT YOUR ITEMS FOR SPECIAL 20% DISCOUNT

Your choice is your identity
Easy steps to buy with us, join now get free voucher

JOIN NOW

ELECTRONICS [230]

- > Cameras (100)
- > Computers, Tablets & laptop (30)
- > Mobile Phone (80)
- > Sound & Vision (15)

CLOTHES [840]

FOOD AND BEVERAGES [1000]

HEALTH & BEAUTY [18]

SPORTS & LEISURE [58]

BOOKS & ENTERTAINMENTS [14]

Product name **VIEW** **\$222.00**

Product name **VIEW** **\$222.00**

Product name **VIEW** **\$222.00**

Product name **VIEW** **\$222.00**

Latest Products

Panasonic

\$222.00

file:///C:/Users/yashp/Downloads/Project/Project/Reliance/product_summary.html

8. REFERENCES

- Amazon Go
- Bigbasket



Plagiarism Checker X Originality Report

Similarity Found: 1%

Date: Wednesday, April 11, 2018

Statistics: 7 words Plagiarized / 1211 Total words

Remarks: Low Plagiarism Detected - Your Document needs Optional Improvement.

G UJ TCHNOLUNIVE Y Cndkeda medad Aflit Apoll o Instute of E ngii& T echnology
Ansanmedad A report Smart Shopping Uner subjt DESGINEERG – 2B 160) B . III, est– VI
(Ctgieerig) Sumied b Sr Na f nt 1 . Patel Jaimin 2 . Patel Yash 3 . Soni Ram 4 . Vaghela
Jaypalsinh Enrolment 151280107038 151280107042 151280107055 151280107058
Asst.Prof ven ndwa Asst.

Kajol Soni (Department Computer (Hd Depat omput neerng) A cdecea (28 - 20 9)
APOLIT EEEOGY COMPUTR NGINERING CERTIF This to that project "Smart has carried
by"Patel (151280107038), Yash Soni (151280107055), Vaghela (151280107058)" my in
fulfillment the Engineering 2A, 6th Degree Bachelor of Engineering in Computer of
Technological University, Ahmadabad during the academic year 2017-2018.
Date:-_____ Pr veeKaal Prof.

Kajol Soni (Faculty Guide) (Head f he me) CANDIDATE'S DECLARATION We finished
project entitled Shopping" submitted our respective We in semester we tried give best.
have our work honestly and in a good way. Firs t Cndte'Na Brah Elln t No. St Seo d
Cnd'Na Brah Elln t No. Signature Third Candidate's Branch Enrollment Signature Fourth
Name Branch Enrollment Signature S ubttet : A poltute f ngineeing Tehno Anaa meba .

: Jaimin Patel : Computer Engineering :151280107038 : : Yash Patel : Computer
Engineering :151280107042 : : Soni Ram : Computer Engineering :151280107055 : :
Jaypalsinh Vaghela : Computer Engineering : 151280107058 : ACKNOWLEDGEMENT In
project goal to easy secure and a customer experience. is because the gets easily and
This involve in process mall's and deeper customer satisfaction. It also ensures
customers comforts.

ABSTRACT In project customer get good for good shopping. design the page attracts This allows customers shop and Here customer get products easily. This project makes the customers comfortable to shop. INDE Sr T P 1. Inrodct 1 1.What is igting... 1 1.What is a? 2 1.What is a ecury? 2 2. 3 3 4 5 6 7 3 . 8 8 9 10 11 11 11 4. 12 12 13 14 15 5. 16 16 17 18 18 19 19 20 20 6. 21 7. 22 8. 25 CerEngii Desgn i - 2B (216 0001) Pge 1 1 INTION 1.WHAT IDEGN HING? ? Deign hink isamehodogy ebdeigne s oleprobms nd find sb olutnsfor lie.A

smindst not obm - foce s siofoceaatioornted wa reting fed ure s thinkdra n gic ginatn,intuitn,asteres elo posibie f t ould — ato rete sd me habefit hee usr hector). ? Deign hinkrersto ret tragiesdeigne ilizeding hepesof deigning.Deign hinkisao n pproah t abeusd cideisue, witamensto lp slvets ss o dtn itprfesna deign cic nd sben ppliein inesa ll ssiaisue.Deign thinkin uss e hedeigne'ssnsilitamehodsto tcpele nedsw h haistecloafesle nd haa viablebinesstecn crt ctor lueamat porty.

? Deign hinkin daio sTnkisamindst nd pproah ler, cboraio nd leslving.lpratic,thedeign esisastd fra merk r ntlles theing maio netpoteia sio,reides nd tslutns ? Deign hinka esfor obm - s nlikealytating,deign thinkinc uildupides ith w,or mitsobredh ura "bratorps... rsn f hedeign hinkpresha en tage: de reerc a ype hoos,impme nd an. CerEngii Desgn i - 2B (216 0001) Pge 2 1.WHAT IDAA ? ? Cmpda isinfornn procseor toreby cmp .T rtn mabein hefom f xt ume,imas udc,sftwa roms r otr ype da .

Cmpda mabeprocseby cmp's Cais sd file nd ldersot cmp r hadk. 1.WHAT IDAA CUT ? Dascitrersto tecivedl pivay messtt realieto ve unahoreacs cmp,dassaweite.Dascitao t dafrm orrio ta scitisaesntl scof T ornizaio f erseat. CerEngii Desgn i - 2B (216 0001) Pge 3 2 AEFRAME 2. Ac ? T iocnta hecciooat civitswhicwe ha evefro firsdat t sdaooobsrtn. CerEngii Desgn i - 2B (216 0001) Pge 4 2. Eonme CerEngii Desgn i - 2B (216 0001) Pge 5 2.

Irti ? Iciobewen usme nd o ony ritapao frawo ? T lude t onveaiowh vedo itpele tsding obsrvaio nd lst hepelewe CerEngii Desgn i - 2B (216 0001) Pge 6 2. Objets • T cioiscmptefilled wh ll nliving hings hrot scn culd lsknow ny hings • Frot etn ould now dreobjec y o t esa whicao how heposiby f heprle. CerEngii Desgn i - 2B (216 0001) Pge 7 2.

Usr • Usrsa rsnswhica lved ding heobsrtn nd t obsrvaio hea hepeo ha yet o CerEngii Desgn i - 2B (216 0001) Pge 8 3 EHY EtMppCnva ma of ER(Wussthe prod) STELDS ho vetheowrsoprod t aACITS (Wt o workscn nebt uc). 3. U sr For u r ic TSURTY he resmeusrsa sfo ? Student ? Families ? Peoples ? Business Man CerEngii Desgn i - 2B (216 0001) Pge 9 3.

Stacholr W vedret f takelde rea llows ? Tables ? Computers ? Trolly ? Cameras ? Cold Storage ? Air Conditioner CerEngii Desgn i - 2B (216 0001) Pge 10 3. Ac T cie rr wh heheoDaaSeury a sfo ? Cameras recording the scenario ? Customers asking for the products ? Workers cleaning the floor ? Customers are shopping the product ? Security guards checking peoples CerEngii Desgn i - 2B (216 0001) Pge 11 3. Sty oarng 3.1 ppsy 3.2

d y CerEngii Desgn i - 2B (216 0001) Pge 12 4 IDEION An aiocnva wrd reidescn tred alimits or imeio.Idetn esn t imeafindslnstno heded le ut to fine hebet sleprobm nd treoit' sle ldetn asisma froPLE(Wcn e TTI(Wt ind oworkscn nebt rodt TUION/CT/ATION(Owhic plaet hnogy abeus), PR . 4.Pople : Pele a rk itt t ? Staff Members ? Customers ? Workers ? IT Engineers ? Suppliers CerEngii Desgn i - 2B (216 0001) Pge 13 4.Ac : ? Safe payment ? Online payment ? Large amount of product ? Use of smart phone ? Easy searching of goodies CerEngii Desgn i - 2B (216 0001) Pge 14 4.

Sittionte Laon: ? Easy shopping in crowd ? Big Bazzars ? Shopping Malls ? Reliance fresh CerEngii Desgn i - 2B (216 0001) Pge 15 4. Pops ? Using QR code ? Cameras ? Machine accept card ? Accessible Location CerEngii Desgn i - 2B (216 0001) Pge 16 5
PRODUCTDELOPME A dt vemecnva hegrowrein hebet sleidea fter he idetn esn repheanurtd delop.

Prodt vemecnva deup f URE hy histeclonedsto e inve P(Wcn e ODT ERENC(w xpeieeby in thisprodt),PRUCFUNTS Min tnay f hisprodt),PRUC FEE (aure t uc OMEN(Wt ind f rdwa/sftwae ha eusd),RECESIGNRAIN Deisn aeocotr), CER RALID N . 5.Ppe : ? Smart shopping ? Easy shopping ? Safe payment CerEngii Desgn i - 2B (216 0001) Pge 17
5.Pople : ? Student ? Teachers ? IT engineers CerEngii Desgn i - 2B (216 0001) Pge 18
5.Podt xpeiee : ? Fast payment system ? Secure payment ? Complexity reduce 5.

Podt Fti ? Comfortable environment ? Every type of product available CerEngii Desgn i - 2B (216 0001) Pge 19 5. Podt eurs ? Computer database ? Electronic devices ? Communication devices 5. Comone: ? Storage ? Security devices ? Product holders ? Sensors ? Computers CerEngii Desgn i - 2B (216 0001) Pge 20 5.Cusome validon : ? Accurate stock ? Time consuming ? Customer satisfaction 5.

Rec Resn/Ren : ? Redesign qurey processing ? Modify application CerEngii Desgn i - 2B (216 0001) Pge 21 6 FL CerEngii Desgn i - 2B (216 0001) Pge 22 7 .L CerEngii Desgn i - 2B (216 0001) Pge 23 CerEngii Desgn i - 2B (216 0001) Pge 24 8 .FENCE ? Amazon Go ? Bigbasket

INTERNET SOURCES:

0% - Empty

1% - <https://www.mgu.ac.in/>

0% - <https://fraser.stlouisfed.org/scribd/?to>