



Object Oriented Analysis and Design using Java

Market Research Software

UE20CS352 – OOAD

Submitted by:

Renita Kurian - PES1UG20CS331
Richa Shahi - PES1UG20CS334
Rimjhim Singh - PES1UG20CS337
Riya Jha - PES1UG20CS344

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
FACULTY OF ENGINEERING PES UNIVERSITY

(Established under Karnataka Act No. 16 of 2013)

100ft Ring Road, Bengaluru – 560 085, Karnataka, India

Problem Statement

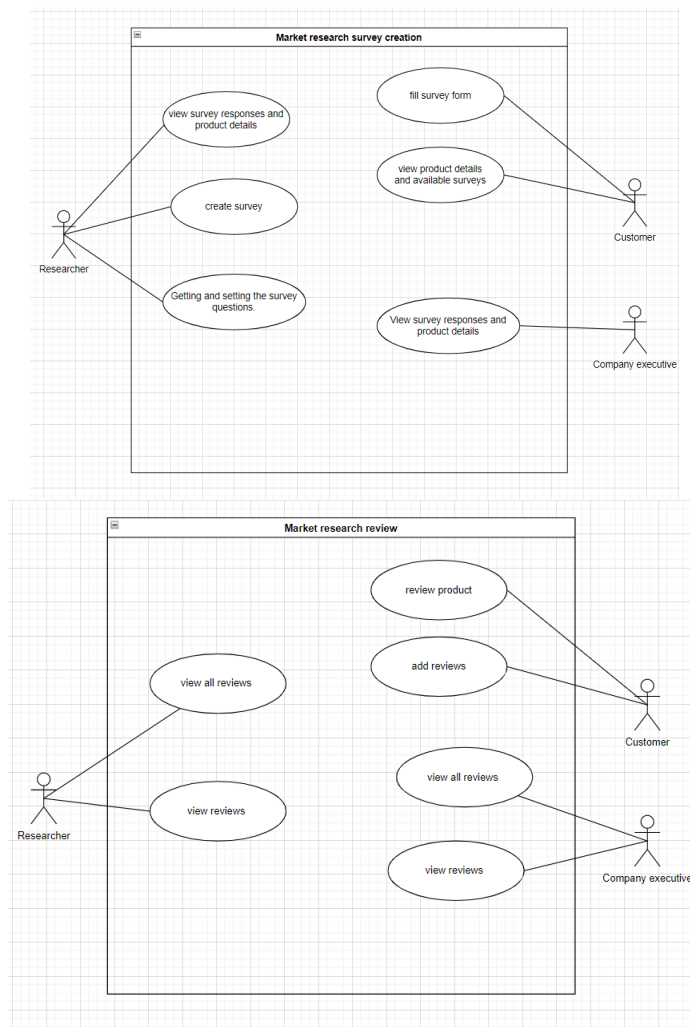
The aim of this project is to develop a Market Research software that allows three types of roles, Company Executives, Market Researchers, and Customers, to perform different tasks related to market research. The software will be designed to facilitate the collection of customer feedback, which will help companies to improve their products and services.

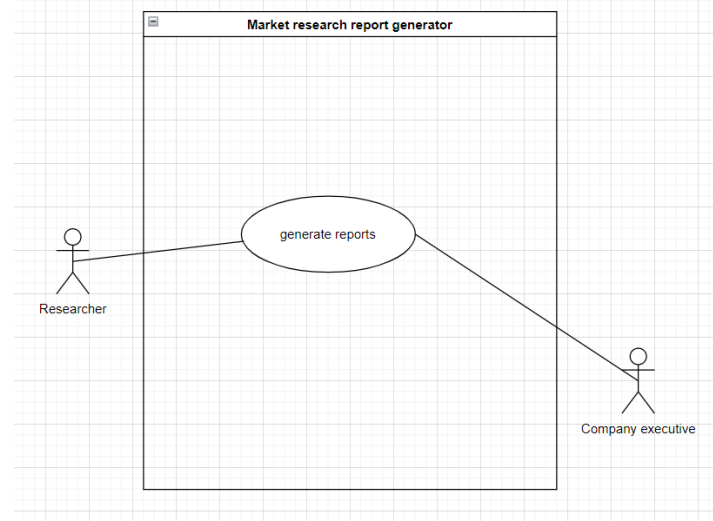
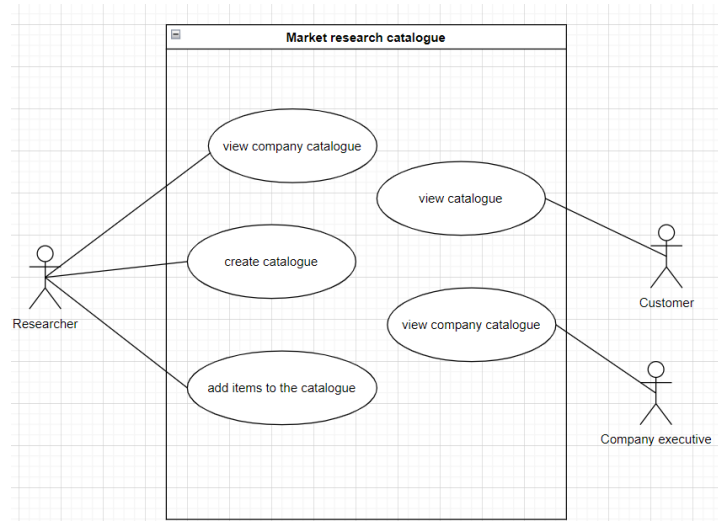
The Company Executive role will have access to an overview of the company's products, including reviews, reports, and the company catalogue. The executive will be able to view the reports generated by the Market Researchers and use them to make informed decisions about the company's products and services.

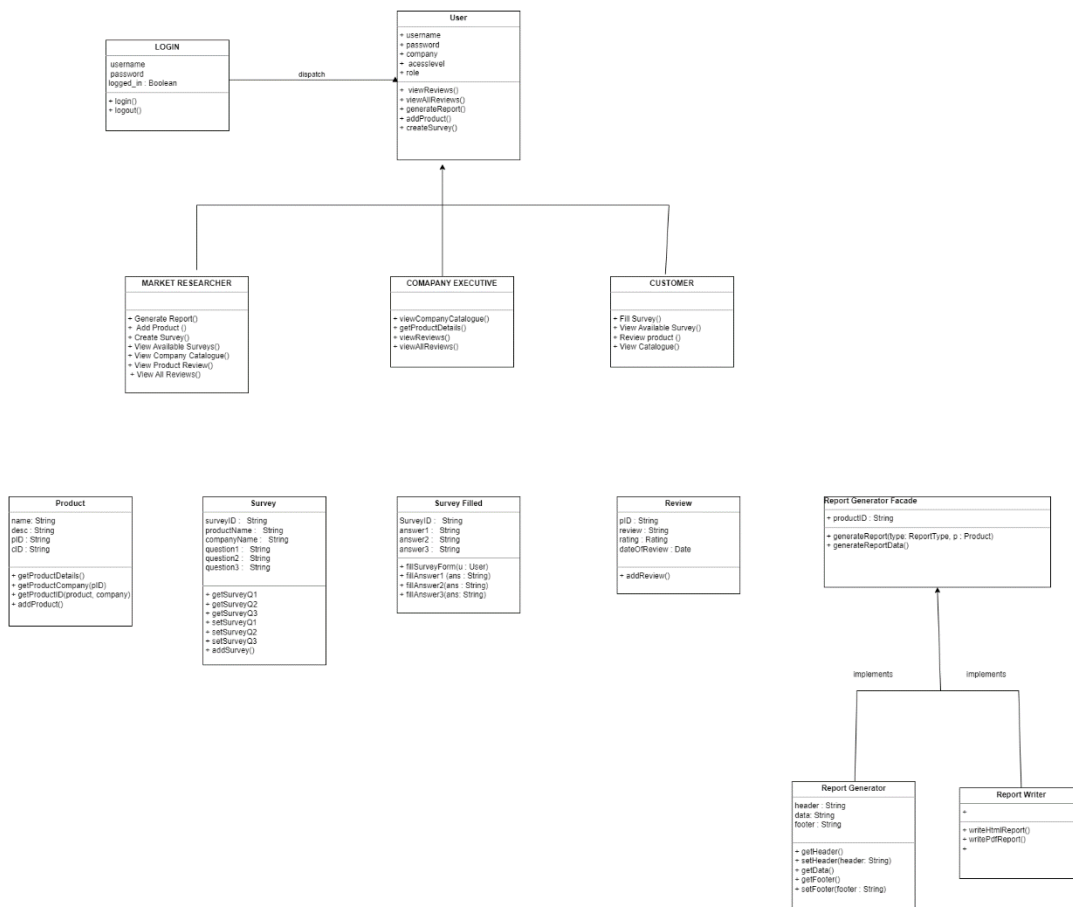
The Market Researcher role will be responsible for creating surveys, viewing reviews, generating reports, and viewing available surveys and catalogues. The Market Researcher will have access to the customer reviews, which will be used to generate reports that will help the Company Executive to make informed decisions.

The Customer role will have the ability to review the products and services of the company, fill out surveys, and view available surveys. The customer's feedback will be used by the Market Researcher to generate reports that will help the Company Executive to improve the company's products and services.

Models (Use Case and Class Models)







Architecture Patterns, Design Principles and Design Patterns used along with a short description which elaborated how that is applied to your problem domain

1. Facade Pattern: to simplify the complex subsystem of generating a report by providing a simple interface to the client. The client can now generate a report without needing to know about the underlying system and the steps involved in generating the report. (Structural)
2. Prototype Pattern: The purpose of implementing the clone() method in this way is to allow for the creation of new Survey objects based on existing instances of Survey. This can be useful in situations where a large number of similar objects need to be created, as it allows for the efficient creation of new objects without the need for complex object instantiation logic. (Creational)
3. Factory Pattern: Factory pattern is used to create different types of users like Company executive, Customer and Market Researcher which are the subclasses of the parent class User.

Github link to the Code base

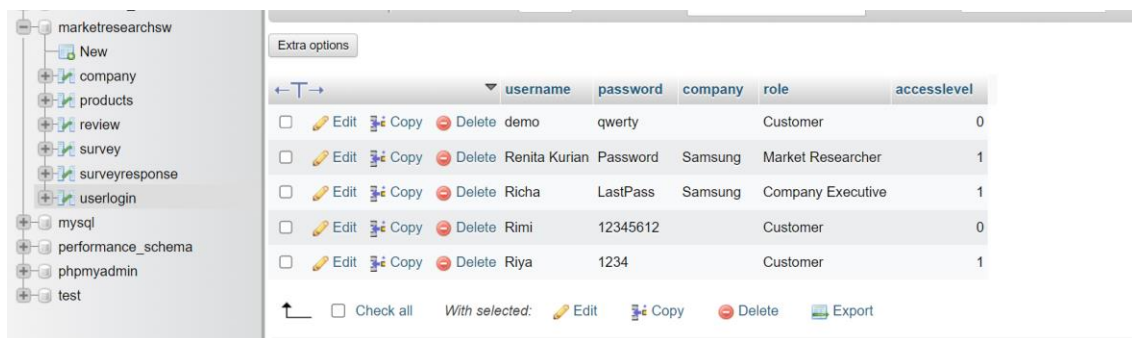
[Renita1206/Market-Research-Software: OOAD Project - 6th Sem \(github.com\)](https://github.com/renita1206/Market-Research-Software)

Screenshots with input values populated and output shown

1.Company Executive

```
PS D:\Documents\PESU\SEM-VI\OOAD\Market-Research-Software-master> d:; cd 'd:\Documents\PESU\SEM-VI\OOAD\Market-Research-Software-master'; & 'C:\Program Files\Java\jdk-11.0.17\bin\java.exe' '@C:\Users\CHAIRM~1\AppData\Local\Temp\cp_8q7ie69kodc2m5v5kjez52otd.argfile' 'MarketResearchSW.MarketResearchSoftware'
Welcome to Market Research Software
Username: Richa
Password: LastPass
Logged in

*** ROLE: Company Executive ***
1. View Company Catalogue
2. Generate Report
3. View Product Review
4. View All Reviews
5. Logout
Enter CHOICE: █
```



	username	password	company	role	accesslevel
<input type="checkbox"/>	demo	qwerty		Customer	0
<input type="checkbox"/>	Renita Kurian	Password	Samsung	Market Researcher	1
<input type="checkbox"/>	Richa	LastPass	Samsung	Company Executive	1
<input type="checkbox"/>	Rimi	12345612		Customer	0
<input type="checkbox"/>	Riya	1234		Customer	1

Enter CHOICE: 1

Here is the current catalogue of products for company Samsung

POLKJFG98	S23	High-end smartphone with an extraordinary camera and 5G support
YYU089	S21	Mobile

Welcome to Market Research Software

Username: Richa

Password: LastPass

Logged in

*** ROLE: Company Executive ***

1. View Company Catalogue

2. Generate Report

3. View Product Review

4. View All Reviews

5. Logout

Enter CHOICE: 2

Enter Product ID: POLKJFG98

Enter Report Format (PDF/HTML): PDF

Report has been generated

*** ROLE: Company Executive ***

1. View Company Catalogue

2. Generate Report

3. View Product Review

4. View All Reviews

5. Logout

Enter CHOICE: 2

Enter Product ID: POLKJFG98

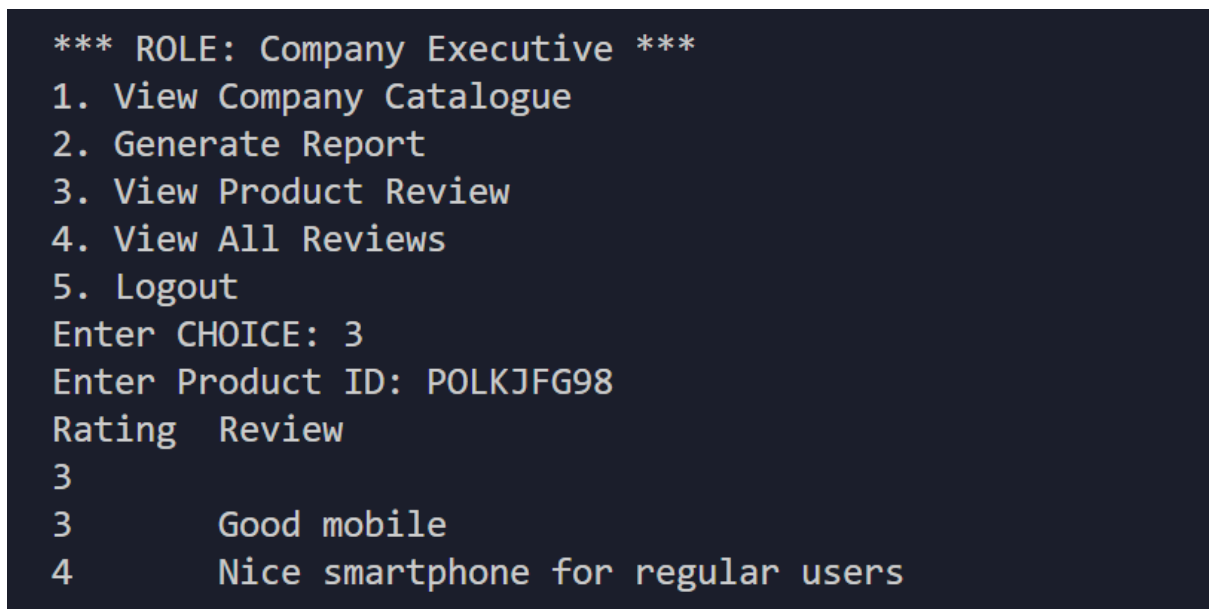
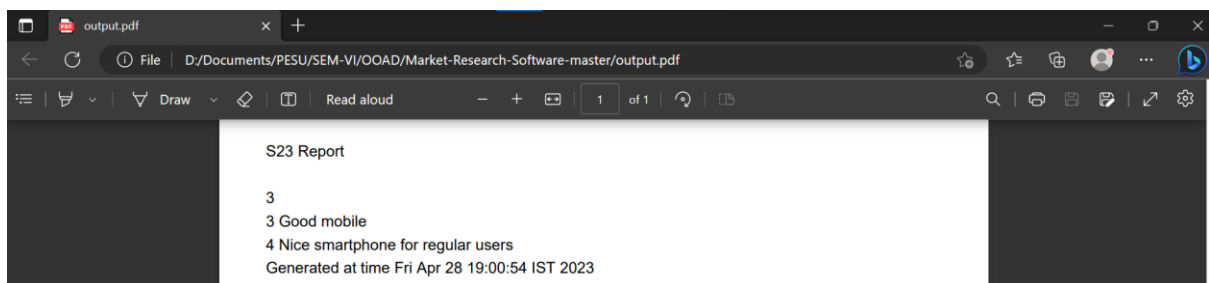
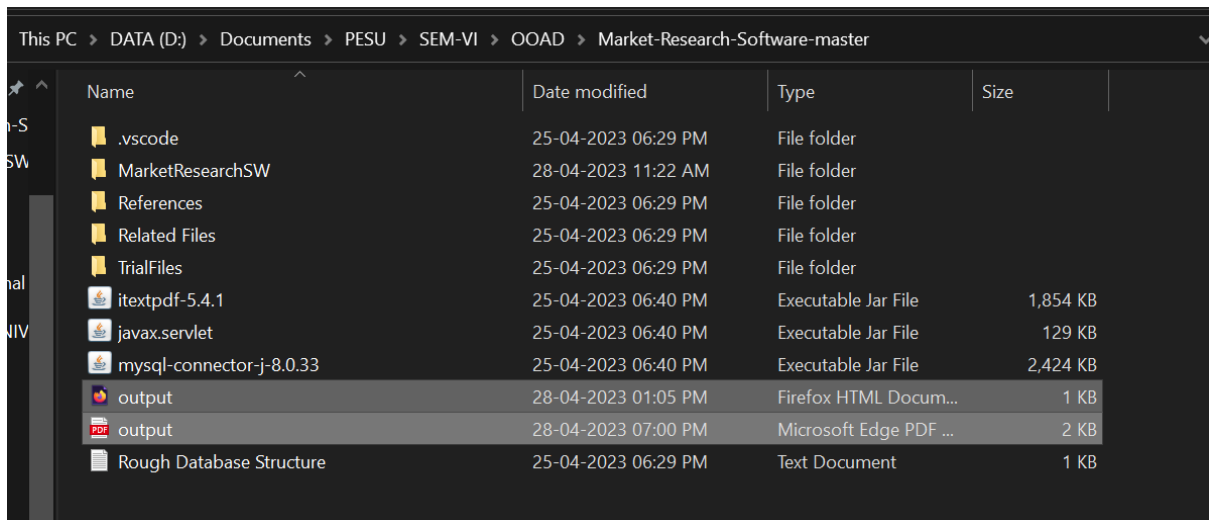
Enter Report Format (PDF/HTML): HTML

HTML Report written

ERROR

Report has been generated

OUTPUT PDF Report generated in provided path



```
*** ROLE: Company Executive ***
```

```
1. View Company Catalogue
```

```
2. Generate Report
```

```
3. View Product Review
```

```
4. View All Reviews
```

```
5. Logout
```

```
Enter CHOICE: 4
```

```
Product Rating    Review
```

```
S23              3
```

```
S23              3      Good mobile
```

```
S23              4      Nice smartphone for regular users
```

```
*** ROLE: Company Executive ***
```

```
1. View Company Catalogue
```

```
2. Generate Report
```

```
3. View Product Review
```

```
4. View All Reviews
```

```
5. Logout
```

```
Enter CHOICE: 5
```

```
Logged out
```

```
PS D:\Documents\PESU\SEM-VI\OOAD\Market-Research-Software-master>
```

2. Market Researcher

```
C:\MSVSKJEZ520td.argFile MarketResearchSW.1
```

```
Welcome to Market Research Software
```

```
Username: Renita Kurian
```

```
Password: Password
```

```
Logged in
```


*** ROLE: Market Researcher ***

1. Generate Report
2. Add Product
3. Create Survey
4. View Available Surveys
5. View Company Catalogue
6. View Product Review
7. View All Reviews
8. Logout

Enter CHOICE: 2

Enter Product name: Galaxy M14

Enter Product Description: 12MP front camera and notch display

Enter Product ID: MN890

Enter Company ID P003N4

*** ROLE: Market Researcher ***

1. Generate Report
2. Add Product
3. Create Survey
4. View Available Surveys
5. View Company Catalogue
6. View Product Review
7. View All Reviews
8. Logout

Enter CHOICE: 3

Enter Product name: Galaxy M4

Enter First Question

Is the front camera better than Samsung Galaxy M13 ?

Enter Second Question

Is the Application display bar more Interactive ?

Enter Third Question

Apple vs Samsung ?

*** ROLE: Market Researcher ***

1. Generate Report
2. Add Product
3. Create Survey
4. View Available Surveys
5. View Company Catalogue
6. View Product Review
7. View All Reviews
8. Logout

Enter CHOICE: 4

----- GalaxySamsung685 -----

Product ID: MN890

Question 1: Is the front camera better than Samsung Galaxy M13 ?

Question 2: Is the Application display bar more Interactive ?

Question 3: Apple vs Samsung ?

----- S21Samsung37 -----

Product ID: YYU089

Question 1: Do you think its better than other versions ?

Question 2: Do you like the camera ?

Question 3: How many years of software support do you require?

----- S23Samsung921 -----

Product ID: POLKJFG98

Question 1: How do you like our new product?

Question 2: Any more suggestions?

Question 3: What do you like most?

----- SLKFJG20498R -----

Product ID: POLKJFG98

Question 1: How was your experience

Question 2: Did you like the new UI update

Question 3: Apple vs Samsung

*** ROLE: Market Researcher ***

1. Generate Report
2. Add Product
3. Create Survey
4. View Available Surveys
5. View Company Catalogue
6. View Product Review
7. View All Reviews
8. Logout

Enter CHOICE: 5

Here is the current catalogue of products for company Samsung

MN890 Galaxy 12MP front camera and notch display

POLKJFG98 S23 High-end smartphone with an extraordinary camera and 5G support

YYU089 S21 Mobile

*** ROLE: Market Researcher ***

1. Generate Report
2. Add Product
3. Create Survey
4. View Available Surveys
5. View Company Catalogue
6. View Product Review
7. View All Reviews
8. Logout

Enter CHOICE: 6

Enter Product ID: POLKJFG98

Rating Review

3

3 Good mobile

4 Nice smartphone for regular users

*** ROLE: Market Researcher ***

1. Generate Report
2. Add Product
3. Create Survey
4. View Available Surveys
5. View Company Catalogue
6. View Product Review
7. View All Reviews
8. Logout

Enter CHOICE: 7

Product	Rating	Review
---------	--------	--------

S23	3	
-----	---	--

S23	3	Good mobile
-----	---	-------------

S23	4	Nice smartphone for regular users
-----	---	-----------------------------------

3.Customer

Welcome to Market Research Software

Username: Riya

Password: 1234

Logged in

ROLE: Customer

1. Fill Survey
2. View Available Survey
3. Review product
4. View Catalogue
5. Logout

Enter CHOICE:

ROLE: Customer

1. Fill Survey
2. View Available Survey
3. Review product
4. View Catalogue
5. Logout

Enter CHOICE: 1

Enter the surveyID:

GalaxySamsung685

Survey Found

Is the front camera better than Samsung Galaxy M13 ?

Not visibly noticeable difference

Is the Application display bar more Interactive ?

Yes...better speed for UI

Apple vs Samsung ?

Apple

There was an issue filling survey

Survey has been filled

ROLE: Customer

1. Fill Survey
2. View Available Survey
3. Review product
4. View Catalogue
5. Logout

Enter CHOICE: 2

----- GalaxySamsung685 -----

Product: Galaxy

Question 1: Is the front camera better than Samsung Galaxy M13 ?

Question 2: Is the Application display bar more Interactive ?

Question 3: Apple vs Samsung ?

----- S21Samsung37 -----

Product: S21

Question 1: Do you think its better than other versions ?

Question 2: Do you like the camera ?

Question 3: How many years of software support do you require?

----- S23Samsung921 -----

Product: S23

Question 1: How do you like our new product?

Question 2: Any more suggestions?

Question 3: What do you like most?

----- SLKFJG20498R -----

Product: S23

Question 1: How was your experience

Question 2: Did you like the new UI update

Question 3: Apple vs Samsung

ROLE: Customer

1. Fill Survey
2. View Available Survey
3. Review product
4. View Catalogue
5. Logout

Enter CHOICE: 3

Enter the name of the product:

Galaxy

Enter the name of the company:

Samsung

Enter your rating of the product:

4

Enter your review for the product

Nice front camera...better speed

Review added successfully!

ROLE: Customer

1. Fill Survey
2. View Available Survey
3. Review product
4. View Catalogue
5. Logout

Enter CHOICE: 4

Samsung Galaxy 12MP front camera and notch display

Samsung S23 High-end smartphone with an extraordinary camera and 5G support

Tynor Crutches Provides support to those who need it

Samsung S21 Mobile

Database

Company Table

<div>marketresearchsw</div> <div>New</div> <div>company</div> <div>products</div> <div>review</div> <div>survey</div> <div>surveyresponse</div> <div>userlogin</div> <div>mysql</div> <div>performance_schema</div> <div>phpmyadmin</div>	Extra options	
	<div>← T →</div>	<div>nameID</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete Harper Collins BV03N4</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete Tynor LO2F03N4</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete Samsung PO03N4</div>
	<div>↑ <input type="checkbox"/> Check all</div>	<div>With selected: Edit Copy Delete</div>

Products table

<div>marketresearchsw</div> <div>New</div> <div>company</div> <div>products</div> <div>review</div> <div>survey</div> <div>surveyresponse</div> <div>userlogin</div> <div>mysql</div> <div>performance_schema</div> <div>phpmyadmin</div> <div>test</div>	Extra options	
	<div>← T →</div>	<div>IDnamedescriptioncompanyID</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete MN890 Galaxy 12MP front camera and notch display PO03N4</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete POLKJFG98 S23 High-end smartphone with an extraordinary camera a... PO03N4</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete SLIFGH9876KJ Crutches Provides support to those who need it LO2F03N4</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete YYU089 S21 Mobile PO03N4</div>
	<div>↑ <input type="checkbox"/> Check all</div>	<div>With selected: Edit Copy Delete Export</div>

Review Table

<div>marketresearchsw</div> <div>New</div> <div>company</div> <div>products</div> <div>review</div> <div>survey</div> <div>surveyresponse</div> <div>userlogin</div> <div>mysql</div> <div>performance_schema</div> <div>phpmyadmin</div>	Extra options	
	<div>← T →</div>	<div>IDPIDUserIDdate-ratingreview</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete MN890root378 MN890 Riya 2023-04-28 4 Nice front camera...better speed</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete POLKJFG98root267 POLKJFG98 Riya 2023-04-28 3</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete POLKJFG98root312 POLKJFG98 Riya 2023-04-28 3 Good mobile</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete POLKJFG98root640 POLKJFG98 Riya 2023-04-28 4 Nice smartphone for regular users</div>
	<div>↑ <input type="checkbox"/> Check all</div>	<div>With selected: Edit Copy Delete Export</div>

Survey Table

<div>marketresearchsw</div> <div>New</div> <div>company</div> <div>products</div> <div>review</div> <div>survey</div> <div>surveyresponse</div> <div>userlogin</div> <div>mysql</div> <div>performance_schema</div> <div>phpmyadmin</div> <div>test</div>	Extra options	
	<div>← T →</div>	<div>IDproductidq1q2q3</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete GalaxySamsung685 MN890 Is the front camera better than Samsung Galaxy M13... Is the Application display bar more Interactive ? Apple vs Samsung ?</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete S21Samsung37 YYU089 Do you think its better than other versions ? Do you like the camera ? How many years of software support do you require?</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete S23Samsung921 POLKJFG98 How do you like our new product? Any more suggestions? What do you like most?</div>
	<div><input type="checkbox"/></div>	<div>Edit Copy Delete SLKFJG20498R POLKJFG98 How was your experience Did you like the new UI update Apple vs Samsung</div>

Survey Response Table

User Login Table