CHARACTERIZING AND PREDICTING EARLY REVIEWERS FOR EFFECTIVE PRODUCT MARKETING ON E-COMMERCE WEBSITES

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ABSTRACT

Online reviews have become an important source of information for users before making an informed purchase decision. Early reviews of a product tend to have a high impact on the subsequent product sales. In this paper, we take the initiative to study the behavior characteristics of early reviewers through their posted reviews on two real-world large e-commerce platforms, i.e., Amazon and Yelp. In specific, we divide product lifetime into three consecutive stages, namely early, majority and laggards. A user who has posted a review in the early stage is considered as an early reviewer. We quantitatively characterize early reviewers based on their rating behaviors, the helpfulness scores received from others and the correlation of their reviews with product popularity.

We have found that an early reviewer tends to assign a higher average rating score; and an early reviewer tends to post more helpful reviews. Our analysis of product reviews also indicates that early reviewers' ratings and their received helpfulness scores are likely to influence product popularity. By viewing review posting process as a multiplayer competition game, we propose a novel margin-based embedding model for early reviewer prediction. Extensive experiments on two different e-commerce datasets have shown that our proposed approach outperforms a number of competitive baselines.

CHAPTER-1

INTRODUCTION

The emergence of e-commerce websites has enabled users to publish or share purchase experiences by posting product reviews, which usually contain useful opinions, comments and feedback towards a product. As such, a majority of customers will read online reviews before making an informed purchase decision . It has been reported about 71% of global online shoppers read online reviews before purchasing a product . Product reviews, especially the early reviews (i.e., the reviews posted in the early stage of a product), have a high impact on subsequent product sales . We call the users who posted the early reviews early reviewers. Although early reviewers contribute only a small proportion of reviews, their opinions can determine the success or failure of new products and services . It is important for companies to identify early reviewers since their feedbacks can help companies to adjust marketing strategies and improve product designs, which can eventually lead to the success of their new products. For this reason, early reviewers become the emphasis to monitor and attract at the early promotion stage of a company. The pivotal role of early reviews has attracted extensive attention from marketing practitioners to induce consumer purchase intentions . For example, Amazon, one of the largest e-commerce company in the world, has advocated the Early Reviewer Program1, which helps to acquire early reviews on products that have few or no reviews.

With this program, Amazon shoppers can learn more about products and make smarter buying decisions. As another related program, Amazon Vine2 invites the most trusted reviewers on Amazon to post opinions about new and prerelease items to help their fellow customers make informed purchase decision.

CHAPTER-2
SYSTEM ANALYSIS

The project involved analyzing the design of few applications so as to make the application more users friendly. To do so, it was really important to keep the navigations from one screen to the other well-ordered and at the same time reducing the amount of typing the user needs to do. In order to make the application more accessible, the browser version had to be chosen so that it is compatible with most of the Browsers.

The process of studying a procedure or business in order to identify its goals and purposes and create systems and procedures that will achieve them in an efficient way

The terms analysis and synthesis stem from Greek, meaning "to take apart" and "to put together," respectively. These terms are used in many scientific disciplines, from mathematics and logic to economics and psychology, to denote similar investigative procedures. Analysis is defined as "the procedure by which we break down an intellectual or substantial whole into parts," while synthesis means "the procedure by which we combine separate elements or components in order to form a coherent whole." [3] System analysis researchers apply methodology to the systems involved, forming an overall picture.

The development of a computer-based information system includes a system analysis phase. This helps produce the data model, a precursor to creating or enhancing a database. There are a number of different approaches to system analysis. When a computer-based information system is developed, system analysis (according to the Waterfall model) would constitute the following steps:

- The development of a feasibility study: determining whether a project is economically, socially, technologically and organizationally feasible.
- Fact-finding measures, designed to ascertain the requirements of the system's end-users (typically involving interviews, questionnaires, or visual observations of work on the existing system)
- Gauging how the end-users would operate the system (in terms of general experience in using computer hardware or software), what the system would be used for and so on

REQUIREMENT SPECIFICATION

HARDWARE REQUIREMENTS:

- **System** : Pentium IV 2.4 GHz.
- **Hard Disk** : 40 GB.
- **Floppy Drive** : 1.44 Mb.
- **Monitor** : 14’ Colour Monitor.
- **Mouse** : Optical Mouse.
- **Ram** : 512 Mb.

SOFTWARE REQUIREMENTS:

- **Operating system** : Windows 7 Ultimate.
- **Coding Language** : Python.
- **Front-End** : Python.
- **Designing** : Html,css,javascript.
- **Data Base** : MySQL.

FUNCTIONAL REQUIREMENTS:

- Graphical User interface with the User.

Operating Systems supported

1. Windows 7
2. Windows XP
3. Windows 10

Technologies and Languages used to Develop:

1. Python
2. Django

Debugger and Emulator:

- Any Browser (Particularly Chrome)

CHAPTER-3

INPUT AND OUTPUT DESIGN

INPUT DESIGN:

The input design is the link between the information system and the user. It comprises the developing specification and procedures for data preparation and those steps are necessary to put transaction data in to a usable form for processing can be achieved by inspecting the computer to read data from a written or printed document or it can occur by having people keying the data directly into the system. The design of input focuses on controlling the amount of input required, controlling the errors, avoiding delay, avoiding extra steps and keeping the process simple. The input is designed in such a way so that it provides security and ease of use with retaining the privacy. Input Design considered the following things:

- What data should be given as input?
- How the data should be arranged or coded?
- The dialog to guide the operating personnel in providing input.
- Methods for preparing input validations and steps to follow when error occur.

OBJECTIVES

1. Input Design is the process of converting a user-oriented description of the input into a computer-based system. This design is important to avoid errors in the data input process and show the correct direction to the management for getting correct information from the computerized system.

2. It is achieved by creating user-friendly screens for the data entry to handle large volume of data. The goal of designing input is to make data entry easier and to be free from errors. The data entry screen is designed in such a way that all the data manipulates can be performed. It also provides record viewing facilities.

3. When the data is entered it will check for its validity. Data can be entered with the help of screens. Appropriate messages are provided as when needed so that the user will not be in maize of instant.The objective of input design is to create an input layout that is easy to follow.

OUTPUT DESIGN:

A quality output is one, which meets the requirements of the end user and presents the information clearly. In any system results of processing are communicated to the users and to other system through outputs. In output design it is determined how the information is to be displaced for immediate need and also the hard copy output. It is the most important and direct source information to the user. Efficient and intelligent output design improves the system's relationship to help user decision-making.

1. Designing computer output should proceed in an organized, well thought out manner; the right output must be developed while ensuring that each output element is designed so that people will find the system can use easily and effectively. When analysis design computer output, they should Identify the specific output that is needed to meet the requirements.

2.Select methods for presenting information.

3.Create document, report, or other formats that contain information produced by the system.

The output form of an information system should accomplish one or more of the following objectives.

- Convey information about past activities, current status or projections of the
- Future.
- Signal important events, opportunities, problems, or warnings.
- Trigger an action.
- Confirm an action.

CHAPTER-4

MODULES

There are three modules can be divided here for this project they are listed as below

- Upload products
- Product Review Based Order
- Rating and Reviews
- Data Analysis

From the above three modules, project is implemented. Bag of discriminative words are achieved

MODULE DESCRIPTION:

1. UPLOAD PRODUCTS:

Uploading the products is done by admin. Authorized person is uploading the new arrivals to system that are listed to users. Product can be uploaded with its attributes such as brand, color, and all other details of warranty. The uploaded products are able to block or unblock by users.

2. PRODUCT REVIEW BASED ORDER:

The suggestion to user's view of products is listed based on the review by user and rating to particular item. Naïve bayes algorithm is used in this project to develop the whether the sentiment of given review is positive or negative. Based on the output of algorithm suggestion to users is given. The algorithm is applied and lists the products in user side based on the positive a nd negative.

3. RATINGS AND REVIEWS:

Ratings and reviews are main concept of the project in order to find effective product marketing. The main aim of the project is to get the user reviews based on how they purchased or whether they purchased or not. The major find out of the project is when they give the ratings and how effective it is. And this will helpful for the users who are willing to buy the same kind of product.

4. DATA ANALYSIS:

The main part of the project is to analysis the ratings and reviews that are given by the user. The products can be analysis based on the numbers which are given by user. The user data analysis of the data can be done by charts format. The graphs may vary like pie chart, bar chart or some other charts.

CHAPTER-5

SOFTWARE ENVIRONMENT

PYTHON

Python is a general-purpose interpreted, interactive, object-oriented, and high-level programming language. An interpreted language, Python has a design philosophy that emphasizes code readability (notably using whitespace indentation to delimit code blocks rather than curly brackets or keywords), and a syntax that allows programmers to express concepts in fewer lines of code than might be used in languages such as C++or Java. It provides constructs that enable clear programming on both small and large scales. Python interpreters are available for many operating systems. CPython, the reference implementation of Python, is open source software and has a community-based development model, as do nearly all of its variant implementations. CPython is managed by the non-profit Python Software Foundation. Python features a dynamic type system and automatic memory management. It supports multiple programming paradigms, including object-oriented, imperative, functional and procedural, and has a large and comprehensive standard library.

DJANGO

Django is a high-level Python Web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it takes care of much of the hassle of Web development, so you can focus on writing your app without needing to reinvent the wheel. It’s free and open source.

Django's primary goal is to ease the creation of complex, database-driven websites. Django emphasizes reusability and "pluggability" of components, rapid development, and the principle of don't repeat yourself. Python is used throughout, even for settings files and data models.

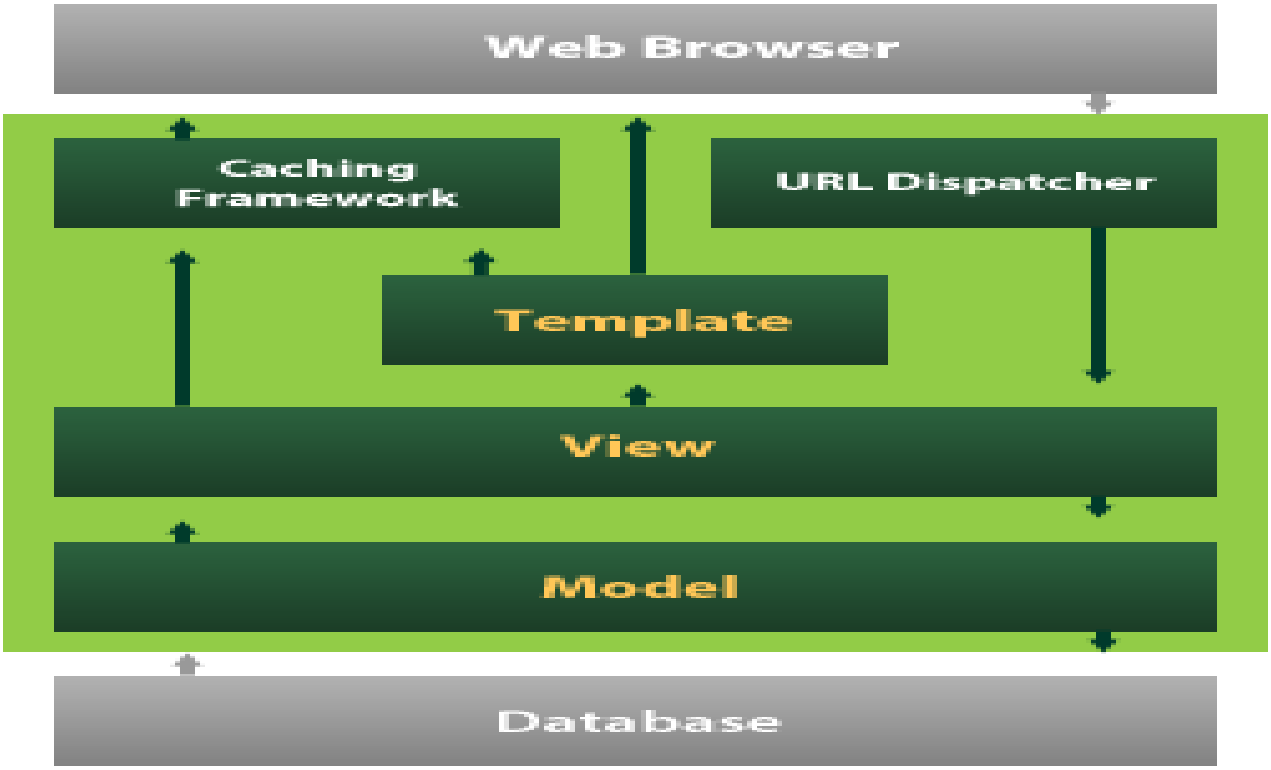

Fig:5.1 Django framework

Django also provides an optional administrative create, read, update and delete interface that is generated dynamically through introspection and configured via admin models.

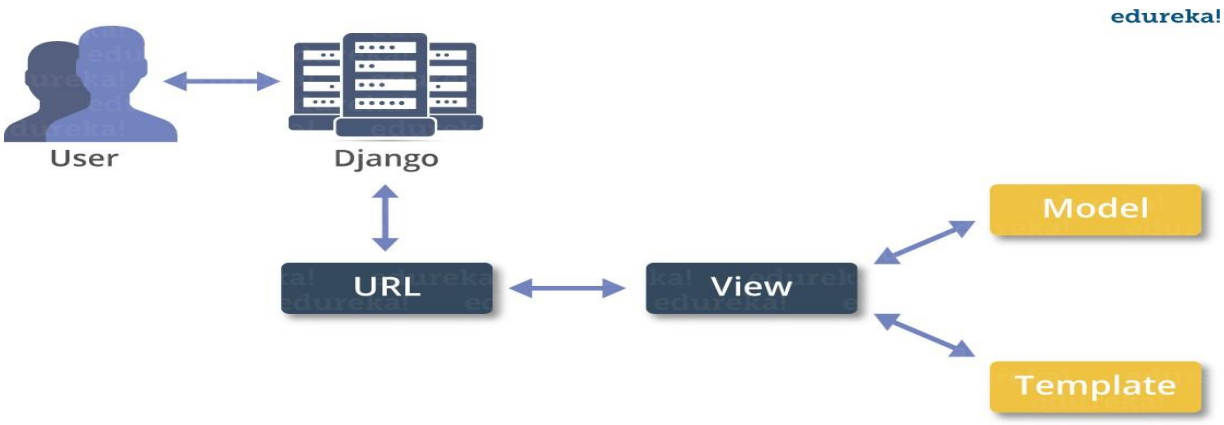

Fig 5.2: Django framework model

CHAPTER-6
SYSTEM ANALYSIS

EXISTING SYSTEM:

Previous studies have highly emphasized the phenomenon that individuals are strongly influenced by the decisions of others, which can be explained by herd behavior. The influence of early reviews on subsequent purchase can be understood as a special case of herding effect. Early reviews contain important product evaluations from previous adopters, which are valuable reference resources for subsequent purchase decisions Different from existing studies on herd behavior, we focus on quantitatively analyzing the overall characteristics of early reviewers using large-scale real-world datasets. In addition, we formalize the early reviewer prediction task as a competition problem and propose a novel embedding based ranking approach to this task. To our knowledge, the task of early reviewer prediction itself has received very little attention in the literature. Our contributions are summarized as follows:

We present a first study to characterize early reviewers on an e-commerce website using two real-world large datasets. We quantitatively analyze the characteristics of early reviewers and their impact on product popularity.

Our empirical analysis provides support to a series of theoretical conclusions from the sociology and economics. We view review posting process as a multiplayer competition game and develop an embedding-based ranking model for the prediction of early reviewers. Our model can deal with the cold-start problem by incorporating side information of products. Extensive experiments on two real-world large datasets, i.e., Amazon and Yelp have demonstrated the effectiveness of our approach for the prediction of early reviewers.

PROPOSED SYSTEM:

To predict early reviewers, we propose a novel approach by viewing review posting process as a multiplayer competition game. Only the most competitive users can become the early reviewer's w.r.t. to a product. The competition process can be further decomposed into multiple pairwise comparisons between two players. In a two-player competition, the winner will beat the loser with an earlier timestamp.

Inspired by the recent progress in distributed representation learning, we propose to use a margin-based embedding model by first mapping both users and products into the same embedding space, and then determining the order of a pair of users given a product based on their respective distance to the product representation.

CHAPTER-7

SYSTEM DESIGN

1. ARCHITECTURE DIAGRAM:

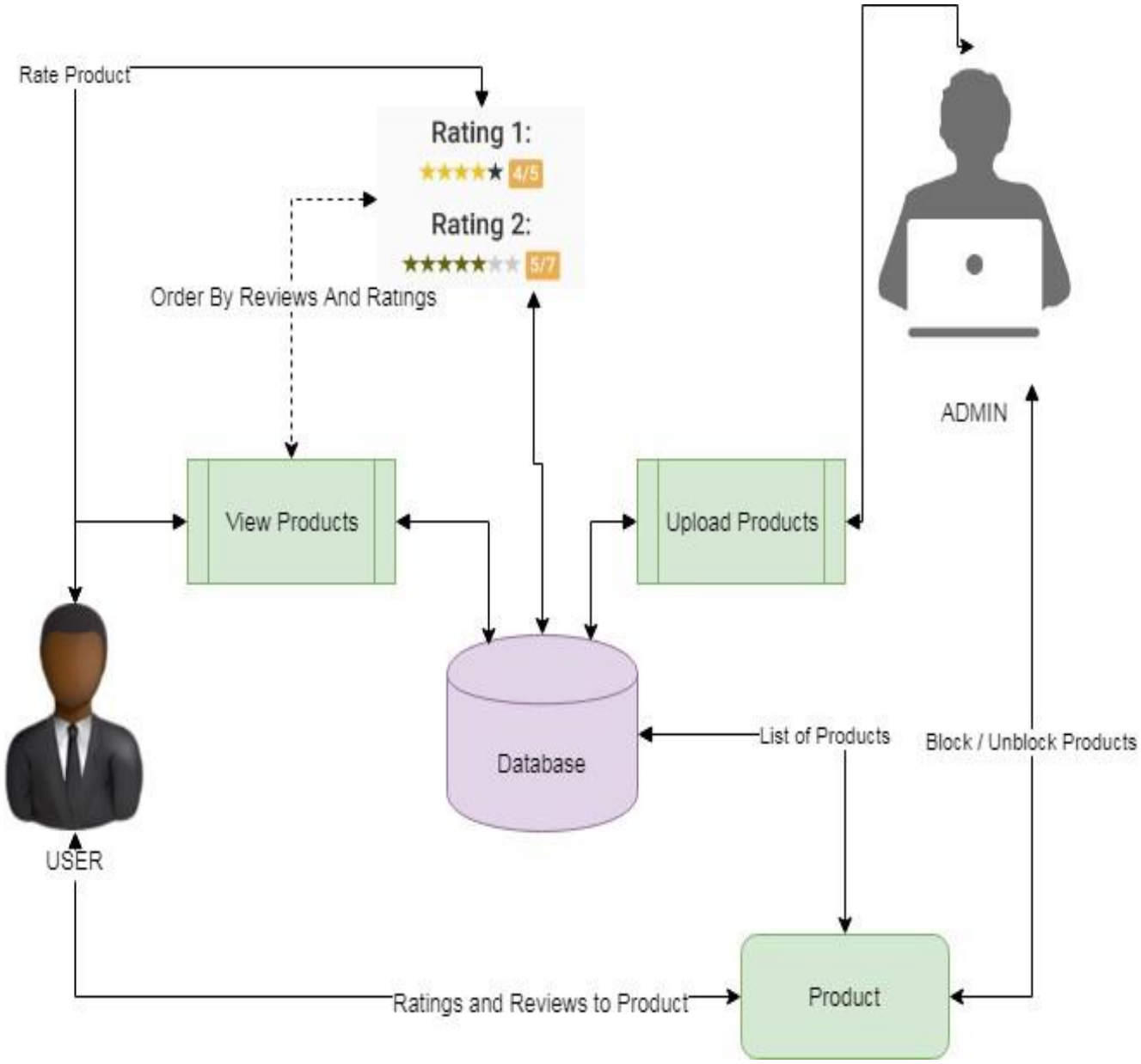

Fig 7.1: Architectural diagram

2. COMPONENT DIAGRAM:

a. User:

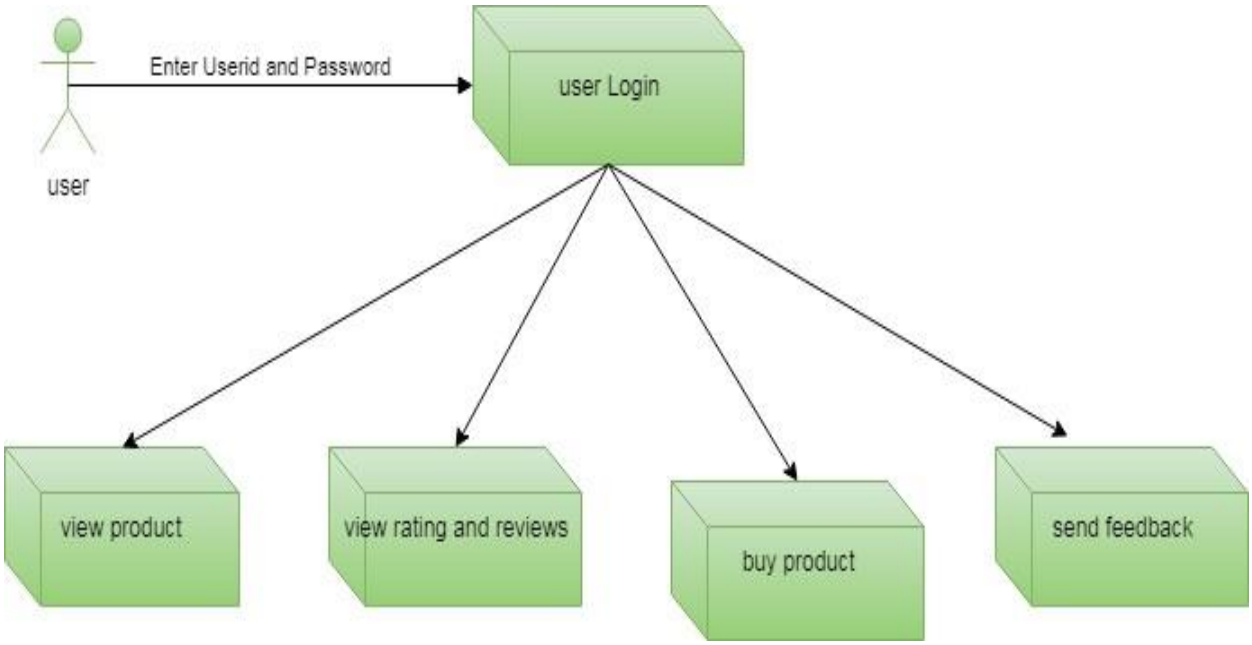

Fig 7.2 a) User-component diagram

b. Admin:

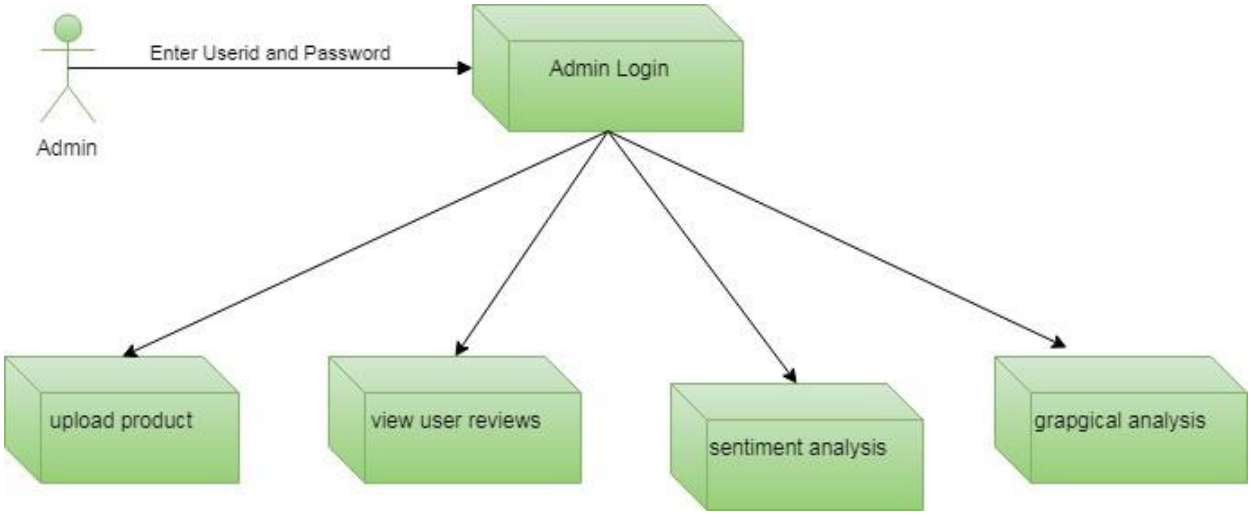

Fig 7.2 b) Admin-Component diagram

3. ER DIAGRAM:

a. User:

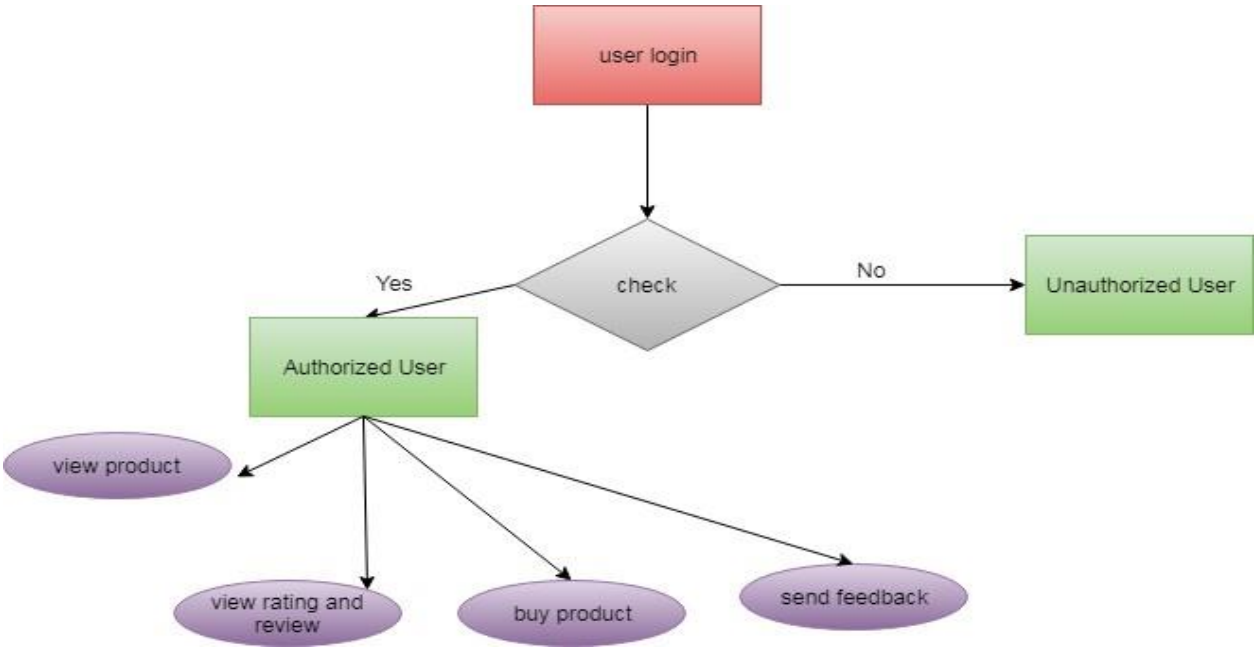

Fig 7.3 a) ER diagram of user

b. Admin:

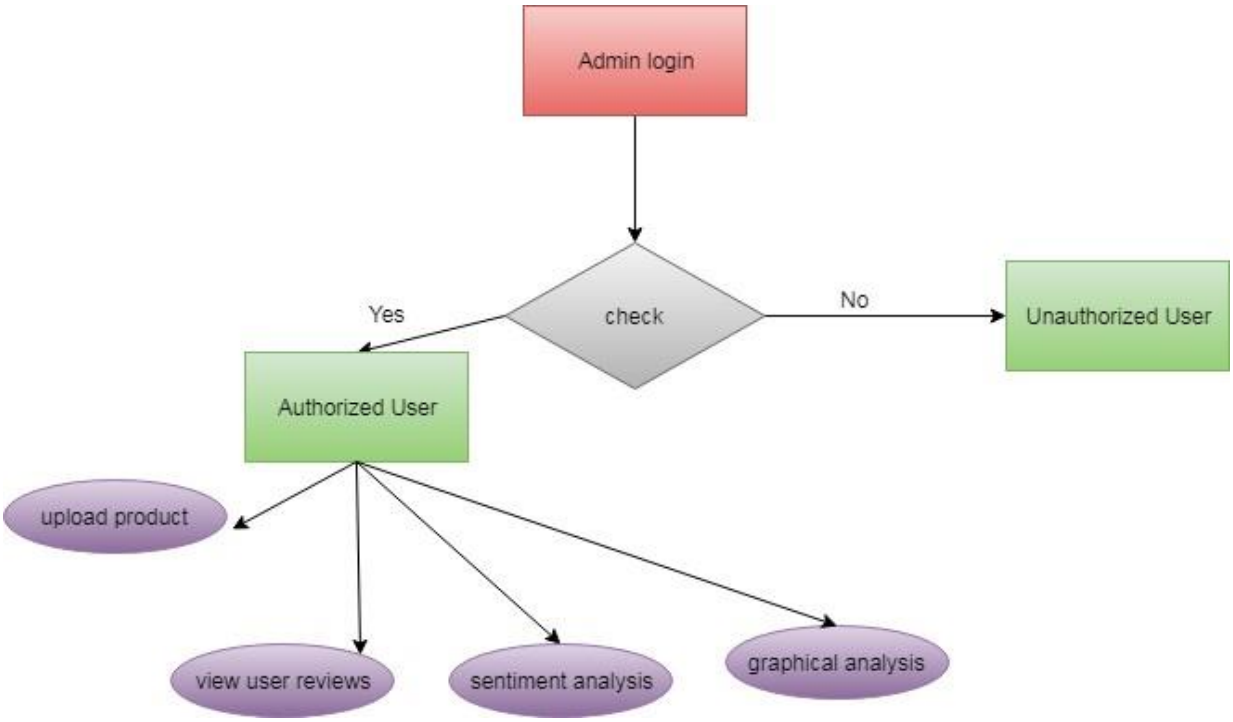

Fig 7.3 b) ER diagram of admin

4. USE CASE DIAGRAM

a. User:

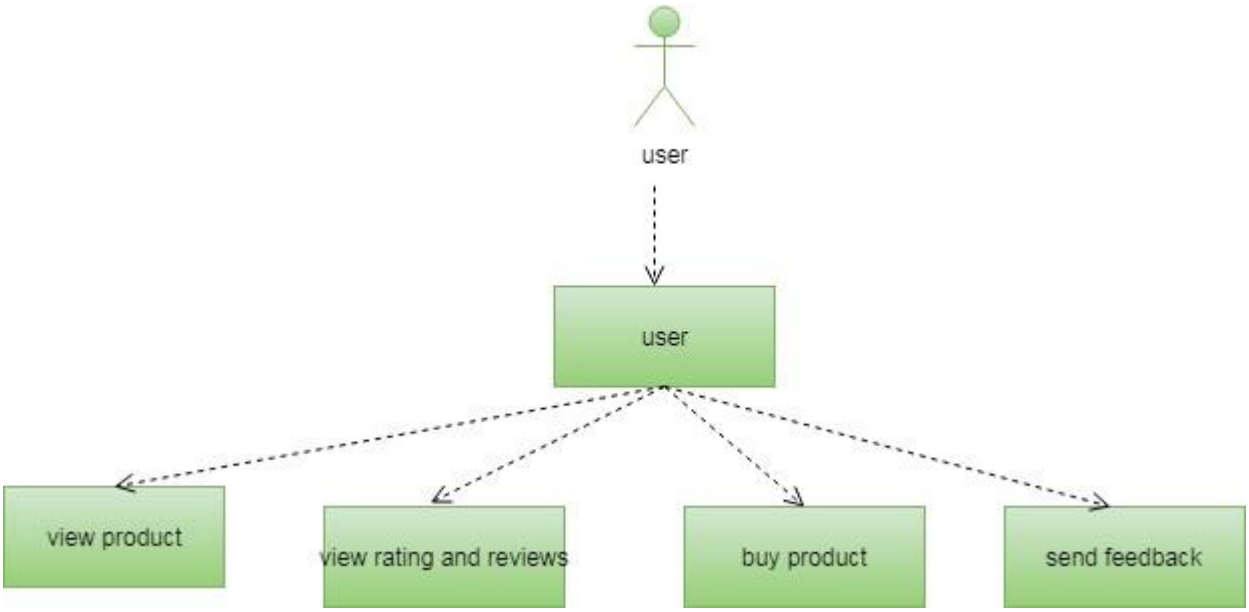

Fig 7.4 a) User-Use case diagram

b. Admin:

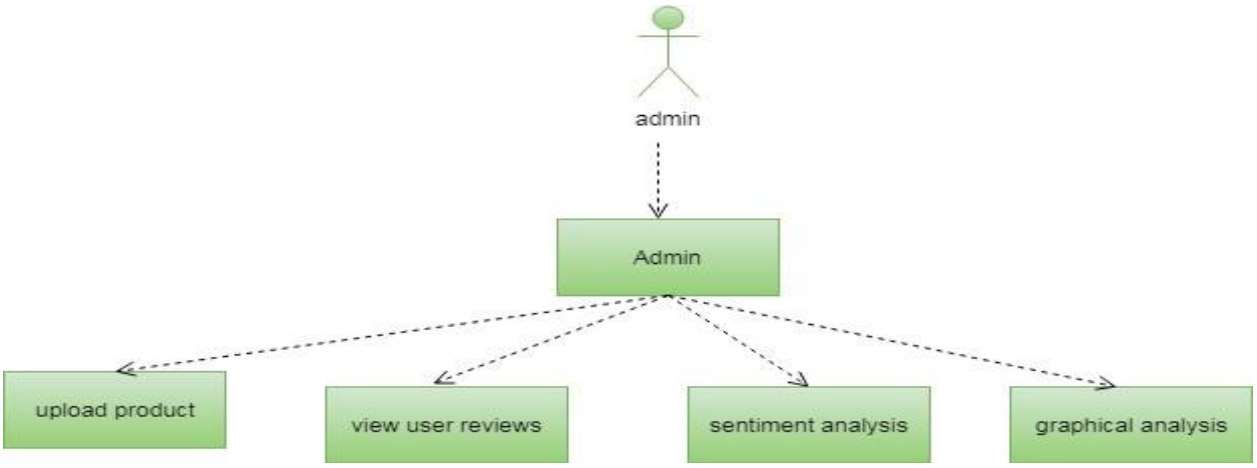

Fig 7.4 b) Admin-use case diagram

5.CLASS DIAGRAM:

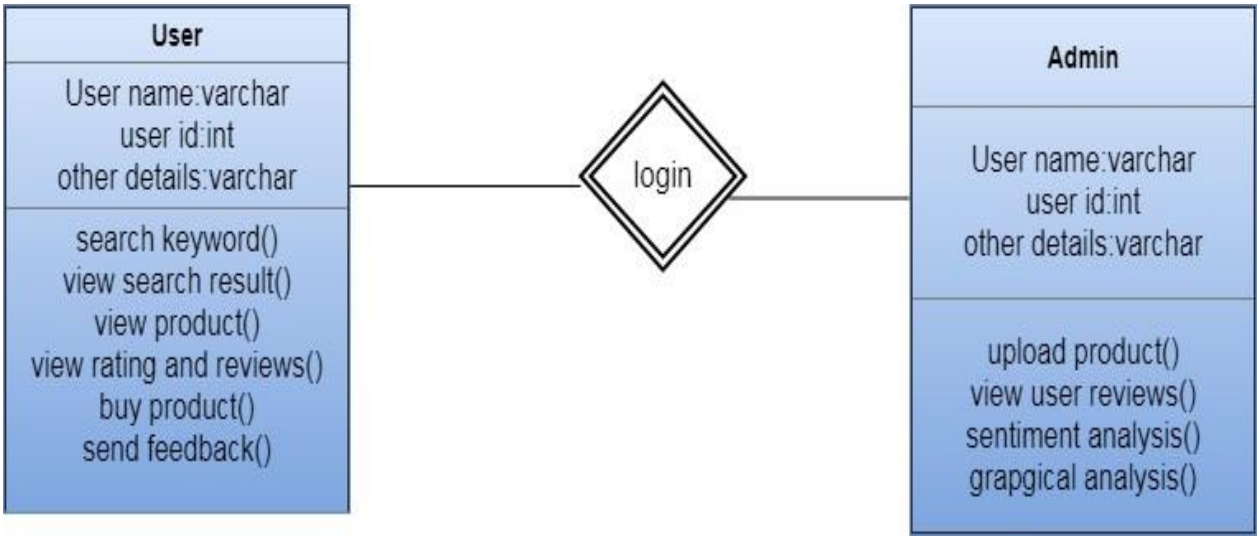

Fig 7.5) Class diagram

5. DATA FLOW DIAGRAM:

a. User:

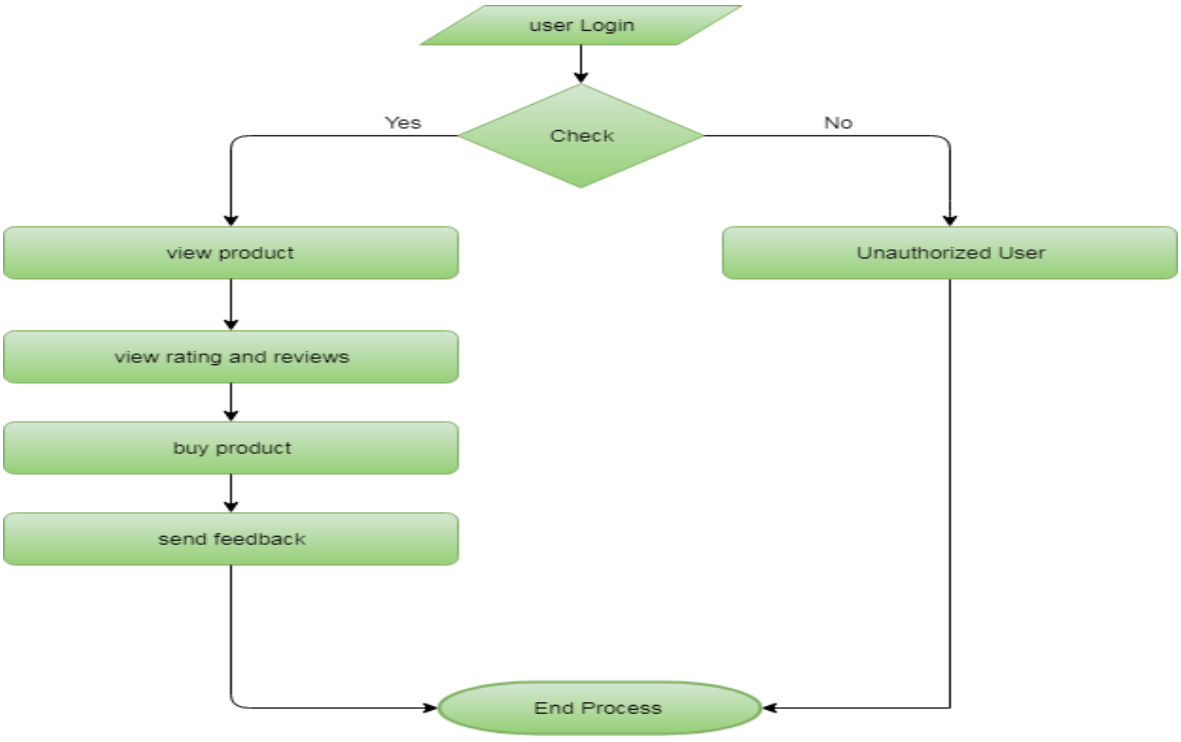

Fig 7.6 a) User-Data flow diagram

b. Admin

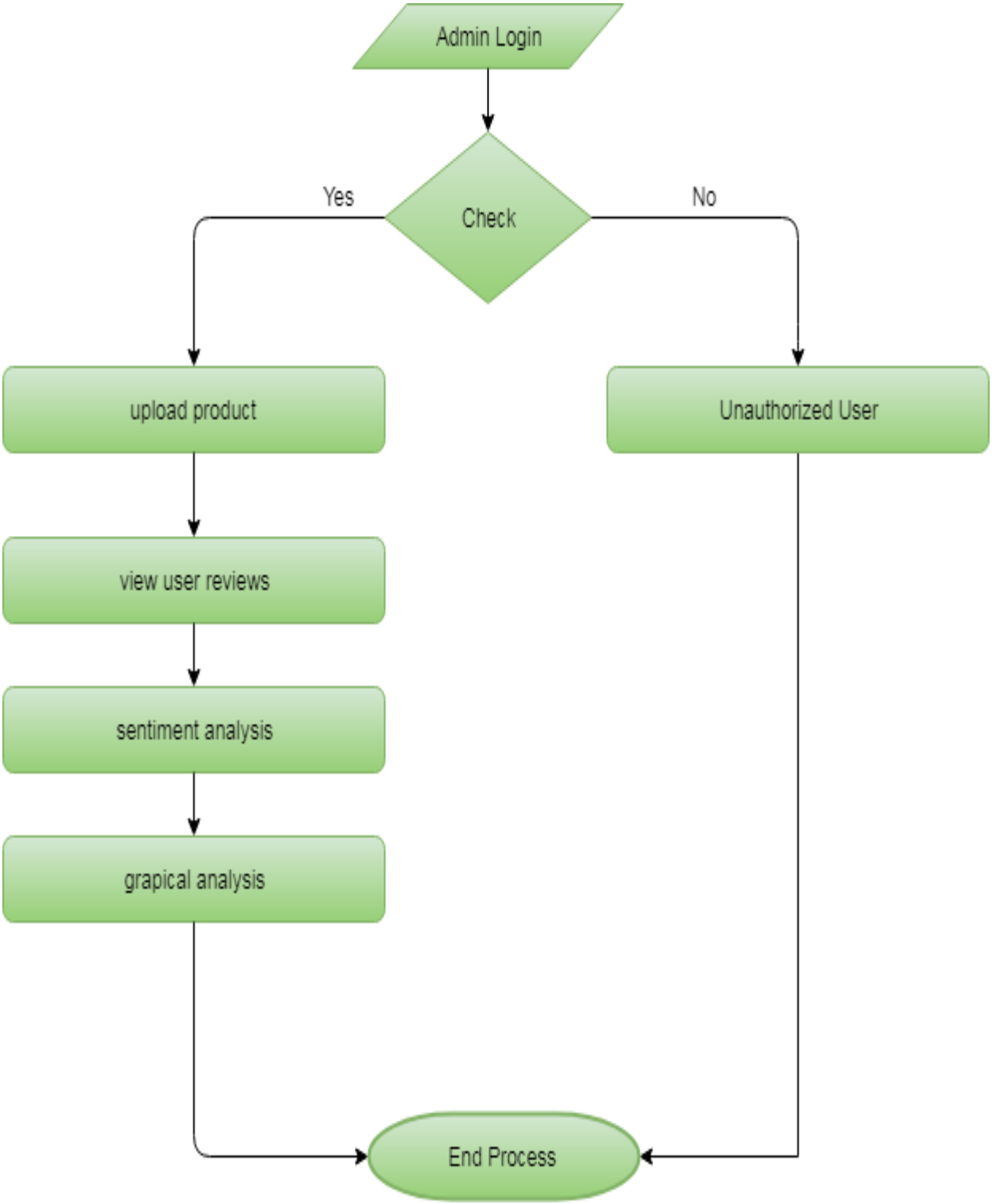

Fig 7.4 b) Admin-Data flow diagram

6. ACTIVITY DIAGRAM:

a. User:

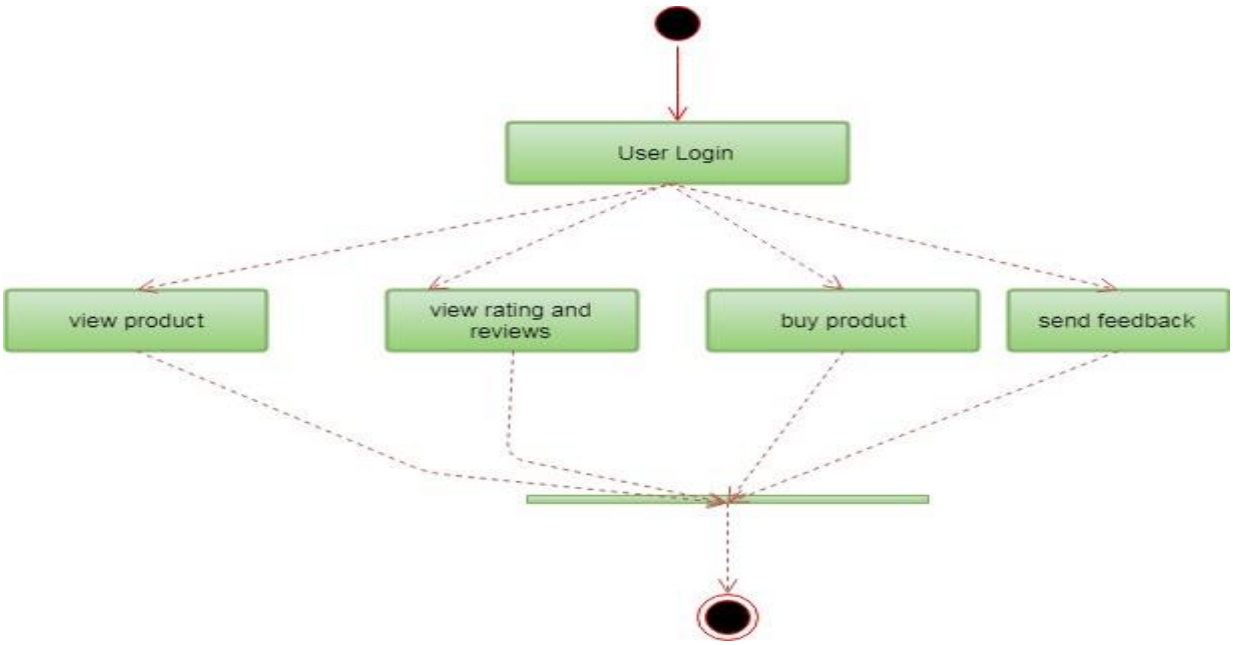

Fig 7.7 a) User-Activity Diagram

b. Admin:

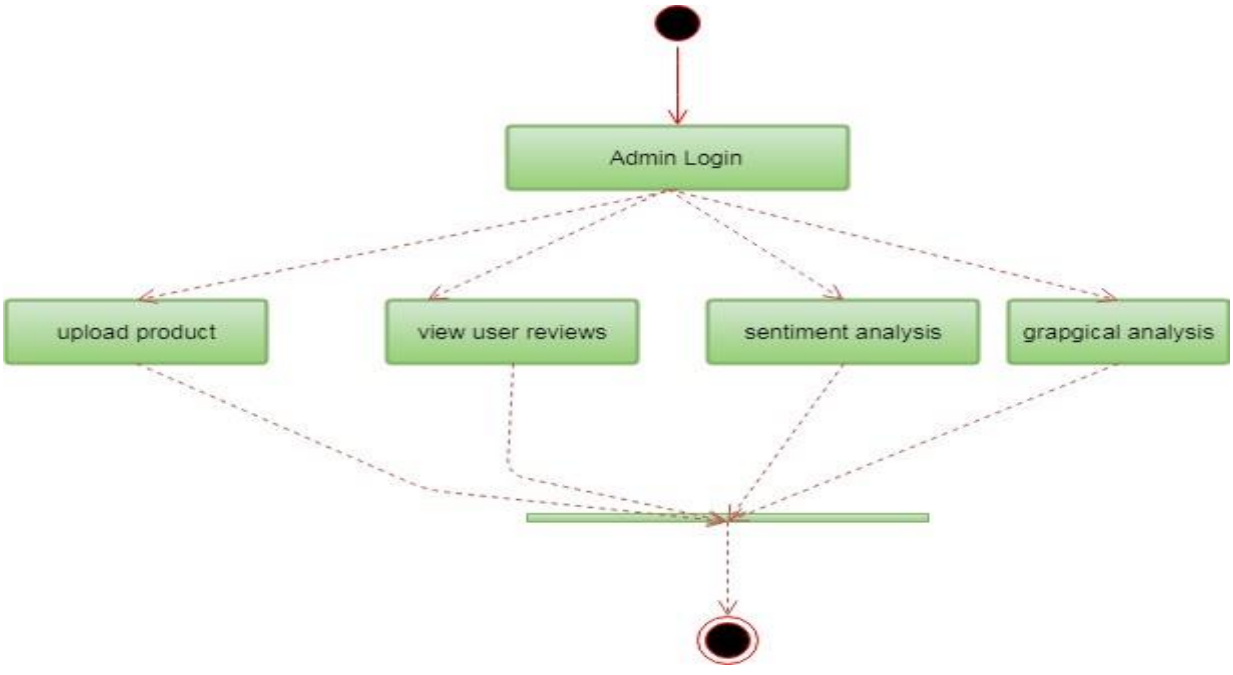

Fig 7.7 b) Admin-Activity diagram

7. SEQUENCE DIAGRAM:

a. User:

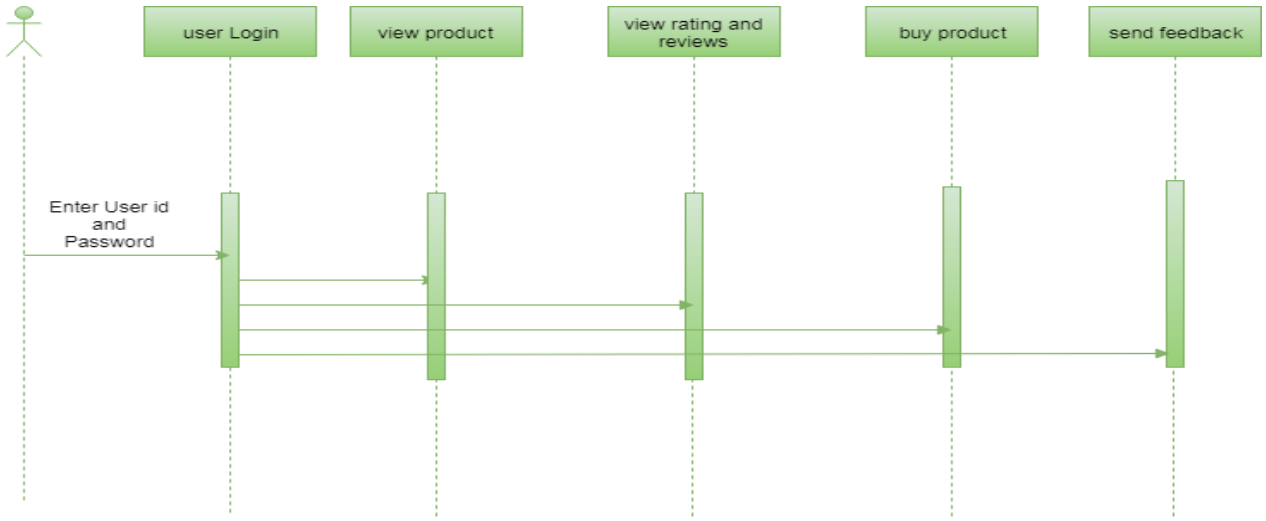

Fig:7.8 a) Sequence diagram of user

b. Admin:

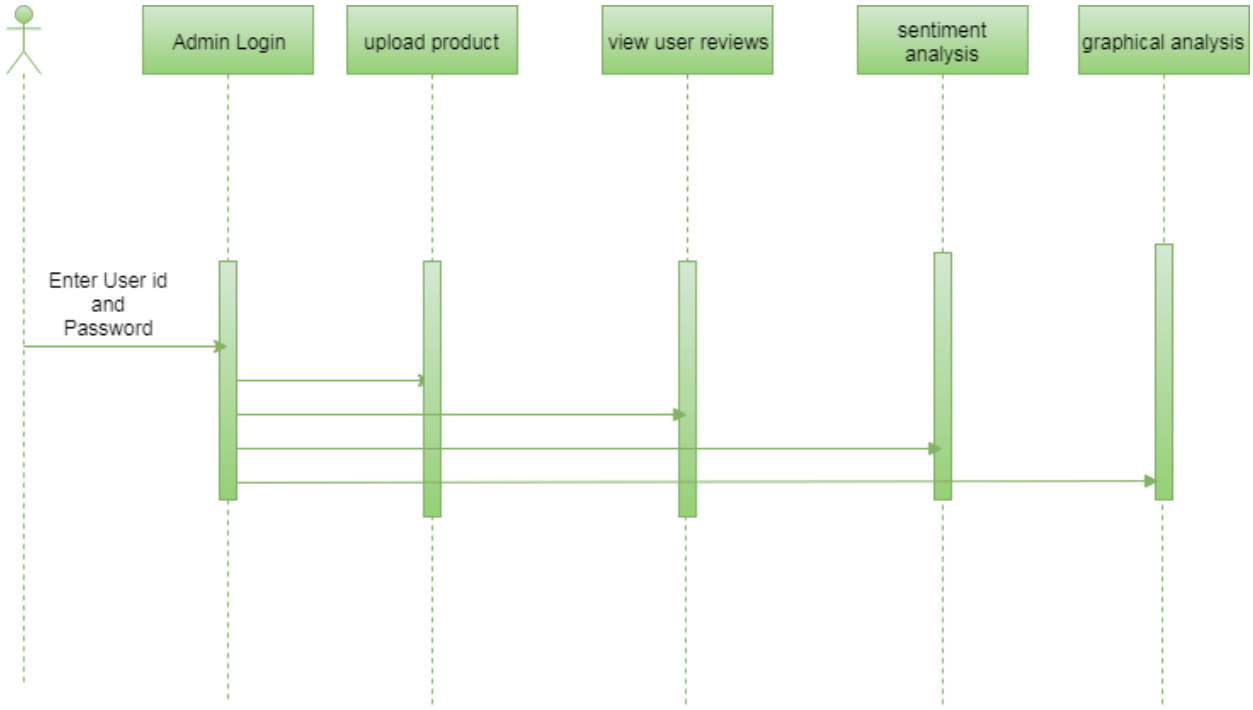

Fig 7.8 b) Admin Sequence diagram

CHAPTER-8

SYSTEM STUDY

FEASIBILITY STUDY:

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

Three key considerations involved in the feasibility analysis are

- **ECONOMICAL FEASIBILITY**
- **TECHNICAL FEASIBILITY**
- **SOCIAL FEASIBILITY**

ECONOMICAL FEASIBILITY:

This study is carried out to check the economic impact that the system will have on the organization. The amount of fund that the company can pour into the research and development of the system is limited. The expenditures must be justified. The developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products had to be purchased

TECHNICAL FEASIBILITY:

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands on the available technical resources. This will lead to high demands being placed on the client.

SOCIAL FEASIBILITY:

The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His level of confidence must be raised so that he is also able to make some constructive criticism, which is welcomed, as he is the final user of the system.

CHAPTER-9

SYSTEM TEST

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, sub-assemblies, assemblies and/or a finished product It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement.

TYPES OF TESTS:

Unit testing

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application .it is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific business process, application, and/or system configuration. Unit tests ensure that each unique path of a business process performs accurately to the documented specifications and contains clearly defined inputs and expected results.

Integration testing:

Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfaction, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

Functional testing:

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals.

Functional testing is centered on the following items:

Valid Input : identified classes of valid input must be accepted. Invalid Input : identified classes of invalid input must be rejected. Functions : identified functions must be exercised.

Output : identified classes of application outputs must.

Systems/Procedures : interfacing systems or procedures must be invoked.

Organization and preparation of functional tests is focused on requirements, key functions, or special test cases. In addition, systematic coverage pertaining to identify Business process flows; data fields, predefined processes, and successive processes must be considered for testing. Before functional testing is complete, additional tests are identified and the effective value of current tests is determined.

System Testing:

System testing ensures that the entire integrated software system meets requirements. It tests a configuration to ensure known and predictable results. An example of system testing is the configuration oriented system integration test. System testing is based on process descriptions and flows, emphasizing pre-driven process links and integration points.

White Box Testing:

White Box Testing is a testing in which in which the software tester has knowledge of the inner workings, structure and language of the software, or at least its purpose. It is purpose. It is used to test areas that cannot be reached from a black box level.

Black Box Testing:

Black Box Testing is testing the software without any knowledge of the inner workings, structure or language of the module being tested. Black box tests, as most other kinds of tests, must be written from a definitive source document, such as specification or requirements document, such as specification or requirements document. It is a testing in which the software under test is treated, as a black box. you cannot “see” into it. The test provides inputs and responds to outputs without considering how the software works.

Unit Testing:

Unit testing is usually conducted as part of a combined code and unit test phase of the software lifecycle, although it is not uncommon for coding and unit testing to be conducted as two distinct phases.

Test strategy and approach:

Field testing will be performed manually and functional tests will be written in detail.

Test objectives:

- All field entries must work properly.
- Pages must be activated from the identified link.
- The entry screen, messages and responses must not be delayed.

Features to be tested:

- Verify that the entries are of the correct format
- No duplicate entries should be allowed
- All links should take the user to the correct page.

Integration Testing:

Software integration testing is the incremental integration testing of two or more integrated software components on a single platform to produce failures caused by interface defects.

The task of the integration test is to check that components or software applications, e.g. components in a software system or – one step up – software applications at the company level – interact without error.

Test Results:

All the test cases mentioned above passed successfully. No defects encountered.

Acceptance Testing:

User Acceptance Testing is a critical phase of any project and requires significant participation by the end user. It also ensures that the system meets the functional requirements.

Test Results:

All the test cases mentioned above passed successfully. No defects encountered.

CHAPTER-10

CODE

```
-- phpMyAdmin SQL Dump
-- version 4.0.4
-- http://www.phpmyadmin.net
--
-- Host: localhost
-- Generation Time: Dec 10, 2018 at 11:27 AM
-- Server version: 5.6.12-log
-- PHP Version: 5.4.16

SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
SET time_zone = "+00:00";


/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8 */;

--
-- Database: `opinionmining`
--
CREATE DATABASE IF NOT EXISTS `opinionmining` DEFAULT CHARACTER SET latin1
COLLATE latin1_swedish_ci;
USE `opinionmining`;

-- --------------------------------------------------------

--
-- Table structure for table `admins_prodcuts`
--

CREATE TABLE IF NOT EXISTS `admins_prodcuts` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `product_name` varchar(200) NOT NULL,
  `vendor_name` varchar(200) NOT NULL,
  `color` varchar(200) NOT NULL,
  `price` double NOT NULL,
  `featuers` varchar(200) NOT NULL,
  `images` varchar(100) NOT NULL,
  `version_name` varchar(200) NOT NULL,
  PRIMARY KEY (`id`)
) ENGINE=InnoDB  DEFAULT CHARSET=latin1 AUTO_INCREMENT=17 ;

--
-- Dumping data for table `admins_prodcuts`
--

INSERT INTO `admins_prodcuts` (`id`, `product_name`, `vendor_name`, `color`, `price`, `featuers`,
`images`, `version_name`) VALUES
(1, 'shirt', ' Van Heusen', 'green', 2000, 'good product', '4.jpg', 'new collections'),
(2, 'shirt', 'Xiomi Peter England', 'white & Blue', 1870, 'All good features available', '1.jpg', 'new
collections'),
```

```
(3, 'T-shirt', 'Parx', 'blue', 10000, 'It is good cloth', '2.jpg', 'new collections'),
(4, 'jeans pant', 'DENIZEN', 'light blue', 4000, 'it is good product', '5.jpg', 'new collections'),
(5, 'cotten pant', 'LEVI''S', 'brown', 2109, 'It is very cheap and worth product and it is indian
made product', '6.jpg', 'new collections'),
(6, 'cotten pant', 'LEVI''S', 'blue', 3500, 'It is worthy product for cost and it is nice to use but it is
little bit heavyIt is worthy product for cost and it is nice to use but it is little bit heavy abc',
'7.jpg', 'new collections'),
(7, 'sudithar', 'Ives.', 'yellow', 1570, 'it is good product', '9.jpg', 'new collections'),
(8, 'sudithar', 'Biba.', 'gray', 1290, 'Money worth', '8.jpg', 'new collections'),
(9, 'sudithar', 'Biba', 'teal', 1240, 'good product', '10.jpg', 'new collections'),
(10, 'mobile accessories', 'Huwai', 'black', 52000, 'Good product', '14.jpg', 'Honor note 3'),
(11, 'mobile', 'sony', 'red', 25000, 'it is good motherboard', '15.jpg', 'vio'),
(13, 'mobile', 'xiaomi', 'pink', 6000, 'it is good product', '16.jpg', 'new'),
(14, 'TV', 'xiaomi', 'black', 45000, 'it is good product', '17.jpeg', 'new version'),
(15, 'watches', 'xiaomi', 'black', 46000, 'It is good product', '18.jpg', 'new version'),
(16, 'TV', 'micromax', 'black', 45670, 'USB support', 'micromax.jpeg', 'se7601');

-- ------------------------------------------------------------

--
-- Table structure for table `auth_group`
--

CREATE TABLE IF NOT EXISTS `auth_group` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `name` varchar(80) NOT NULL,
  PRIMARY KEY (`id`),
  UNIQUE KEY `name` (`name`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=1 ;

-- ------------------------------------------------------------

--
-- Table structure for table `auth_group_permissions`
--

CREATE TABLE IF NOT EXISTS `auth_group_permissions` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `group_id` int(11) NOT NULL,
  `permission_id` int(11) NOT NULL,
  PRIMARY KEY (`id`),
  UNIQUE KEY `auth_group_permissions_group_id_permission_id_0cd325b0_uniq`
(`group_id`,`permission_id`),
  KEY `auth_group_permissio_permission_id_84c5c92e_fk_auth_perm` (`permission_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=1 ;

-- ------------------------------------------------------------

--
-- Table structure for table `auth_permission`
--




CREATE TABLE IF NOT EXISTS `auth_permission` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
```

```
  `name` varchar(255) NOT NULL,
  `content_type_id` int(11) NOT NULL,
  `codename` varchar(100) NOT NULL,
  PRIMARY KEY (`id`),
  UNIQUE KEY `auth_permission_content_type_id_codename_01ab375a_uniq`
(`content_type_id`,`codename`)
)  ENGINE=InnoDB    DEFAULT  CHARSET=latin1  AUTO_INCREMENT=44  ;

--
-- Dumping data for table `auth_permission`
--

INSERT INTO `auth_permission` (`id`, `name`, `content_type_id`, `codename`) VALUES
(1, 'Can add log entry', 1, 'add_logentry'),
(2, 'Can change log entry', 1, 'change_logentry'),
(3, 'Can delete log entry', 1, 'delete_logentry'),
(4, 'Can view log entry', 1, 'view_logentry'),
(5, 'Can add permission', 2, 'add_permission'),
(6, 'Can change permission', 2, 'change_permission'),
(7, 'Can delete permission', 2, 'delete_permission'),
(8, 'Can view permission', 2, 'view_permission'),
(9, 'Can add group', 3, 'add_group'),
(10, 'Can change group', 3, 'change_group'),
(11, 'Can delete group', 3, 'delete_group'),
(12, 'Can view group', 3, 'view_group'),
(13, 'Can add user', 4, 'add_user'),
(14, 'Can change user', 4, 'change_user'),
(15, 'Can delete user', 4, 'delete_user'),
(16, 'Can view user', 4, 'view_user'),
(17, 'Can add content type', 5, 'add_contenttype'),
(18, 'Can change content type', 5, 'change_contenttype'),
(19, 'Can delete content type', 5, 'delete_contenttype'),
(20, 'Can view content type', 5, 'view_contenttype'),
(21, 'Can add session', 6, 'add_session'),
(22, 'Can change session', 6, 'change_session'),
(23, 'Can delete session', 6, 'delete_session'),
(24, 'Can view session', 6, 'view_session'),
(25, 'Can add users', 7, 'add_users'),
(26, 'Can change users', 7, 'change_users'),
(27, 'Can delete users', 7, 'delete_users'),
(28, 'Can view users', 7, 'view_users'),
(29, 'Can add prodcuts', 8, 'add_prodcuts'),
(30, 'Can change prodcuts', 8, 'change_prodcuts'),
(31, 'Can delete prodcuts', 8, 'delete_prodcuts'),
(32, 'Can view prodcuts', 8, 'view_prodcuts'),
(33, 'Can add purchase', 9, 'add_purchase'),
(34, 'Can change purchase', 9, 'change_purchase'),
(35, 'Can delete purchase', 9, 'delete_purchase'),
(36, 'Can view purchase', 9, 'view_purchase'),
(37, 'Can add feedback', 10, 'add_feedback'),
(38, 'Can change feedback', 10, 'change_feedback'),
(39, 'Can delete feedback', 10, 'delete_feedback'),
(40, 'Can view feedback', 10, 'view_feedback'),
(41, 'Can add implict model', 11, 'add_implictmodel'),

(42, 'Can change implict model', 11, 'change_implictmodel'),
(43, 'Can delete implict model', 11, 'delete_implictmodel');

-- ------------------------------------------------------------------------------
```

```
--
-- Table structure for table `auth_user`
--

CREATE TABLE IF NOT EXISTS `auth_user` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `password` varchar(128) NOT NULL,
  `last_login` datetime(6) DEFAULT NULL,
  `is_superuser` tinyint(1) NOT NULL,
  `username` varchar(150) NOT NULL,
  `first_name` varchar(30) NOT NULL,
  `last_name` varchar(150) NOT NULL,
  `email` varchar(254) NOT NULL,
  `is_staff` tinyint(1) NOT NULL,
  `is_active` tinyint(1) NOT NULL,
  `date_joined` datetime(6) NOT NULL,
  PRIMARY KEY (`id`),
  UNIQUE KEY `username` (`username`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=1 ;

-- ----------------------------------------------------------

--
-- Table structure for table `auth_user_groups`
--

CREATE TABLE IF NOT EXISTS `auth_user_groups` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `user_id` int(11) NOT NULL,
  `group_id` int(11) NOT NULL,
  PRIMARY KEY (`id`),
  UNIQUE KEY `auth_user_groups_user_id_group_id_94350c0c_uniq` (`user_id`,`group_id`),
  KEY `auth_user_groups_group_id_97559544_fk_auth_group_id` (`group_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=1 ;

-- ----------------------------------------------------------

--
-- Table structure for table `auth_user_user_permissions`
--

CREATE TABLE IF NOT EXISTS `auth_user_user_permissions` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `user_id` int(11) NOT NULL,
  `permission_id` int(11) NOT NULL,
  PRIMARY KEY (`id`),
  UNIQUE KEY `auth_user_user_permissions_user_id_permission_id_14a6b632_uniq`
(`user_id`,`permission_id`),


  KEY `auth_user_user_permi_permission_id_1fbb5f2c_fk_auth_perm` (`permission_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=1 ;

-- ----------------------------------------------------------

--
```

```
-- Table structure for table `django_admin_log`
--



CREATE TABLE IF NOT EXISTS `django_admin_log` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `action_time` datetime(6) NOT NULL,
  `object_id` longtext,
  `object_repr` varchar(200) NOT NULL,
  `action_flag` smallint(5) unsigned NOT NULL,
  `change_message` longtext NOT NULL,
  `content_type_id` int(11) DEFAULT NULL,
  `user_id` int(11) NOT NULL,
  PRIMARY KEY (`id`),
  KEY `django_admin_log_content_type_id_c4bce8eb_fk_django_co` (`content_type_id`),
  KEY `django_admin_log_user_id_c564eba6_fk_auth_user_id` (`user_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=1 ;

-- ------------------------------------------------------------

--
-- Table structure for table `django_content_type`
--

CREATE TABLE IF NOT EXISTS `django_content_type` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `app_label` varchar(100) NOT NULL,
  `model` varchar(100) NOT NULL,
  PRIMARY KEY (`id`),
  UNIQUE KEY `django_content_type_app_label_model_76bd3d3b_uniq` (`app_label`,`model`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=12 ;

--
-- Dumping data for table `django_content_type`
--

INSERT INTO `django_content_type` (`id`, `app_label`, `model`) VALUES
(1, 'admin', 'logentry'),
(8, 'admins', 'prodcuts'),
(3, 'auth', 'group'),
(2, 'auth', 'permission'),
(4, 'auth', 'user'),
(5, 'contenttypes', 'contenttype'),
(6, 'sessions', 'session'),
(10, 'user', 'feedback'),
(11, 'user', 'implictmodel'),
(9, 'user', 'purchase'),
(7, 'user', 'users');


-- ------------------------------------------------------------

--
-- Table structure for table `django_migrations`
--

CREATE TABLE IF NOT EXISTS `django_migrations` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
```

```
  `app` varchar(255) NOT NULL,
  `name` varchar(255) NOT NULL,
  `applied` datetime(6) NOT NULL,
  PRIMARY KEY (`id`)
) ENGINE=InnoDB  DEFAULT CHARSET=latin1 AUTO_INCREMENT=26 ;

--
-- Dumping data for table `django_migrations`
--

INSERT INTO `django_migrations` (`id`, `app`, `name`, `applied`) VALUES
(1, 'contenttypes', '0001_initial', '2018-08-11 12:34:56.765625'),
(2, 'auth', '0001_initial', '2018-08-11 12:35:09.420898'),
(3, 'admin', '0001_initial', '2018-08-11 12:35:11.701171'),
(4, 'admin', '0002_logentry_remove_auto_add', '2018-08-11 12:35:11.794921'),
(5, 'admin', '0003_logentry_add_action_flag_choices', '2018-08-11 12:35:11.857421'),
(6, 'contenttypes', '0002_remove_content_type_name', '2018-08-11 12:35:13.250976'),
(7, 'auth', '0002_alter_permission_name_max_length', '2018-08-11 12:35:13.954101'),
(8, 'auth', '0003_alter_user_email_max_length', '2018-08-11 12:35:14.687500'),
(9, 'auth', '0004_alter_user_username_opts', '2018-08-11 12:35:14.734375'),
(10, 'auth', '0005_alter_user_last_login_null', '2018-08-11 12:35:15.306640'),
(11, 'auth', '0006_require_contenttypes_0002', '2018-08-11 12:35:15.353515'),
(12, 'auth', '0007_alter_validators_add_error_messages', '2018-08-11 12:35:15.400390'),
(13, 'auth', '0008_alter_user_username_max_length', '2018-08-11 12:35:16.041015'),
(14, 'auth', '0009_alter_user_last_name_max_length', '2018-08-11 12:35:16.823242'),
(15, 'sessions', '0001_initial', '2018-08-11 12:35:17.951171'),
(16, 'user', '0001_initial', '2018-08-11 12:35:18.374023'),
(17, 'user', '0002_users_profession', '2018-08-11 12:35:18.875000'),
(18, 'user', '0003_auto_20180811_1804', '2018-08-11 12:35:18.906250'),
(19, 'admins', '0001_initial', '2018-08-13 13:18:51.536132'),
(20, 'user', '0004_purchase', '2018-08-13 13:19:36.762695'),
(21, 'user', '0005_feedback', '2018-08-13 13:40:38.198242'),
(22, 'admins', '0002_prodcuts_version_name', '2018-08-14 10:08:50.041015'),
(23, 'admins', '0002_auto_20181208_1532', '2018-12-08 10:02:49.440201'),
(24, 'user', '0002_implictmodel', '2018-12-08 10:02:50.762807'),
(25, 'user', '0003_auto_20181208_1615', '2018-12-08 10:45:08.774279');

-- --------------------------------------------------------

--
-- Table structure for table `django_session`
--

CREATE TABLE IF NOT EXISTS `django_session` (
  `session_key` varchar(40) NOT NULL,
  `session_data` longtext NOT NULL,
  `expire_date` datetime(6) NOT NULL,
  PRIMARY KEY (`session_key`),


  KEY `django_session_expire_date_a5c62663` (`expire_date`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Dumping data for table `django_session`
--

INSERT INTO `django_session` (`session_key`, `session_data`, `expire_date`) VALUES
('2vbh9pjauhkr4t5vx4yttdeuara9k46u',
```

```
'YTMzNjBlNWQ5NzZhZjczNjc5NDExOTJiZWJjNjM1NzQzOTljYzhmMjp7InVzZXJpZCI6NTQsInVzZ
XJuYW1lIjoic2FiYXJpIn0=', '2018-12-15 10:30:15.375606'),
('2yl2b4f9430j4y3vs1rn4hpfofg742wp',
'MjZhZTFiMWMxMWQwNzE0NDBlMTE1MDk3OTc3NmNmOGUwMDRlNWMyYzp7InVzZXJpZCI6
MSwidXNlcm5hbWUiOiJhZG1pbiJ9', '2018-08-28 10:04:07.715820'),
('61jul8fcmja3nfmengybtzcysh9h2lp7',
'ODIxNjkyMWQyZWQ3OWIyN2E4NGQ5Yzg4MzY4NWNmYzJiMTA5ZjIyMDp7InVzZXJpZCI6NTQsI
nVzZXJuYW1lIjoic2FiYXJpIiwiYiI6IjE1OjI2OjI4In0=', '2018-12-24 09:56:28.567408'),
('8nbpelns1q0l9gnpla8yfpbp0mezri6h',
'MjZhZTFiMWMxMWQwNzE0NDBlMTE1MDk3OTc3NmNmOGUwMDRlNWMyYzp7InVzZXJpZCI6
MSwidXNlcm5hbWUiOiJhZG1pbiJ9', '2018-09-04 11:04:52.277343'),
('fa1ba2hr1vi3zrsfm43nvcfndonou3wg',
'NjAxNjE4YjVlMDVjMzYwMWE4NjMwZmJjZjAxZThiNzljNTQ5MGUxODp7InVzZXJpZCI6MiwidXNl
cm5hbWUiOiJnb2t1bCJ9', '2018-12-20 09:42:48.106102'),
('g5yj7hvb8s02s4g5r731qqg5pdvnpprm',
'NzU0NmM2ZWQzNDhjOTU0MGI5YjQ3N2JlYjVhNGFkOTg3YjNjNmE5Zjp7InVzZXJpZCI6MTAsIn
VzZXJuYW1lIjoicmFtIn0=', '2018-09-06 11:32:28.859375'),
('hxn7ymwgk7d48hg95sx9an8bm84nmx8s',
'MjZhZTFiMWMxMWQwNzE0NDBlMTE1MDk3OTc3NmNmOGUwMDRlNWMyYzp7InVzZXJpZCI6
MSwidXNlcm5hbWUiOiJhZG1pbiJ9', '2018-09-05 14:22:30.652343'),
('j5ldau2u9jgut03ksa78f89hspuswzlo',
'ZmRjNTAxODUxMjdjODBkZjhlYmI4OTQyMGQ0NDBmOTQ2OTA5MjkwZjp7fQ==', '2018-12-12
11:52:36.879451'),
('j8kth4fwkwty12fgg3smr2sdua5dff8n',
'NzdjMWFkZWQxYmVlMjM0MTE4YTdjN2JjOWRhNTI2NzFlODkxNmE3MDp7InVzZXJpZCI6MSwi
dXNlcm5hbWUiOiJhZG1pbiJ9', '2018-12-20 11:05:21.240344'),
('j8p7y0kwx8yggsqo92euze7gfhsqztpp',
'MjZhZTFiMWMxMWQwNzE0NDBlMTE1MDk3OTc3NmNmOGUwMDRlNWMyYzp7InVzZXJpZCI6
MSwidXNlcm5hbWUiOiJhZG1pbiJ9', '2018-12-06 07:10:18.004707'),
('ku4uk924u0w2wfaaik2lokot0txrtp9c',
'Y2E5MmI2ZmJlNWY5ODQ2YzA1YzViZjUwNGI5ZTYyZDM2NjY4MWRjODp7fQ==', '2018-09-05
14:44:56.993164'),
('mtjrobvpd5y80rav07lktdnuo2q80qpm',
'MjZhZTFiMWMxMWQwNzE0NDBlMTE1MDk3OTc3NmNmOGUwMDRlNWMyYzp7InVzZXJpZCI6
MSwidXNlcm5hbWUiOiJhZG1pbiJ9', '2018-12-06 10:06:35.954061'),
('s8pxwsgx6vzbtj7mcrkflyb0kqvuijuq',
'NjAxNjE4YjVlMDVjMzYwMWE4NjMwZmJjZjAxZThiNzljNTQ5MGUxODp7InVzZXJpZCI6MiwidXNl
cm5hbWUiOiJnb2t1bCJ9', '2018-12-14 12:25:45.620731'),
('thjcao031c99kn9jk25cvgrkzzoqocu6',
'Y2E5MmI2ZmJlNWY5ODQ2YzA1YzViZjUwNGI5ZTYyZDM2NjY4MWRjODp7fQ==', '2018-08-25
14:07:27.893554'),
('v90j1vl1itg1hyhda65h8oj5kk5lhw44',
'MjZhZTFiMWMxMWQwNzE0NDBlMTE1MDk3OTc3NmNmOGUwMDRlNWMyYzp7InVzZXJpZCI6
MSwidXNlcm5hbWUiOiJhZG1pbiJ9', '2018-10-20 14:56:38.993666'),
('vbr6crzhkk4qjtot8q034a8usklkusvp',
'Y2E5MmI2ZmJlNWY5ODQ2YzA1YzViZjUwNGI5ZTYyZDM2NjY4MWRjODp7fQ==', '2018-09-05
14:01:04.137695');

-- --------------------------------------------------------

--
-- Table structure for table `user_feedback`
--

CREATE TABLE IF NOT EXISTS `user_feedback` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `isPurchased` varchar(200) NOT NULL,
  `rating` varchar(200) NOT NULL,
  `review` varchar(200) NOT NULL,
```

```
  `sentiment` varchar(200) NOT NULL,
  `product_id` int(11) NOT NULL,
  `user_id` int(11) NOT NULL,
  PRIMARY KEY (`id`),
  KEY `user_feedback_product_id_fa325b04_fk_admins_prodcuts_id` (`product_id`),
  KEY `user_feedback_user_id_5b987fa1_fk_user_users_id` (`user_id`)
) ENGINE=InnoDB  DEFAULT CHARSET=latin1 AUTO_INCREMENT=608 ;

--
-- Dumping data for table `user_feedback`
--

INSERT INTO `user_feedback` (`id`, `isPurchased`, `rating`, `review`, `sentiment`, `product_id`,
`user_id`) VALUES
(1, 'not purchased', '3', 'It is very good product', 'positive', 2, 1),
(2, 'not purchased', '2', 'it is good\r', 'positive', 2, 1),
(3, 'purchased', '2', 'good', 'positive', 1, 4),
(4, 'not purchased', '4', 'It is worst', 'neutral', 3, 1),
(5, 'purchased', '1', 'poor product i have ever seen', 'negative', 3, 1),
(6, 'purchased', '5', 'worst product I have ever purchased', 'negative', 1, 1),
(7, 'purchased', '3', 'not good', 'negative', 1, 1),
(8, 'purchased', '3', 'poor purchase', 'negative', 6, 15),
(9, 'purchased', '2', 'great purchase', 'positive', 2, 1),
(10, 'purchased', '5', 'super', 'positive', 10, 1),
(11, 'purchased', '2', 'It is very good product', 'positive', 10, 1),
(12, 'not purchased', '1', 'it is good\r', 'positive', 1, 1),
(13, 'not purchased', '2', 'good', 'positive', 2, 1),
(14, 'not purchased', '5', 'It is worst', 'negative', 7, 14),
(15, 'not purchased', '4', 'poor product i have ever seen', 'neutral', 2, 14),
(16, 'purchased', '3', 'worst product I have ever purchased', 'neutral', 6, 14),
(17, 'purchased', '2', 'not good', 'neutral', 2, 14),
(18, 'purchased', '2', 'poor purchase', 'positive', 7, 14),
(19, 'purchased', '4', 'great purchase', 'positive', 8, 14),
(20, 'purchased', '1', 'super', 'positive', 7, 14),
(21, 'purchased', '5', 'It is very good product', 'positive', 10, 14),
(22, 'purchased', '3', 'it is good\r', 'neutral', 9, 18),
(23, 'not purchased', '3', 'good', 'negative', 8, 18),
(24, 'purchased', '2', 'It is worst', 'negative', 8, 1),
(25, 'not purchased', '5', 'poor product i have ever seen', 'negative', 7, 1),
(26, 'not purchased', '2', 'worst product I have ever purchased', 'negative', 1, 1),
(27, 'purchased', '1', 'not good', 'positive', 8, 1),
(28, 'purchased', '2', 'poor purchase', 'positive', 7, 1),
(29, 'purchased', '5', 'great purchase', 'positive', 3, 1),
(30, 'not purchased', '4', 'super', 'positive', 10, 1),
(31, 'purchased', '3', 'It is very good product', 'positive', 5, 1),


(32, 'not purchased', '2', 'it is good\r', 'negative', 7, 1),
(33, 'purchased', '2', 'good', 'neutral', 10, 1),
(34, 'purchased', '4', 'It is worst', 'neutral', 6, 1),
(35, 'purchased', '1', 'poor product i have ever seen', 'neutral', 4, 1),
(36, 'purchased', '5', 'worst product I have ever purchased', 'positive', 9, 1),
(37, 'purchased', '3', 'not good', 'positive', 4, 1),
(38, 'purchased', '3', 'poor purchase', 'positive', 8, 1),
(39, 'purchased', '2', 'great purchase', 'positive', 6, 1),
(40, 'purchased', '5', 'super', 'neutral', 3, 1),
(41, 'purchased', '2', 'It is very good product', 'positive', 3, 1),
(42, 'purchased', '1', 'it is good\r', 'positive', 5, 1),
(43, 'purchased', '2', 'good', 'positive', 9, 1),
```

(44, 'purchased', '5', 'It is worst', 'neutral', 3, 1),
(45, 'purchased', '4', 'poor product i have ever seen', 'negative', 2, 1),
(46, 'purchased', '3', 'worst product I have ever purchased', 'negative', 10, 1),
(47, 'purchased', '2', 'not good', 'negative', 10, 1),
(48, 'purchased', '2', 'poor purchase', 'negative', 10, 1),
(49, 'not purchased', '4', 'great purchase', 'positive', 4, 1),
(50, 'purchased', '1', 'super', 'positive', 3, 1),
(51, 'not purchased', '5', 'It is very good product', 'positive', 7, 1),
(52, 'purchased', '3', 'it is good\r', 'positive', 6, 1),
(53, 'purchased', '3', 'good', 'positive', 1, 1),
(54, 'purchased', '2', 'It is worst', 'negative', 10, 1),
(55, 'purchased', '5', 'poor product i have ever seen', 'neutral', 1, 1),
(56, 'purchased', '2', 'worst product I have ever purchased', 'neutral', 6, 1),
(57, 'not purchased', '1', 'not good', 'neutral', 4, 1),
(58, 'not purchased', '2', 'poor purchase', 'positive', 3, 1),
(59, 'purchased', '5', 'great purchase', 'positive', 9, 1),
(60, 'not purchased', '4', 'super', 'positive', 8, 1),
(61, 'not purchased', '3', 'It is very good product', 'positive', 6, 1),
(62, 'not purchased', '2', 'it is good\r', 'neutral', 3, 1),
(63, 'purchased', '2', 'good', 'negative', 7, 1),
(64, 'not purchased', '4', 'It is worst', 'negative', 7, 1),
(65, 'purchased', '1', 'poor product i have ever seen', 'negative', 7, 1),
(66, 'purchased', '5', 'worst product I have ever purchased', 'negative', 9, 1),
(67, 'purchased', '3', 'not good', 'positive', 3, 1),
(68, 'purchased', '3', 'poor purchase', 'positive', 9, 1),
(69, 'purchased', '2', 'great purchase', 'positive', 4, 1),
(70, 'purchased', '5', 'super', 'positive', 9, 1),
(71, 'purchased', '2', 'It is very good product', 'positive', 5, 1),
(72, 'not purchased', '1', 'it is good\r', 'negative', 5, 1),
(73, 'not purchased', '2', 'good', 'neutral', 9, 1),
(74, 'not purchased', '5', 'It is worst', 'neutral', 6, 1),
(75, 'not purchased', '4', 'poor product i have ever seen', 'neutral', 6, 1),
(76, 'purchased', '3', 'worst product I have ever purchased', 'positive', 7, 1),
(77, 'purchased', '2', 'not good', 'positive', 4, 1),
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(402, 'purchased', '1', 'it is good\r', 'positive', 5, 1),
(403, 'purchased', '2', 'good', 'positive', 8, 1),
(404, 'purchased', '5', 'It is worst', 'neutral', 10, 1),
(405, 'purchased', '4', 'poor product i have ever seen', 'negative', 10, 1),
(406, 'purchased', '3', 'worst product I have ever purchased', 'negative', 7, 1),
(407, 'purchased', '2', 'not good', 'negative', 10, 1),
(408, 'purchased', '2', 'poor purchase', 'negative', 3, 1),
(409, 'not purchased', '4', 'great purchase', 'positive', 2, 1),
(410, 'purchased', '1', 'super', 'positive', 3, 1),
(411, 'not purchased', '5', 'It is very good product', 'positive', 7, 1),
(412, 'purchased', '3', 'it is good\r', 'positive', 10, 1),
(413, 'purchased', '3', 'good', 'positive', 9, 1),
(414, 'purchased', '2', 'It is worst', 'negative', 5, 1),
(415, 'purchased', '5', 'poor product i have ever seen', 'neutral', 7, 1),
(416, 'purchased', '2', 'worst product I have ever purchased', 'neutral', 1, 1),
(417, 'not purchased', '1', 'not good', 'neutral', 4, 1),
(418, 'not purchased', '2', 'poor purchase', 'positive', 5, 1),
(419, 'purchased', '5', 'great purchase', 'positive', 5, 1),
(420, 'not purchased', '4', 'super', 'positive', 7, 1),
(421, 'not purchased', '3', 'It is very good product', 'positive', 7, 1),
(422, 'not purchased', '2', 'it is good\r', 'neutral', 7, 1),
(423, 'purchased', '2', 'good', 'negative', 1, 1),
(424, 'not purchased', '4', 'It is worst', 'negative', 7, 1),
(425, 'purchased', '1', 'poor product i have ever seen', 'negative', 2, 1),

(426, 'purchased', '5', 'worst product I have ever purchased', 'negative', 3, 1),
(427, 'purchased', '3', 'not good', 'positive', 6, 1),
(428, 'purchased', '3', 'poor purchase', 'positive', 7, 1),
(429, 'purchased', '2', 'great purchase', 'positive', 8, 1),
(430, 'purchased', '5', 'super', 'positive', 5, 1),
(431, 'purchased', '2', 'It is very good product', 'positive', 6, 1),
(432, 'not purchased', '1', 'it is good\r', 'negative', 10, 1),
(433, 'not purchased', '2', 'good', 'neutral', 5, 1),
(434, 'not purchased', '5', 'It is worst', 'neutral', 4, 1),
(435, 'not purchased', '4', 'poor product i have ever seen', 'neutral', 1, 1),
(436, 'purchased', '3', 'worst product I have ever purchased', 'positive', 9, 1),
(437, 'purchased', '2', 'not good', 'positive', 1, 1),
(438, 'purchased', '2', 'poor purchase', 'positive', 8, 1),
(439, 'purchased', '4', 'great purchase', 'positive', 1, 1),
(440, 'purchased', '1', 'super', 'neutral', 4, 1),
(441, 'purchased', '5', 'It is very good product', 'positive', 7, 1),
(442, 'purchased', '3', 'it is good\r', 'positive', 10, 1),
(443, 'not purchased', '3', 'good', 'positive', 5, 1),
(444, 'purchased', '2', 'It is worst', 'neutral', 9, 1),

(445, 'not purchased', '5', 'poor product i have ever seen', 'negative', 2, 1),
(446, 'not purchased', '2', 'worst product I have ever purchased', 'negative', 6, 1),
(447, 'purchased', '1', 'not good', 'negative', 3, 1),
(448, 'purchased', '2', 'poor purchase', 'negative', 2, 1),
(449, 'purchased', '5', 'great purchase', 'positive', 5, 1),
(450, 'not purchased', '4', 'super', 'positive', 7, 1),
(451, 'purchased', '3', 'It is very good product', 'positive', 2, 1),
(452, 'not purchased', '2', 'it is good\r', 'positive', 10, 1),
(453, 'purchased', '2', 'good', 'positive', 3, 1),
(454, 'purchased', '4', 'It is worst', 'negative', 10, 1),
(455, 'purchased', '1', 'poor product i have ever seen', 'neutral', 1, 1),
(456, 'purchased', '5', 'worst product I have ever purchased', 'neutral', 5, 1),
(457, 'purchased', '3', 'not good', 'neutral', 7, 1),
(458, 'purchased', '3', 'poor purchase', 'positive', 6, 1),
(459, 'purchased', '2', 'great purchase', 'positive', 3, 1),
(460, 'purchased', '5', 'super', 'positive', 1, 1),
(461, 'purchased', '2', 'It is very good product', 'positive', 10, 1),
(462, 'purchased', '1', 'it is good\r', 'neutral', 6, 1),
(463, 'purchased', '2', 'good', 'negative', 10, 1),
(464, 'purchased', '5', 'It is worst', 'negative', 7, 1),
(465, 'purchased', '4', 'poor product i have ever seen', 'negative', 7, 1),
(466, 'purchased', '3', 'worst product I have ever purchased', 'negative', 9, 1),
(467, 'purchased', '2', 'not good', 'positive', 6, 1),
(468, 'purchased', '2', 'poor purchase', 'positive', 10, 1),
(469, 'not purchased', '4', 'great purchase', 'positive', 10, 1),
(470, 'purchased', '1', 'super', 'positive', 7, 1),
(471, 'not purchased', '5', 'It is very good product', 'positive', 1, 1),
(472, 'purchased', '3', 'it is good\r', 'negative', 5, 1),
(473, 'purchased', '3', 'good', 'neutral', 5, 1),
(474, 'purchased', '2', 'It is worst', 'neutral', 10, 1),
(475, 'purchased', '5', 'poor product i have ever seen', 'neutral', 10, 1),
(476, 'purchased', '2', 'worst product I have ever purchased', 'positive', 1, 1),
(477, 'not purchased', '1', 'not good', 'positive', 3, 1),
(478, 'not purchased', '2', 'poor purchase', 'positive', 10, 1),
(479, 'purchased', '5', 'great purchase', 'positive', 7, 1),
(480, 'not purchased', '4', 'super', 'neutral', 5, 1),
(481, 'not purchased', '3', 'It is very good product', 'positive', 3, 1),

(482, 'not purchased', '2', 'it is good\r', 'positive', 1, 1),
(483, 'purchased', '2', 'good', 'positive', 8, 1),
(484, 'not purchased', '4', 'It is worst', 'neutral', 2, 1),
(485, 'purchased', '1', 'poor product i have ever seen', 'negative', 5, 1),
(486, 'purchased', '5', 'worst product I have ever purchased', 'negative', 4, 1),
(487, 'purchased', '3', 'not good', 'negative', 1, 1),
(488, 'purchased', '3', 'poor purchase', 'negative', 1, 1),
(489, 'purchased', '2', 'great purchase', 'positive', 9, 1),
(490, 'purchased', '5', 'super', 'positive', 5, 1),
(491, 'purchased', '2', 'It is very good product', 'positive', 10, 1),
(492, 'not purchased', '1', 'it is good\r', 'positive', 10, 1),
(493, 'not purchased', '2', 'good', 'positive', 3, 1),
(494, 'not purchased', '5', 'It is worst', 'negative', 4, 1),
(495, 'not purchased', '4', 'poor product i have ever seen', 'neutral', 7, 1),
(496, 'purchased', '3', 'worst product I have ever purchased', 'neutral', 1, 1),
(497, 'purchased', '2', 'not good', 'neutral', 8, 1),
(498, 'purchased', '2', 'poor purchase', 'positive', 9, 1),
(499, 'purchased', '4', 'great purchase', 'positive', 5, 1),
(500, 'purchased', '1', 'super', 'positive', 8, 1),
(501, 'purchased', '5', 'It is very good product', 'positive', 2, 1),

(502, 'purchased', '3', 'it is good\r', 'neutral', 5, 1),
(503, 'not purchased', '3', 'good', 'negative', 2, 1),
(504, 'purchased', '2', 'It is worst', 'negative', 10, 1),
(505, 'not purchased', '5', 'poor product i have ever seen', 'negative', 7, 1),
(506, 'not purchased', '2', 'worst product I have ever purchased', 'negative', 8, 1),
(507, 'purchased', '1', 'not good', 'positive', 4, 1),
(508, 'purchased', '2', 'poor purchase', 'positive', 5, 1),
(509, 'purchased', '5', 'great purchase', 'positive', 6, 1),
(510, 'not purchased', '4', 'super', 'positive', 9, 1),
(511, 'purchased', '3', 'It is very good product', 'positive', 2, 1),
(512, 'not purchased', '2', 'it is good\r', 'negative', 6, 1),
(513, 'purchased', '2', 'good', 'neutral', 10, 1),
(514, 'purchased', '4', 'It is worst', 'neutral', 9, 1),
(515, 'purchased', '1', 'poor product i have ever seen', 'neutral', 1, 1),
(516, 'purchased', '5', 'worst product I have ever purchased', 'positive', 4, 1),
(517, 'purchased', '3', 'not good', 'positive', 1, 1),
(560, 'purchased', '1', 'super', 'neutral', 4, 1),
(561, 'purchased', '5', 'It is very good product', 'positive', 1, 1),
(562, 'purchased', '3', 'it is good\r', 'positive', 5, 1),
(563, 'not purchased', '3', 'good', 'positive', 5, 1),
(564, 'purchased', '2', 'It is worst', 'neutral', 3, 1),
(565, 'not purchased', '5', 'poor product i have ever seen', 'negative', 7, 1),
(566, 'not purchased', '2', 'worst product I have ever purchased', 'negative', 3, 1),
(567, 'purchased', '1', 'not good', 'negative', 5, 1),
(568, 'purchased', '2', 'poor purchase', 'negative', 10, 1),
(569, 'purchased', '5', 'great purchase', 'positive', 5, 1),
(570, 'not purchased', '4', 'super', 'positive', 7, 1),
(571, 'purchased', '3', 'It is very good product', 'positive', 1, 1),
(572, 'not purchased', '2', 'it is good\r', 'positive', 7, 1),
(573, 'purchased', '2', 'good', 'positive', 4, 1),
(574, 'purchased', '4', 'It is worst', 'negative', 8, 1),
(575, 'purchased', '1', 'poor product i have ever seen', 'neutral', 10, 1),
(576, 'purchased', '5', 'worst product I have ever purchased', 'neutral', 9, 1),
(577, 'purchased', '3', 'not good', 'neutral', 3, 1),
(578, 'purchased', '3', 'poor purchase', 'positive', 6, 1),
(579, 'purchased', '2', 'great purchase', 'positive', 2, 1),

(580, 'purchased', '5', 'super', 'positive', 5, 1),
(581, 'purchased', '2', 'It is very good product', 'positive', 10, 1),
(582, 'purchased', '1', 'it is good\r', 'neutral', 3, 1),
(583, 'purchased', '2', 'good', 'negative', 2, 1),
(584, 'purchased', '5', 'It is worst', 'negative', 9, 1),
(585, 'purchased', '4', 'poor product i have ever seen', 'negative', 2, 1),
(586, 'purchased', '3', 'worst product I have ever purchased', 'negative', 9, 1),
(587, 'purchased', '2', 'not good', 'positive', 4, 1),
(588, 'purchased', '2', 'poor purchase', 'positive', 6, 1),
(589, 'not purchased', '4', 'great purchase', 'positive', 8, 1),
(590, 'purchased', '1', 'super', 'positive', 6, 1),
(591, 'not purchased', '5', 'It is very good product', 'positive', 8, 1),
(592, 'purchased', '3', 'it is good\r', 'negative', 8, 1),
(593, 'purchased', '3', 'good', 'neutral', 1, 1),
(594, 'purchased', '2', 'It is worst', 'neutral', 1, 1),
(595, 'purchased', '5', 'poor product i have ever seen', 'neutral', 3, 1),
(596, 'purchased', '2', 'worst product I have ever purchased', 'positive', 6, 1),
(597, 'not purchased', '1', 'not good', 'positive', 3, 1),
(598, 'not purchased', '2', 'poor purchase', 'positive', 4, 1),
(599, 'purchased', '5', 'great purchase', 'positive', 5, 1),
(600, 'not purchased', '4', 'super', 'neutral', 2, 1),

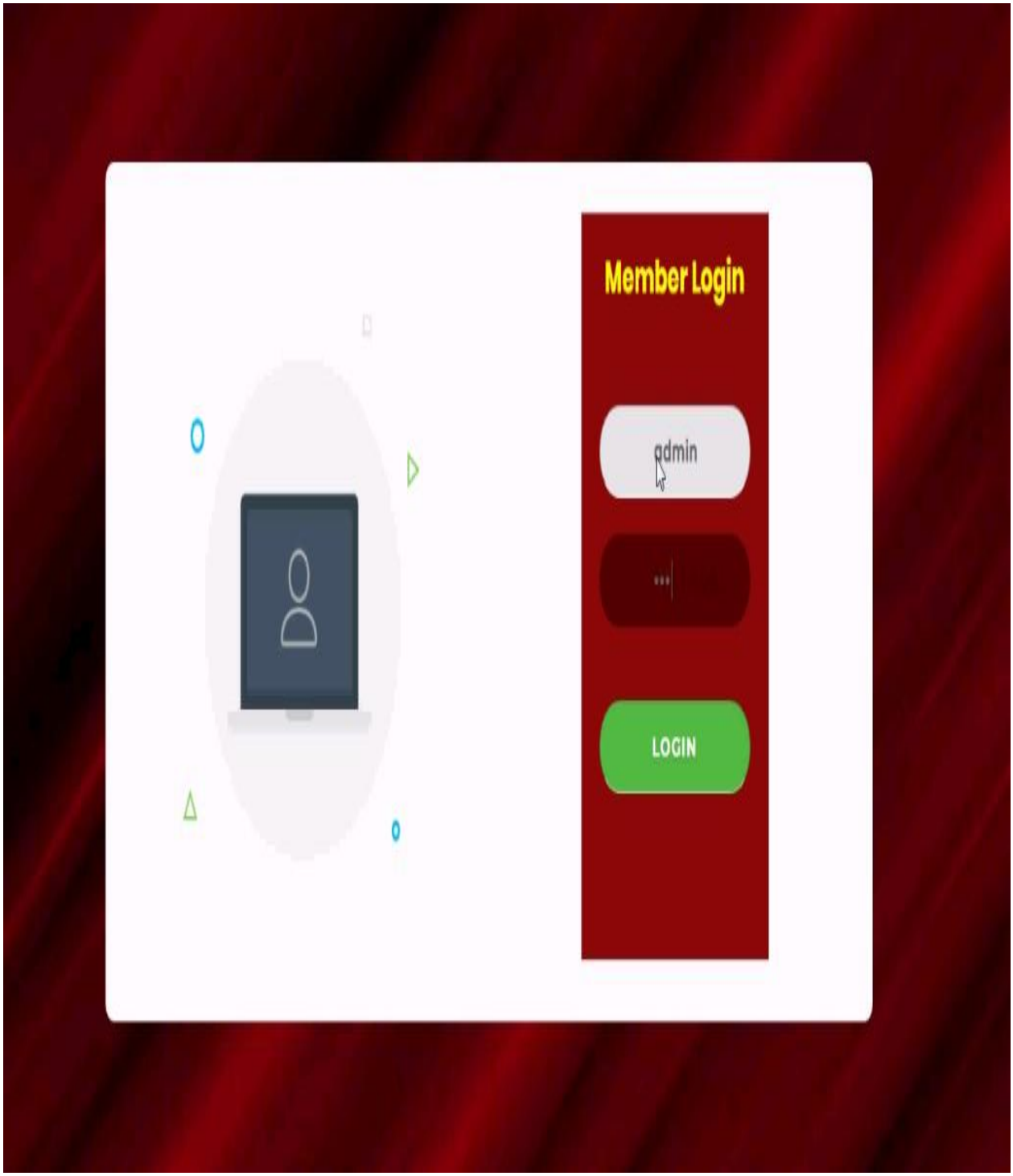
```
(601, 'not purchased', '1', 'it is good', 'positive', 4, 1),
(602, 'not purchased', '1', 'it is good', 'positive', 4, 1),
(603, 'not purchased', '3', 'it is good product', 'positive', 2, 54),
(604, 'not purchased', '3', 'thanks', 'neutral', 1, 2),
(605, 'not purchased', '4', 'good product', 'positive', 11, 2),
(606, 'not purchased', '3', 'thank you', 'neutral', 15, 54),
(607, 'not purchased', '4', 'it is good product\r\n', 'positive', 2, 55);

-- --------------------------------------------------------

--
-- Table structure for table `user_purchase`
--

CREATE TABLE IF NOT EXISTS `user_purchase` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `quantity` int(11) NOT NULL,
  `totalprice` double NOT NULL,
  `status` varchar(200) NOT NULL,
  `customer_id` int(11) NOT NULL,
  `purhased_id` int(11) NOT NULL,
  PRIMARY KEY (`id`),
  KEY `user_purchase_customer_id_d874c240_fk_user_users_id` (`customer_id`),
  KEY `user_purchase_purhased_id_0f782911_fk_admins_prodcuts_id` (`purhased_id`)
) ENGINE=InnoDB  DEFAULT CHARSET=latin1 AUTO_INCREMENT=4 ;

--
-- Dumping data for table `user_purchase`
--

INSERT INTO `user_purchase` (`id`, `quantity`, `totalprice`, `status`, `customer_id`,
`purhased_id`) VALUES
(1, 1, 10000, 'purchased', 1, 3),
(2, 2, 0, 'incart', 55, 3),
(3, 0, 0, 'incart', 55, 2);


-- --------------------------------------------------------

--
-- Table structure for table `user_users`
--

CREATE TABLE IF NOT EXISTS `user_users` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `firstname` varchar(200) NOT NULL,
  `lastname` varchar(200) NOT NULL,
  `username` varchar(200) NOT NULL,
  `password` varchar(200) NOT NULL,
  `email` varchar(200) NOT NULL,
  `mobile` varchar(20) NOT NULL,
  `location` varchar(200) NOT NULL,
  `profession` varchar(200) NOT NULL,
  PRIMARY KEY (`id`)
) ENGINE=InnoDB  DEFAULT CHARSET=latin1 AUTO_INCREMENT=56 ;

--
-- Dumping data for table `user_users`
--
```

```
INSERT INTO `user_users` (`id`, `firstname`, `lastname`, `username`, `password`, `email`,
`mobile`, `location`, `profession`) VALUES
(1, 'vinay', 'krishnan', 'vinay', '123', 'gokul@gmail.com', '9685741230', 'Chennai', 'Accounting'),
(2, 'rahul', 'kissan', 'gokul', '123', 'gokul@gmail.com', '9685741230', 'Chennai', 'Animation'),
(3, 'siva', 'kumar', 'rahul', '123', 'gokul@gmail.com', '9685741230', 'Chennai', 'IT'),
(4, 'suresh', 'kumar', 'siva', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Dairy'),
(5, 'jaya', 'kumar', 'suresh', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Construction'),
(6, 'shakthi', 'm', 'jaya', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Computer Hardware'),
(7, 'ramya', 's', 'shakthi', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Computer
Hardware'),
(8, 'ragu', 's', 'ramya', '123', 'gokul@gmail.com', '9685741230', 'Delhi', 'Consumer Service'),
(9, 'ram', 'g', 'ragu', '123', 'gokul@gmail.com', '9685741230', 'Delhi', 'Farming'),
(10, 'dev', 's', 'ram', '123', 'gokul@gmail.com', '9685741230', 'Cuttack', 'Farming'),
(11, 'diya', 'c', 'dev', '123', 'gokul@gmail.com', '9685741230', 'Pune', 'Fine Arts'),
(12, 'priya', 'g', 'diya', '123', 'gokul@gmail.com', '9685741230', 'Nasik', 'Hospital/Health care'),
(13, 'priyanka', 'g', 'priya', '123', 'gokul@gmail.com', '9685741230', 'Bangalore', 'Hospital/Health
care'),
(14, 'sabari', 'e', 'priyanka', '123', 'gokul@gmail.com', '9685741230', 'Bangalore', 'Hospital/Health
care'),
(15, 'nathan', 'c', 'sabari', '123', 'gokul@gmail.com', '9685741230', 'Hyderabad', 'IT'),
(16, 'sivaraj', 'e', 'nathan', '123', 'gokul@gmail.com', '9685741230', 'Hyderabad', 'IT'),
(17, 'navaneetha', 'mm', 'sivaraj', '123', 'gokul@gmail.com', '9685741230', 'Tiruvanandapuram',
'IT'),
(18, 'kabilan', 'm', 'navaneetha', '123', 'gokul@gmail.com', '9685741230', 'Tiruvanandapuram',
'Animation'),
(19, 'ashok', 'kumar', 'kabilan', '123', 'gokul@gmail.com', '9685741230', 'Delhi', 'Accounting'),
(20, 'abi', 'v', 'ashok', '123', 'gokul@gmail.com', '9685741230', 'Bhopal', 'Accounting'),
(21, 'anu', 'v', 'abi', '123', 'gokul@gmail.com', '9685741230', 'Patna', 'Animation'),
(22, 'anusha', 'n', 'anu', '123', 'gokul@gmail.com', '9685741230', 'Chennai', 'IT'),
(23, 'dipa', 'karmakar', 'anusha', '123', 'gokul@gmail.com', '9685741230', 'Chennai',
'Hospital/Health care'),
(24, 'deepika', 'j', 'dipa', '123', 'gokul@gmail.com', '9685741230', 'Chennai', 'Farming'),
(25, 'deepak', 'p', 'deepika', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Consumer
Service'),
(26, 'mohammed', 'fazi', 'deepak', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Computer
Hardware'),
(27, 'yokesh', 'j', 'mohammed', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Computer
Hardware'),
(28, 'divya', 'prabha', 'yokesh', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Food
Production'),
(29, 'kannan', 'k', 'divya', '123', 'gokul@gmail.com', '9685741230', 'Delhi', 'Food Production'),
(30, 'kamal', 'k', 'kannan', '123', 'gokul@gmail.com', '9685741230', 'Delhi', 'Food Production'),
(31, 'amaresh', 'v', 'kamal', '123', 'gokul@gmail.com', '9685741230', 'Cuttack', 'Food Production'),
(32, 'kesavan', 's', 'amaresh', '123', 'gokul@gmail.com', '9685741230', 'Pune', 'IT'),
(33, 'madhavan', 't', 'kesavan', '123', 'gokul@gmail.com', '9685741230', 'Nasik', 'IT'),
(34, 'komagal', 'e', 'madhavan', '123', 'gokul@gmail.com', '9685741230', 'Bangalore', 'Animation'),
(35, 'kalaimagal', 'g', 'komagal', '123', 'gokul@gmail.com', '9685741230', 'Bangalore',
'Accounting'),
(36, 'deepti', 'j', 'kalaimagal', '123', 'gokul@gmail.com', '9685741230', 'Hyderabad', 'Accounting'),
(37, 'pranav', 'n', 'deepti', '123', 'gokul@gmail.com', '9685741230', 'Hyderabad', 'Accounting'),
(38, 'sumalatha', 'k', 'pranav', '123', 'gokul@gmail.com', '9685741230', 'Tiruvanandapuram',
'Food Production'),
(39, 'latha', 'k', 'sumalatha', '123', 'gokul@gmail.com', '9685741230', 'Tiruvanandapuram', 'Food
Production'),
(40, 'roopesh', 'v', 'latha', '123', 'gokul@gmail.com', '9685741230', 'Chennai', 'Hospital/Health
care'),
(41, 'rakesh', 's', 'roopesh', '123', 'gokul@gmail.com', '9685741230', 'Chennai', 'Hospital/Health
care'),
```

```
(42, 'kamalesh', 't', 'rakesh', '123', 'gokul@gmail.com', '9685741230', 'Chennai', 'Hospital/Health
care'),
(43, 'kamala', 'e', 'kamalesh', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Dairy'),
(44, 'ranjini', 't', 'kamala', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Accounting'),
(45, 'karthi', 't', 'ranjini', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Dairy'),
(46, 'karthik', 'g', 'karthi', '123', 'gokul@gmail.com', '9685741230', 'Mumbai', 'Food Production'),
(47, 'velan', 'd', 'karthik', '123', 'gokul@gmail.com', '9685741230', 'Delhi', 'Sports'),
(48, 'devan', 'v', 'velan', '123', 'gokul@gmail.com', '9685741230', 'Delhi', 'Sports'),
(49, 'suba', 'n', 'devan', '123', 'gokul@gmail.com', '9685741230', 'Cuttack', 'Food Production'),
(50, 'chitra', 'b', 'suba', '123', 'gokul@gmail.com', '9685741230', 'Pune', 'Sports'),
(53, 'siv', 'raj', 'shiv', '123', 'shiv@gmail.com', '9685741230', 'Chennai', 'Accounting'),
(54, 'sabari', 'nathan', 'sabari', '1997', 'sabarinathan1350@gmail.com', '9789672189', 'Ambala',
'Animation'),
(55, 'santhosh', 'kumar', 'santhosh', '1998', 'santhothosh32@gmail.com', '9789672189',
'Chennai', 'Media Production');




--
-- Constraints for dumped tables
--

--
-- Constraints for table `auth_group_permissions`
--
ALTER TABLE `auth_group_permissions`
  ADD CONSTRAINT `auth_group_permissions_group_id_b120cbf9_fk_auth_group_id` FOREIGN
KEY (`group_id`) REFERENCES `auth_group` (`id`),
  ADD CONSTRAINT `auth_group_permissio_permission_id_84c5c92e_fk_auth_perm` FOREIGN
KEY (`permission_id`) REFERENCES `auth_permission` (`id`);

--
-- Constraints for table `auth_permission`
--
ALTER TABLE `auth_permission`
  ADD CONSTRAINT `auth_permission_content_type_id_2f476e4b_fk_django_co` FOREIGN KEY
(`content_type_id`) REFERENCES `django_content_type` (`id`);

--
-- Constraints for table `auth_user_user_permissions`
--
ALTER TABLE `auth_user_user_permissions`
  ADD CONSTRAINT `auth_user_user_permissions_user_id_a95ead1b_fk_auth_user_id`
FOREIGN KEY (`user_id`) REFERENCES `auth_user` (`id`),
  ADD CONSTRAINT `auth_user_user_permi_permission_id_1fbb5f2c_fk_auth_perm` FOREIGN
KEY (`permission_id`) REFERENCES `auth_permission` (`id`);

--
-- Constraints for table `django_admin_log`
--

--
-- Constraints for table `user_feedback`
--
ALTER TABLE `user_feedback`
  ADD CONSTRAINT `user_feedback_product_id_fa325b04_fk_admins_prodcuts_id` FOREIGN
KEY (`product_id`) REFERENCES `admins_prodcuts` (`id`),
  ADD CONSTRAINT `user_feedback_user_id_5b987fa1_fk_user_users_id` FOREIGN KEY
```

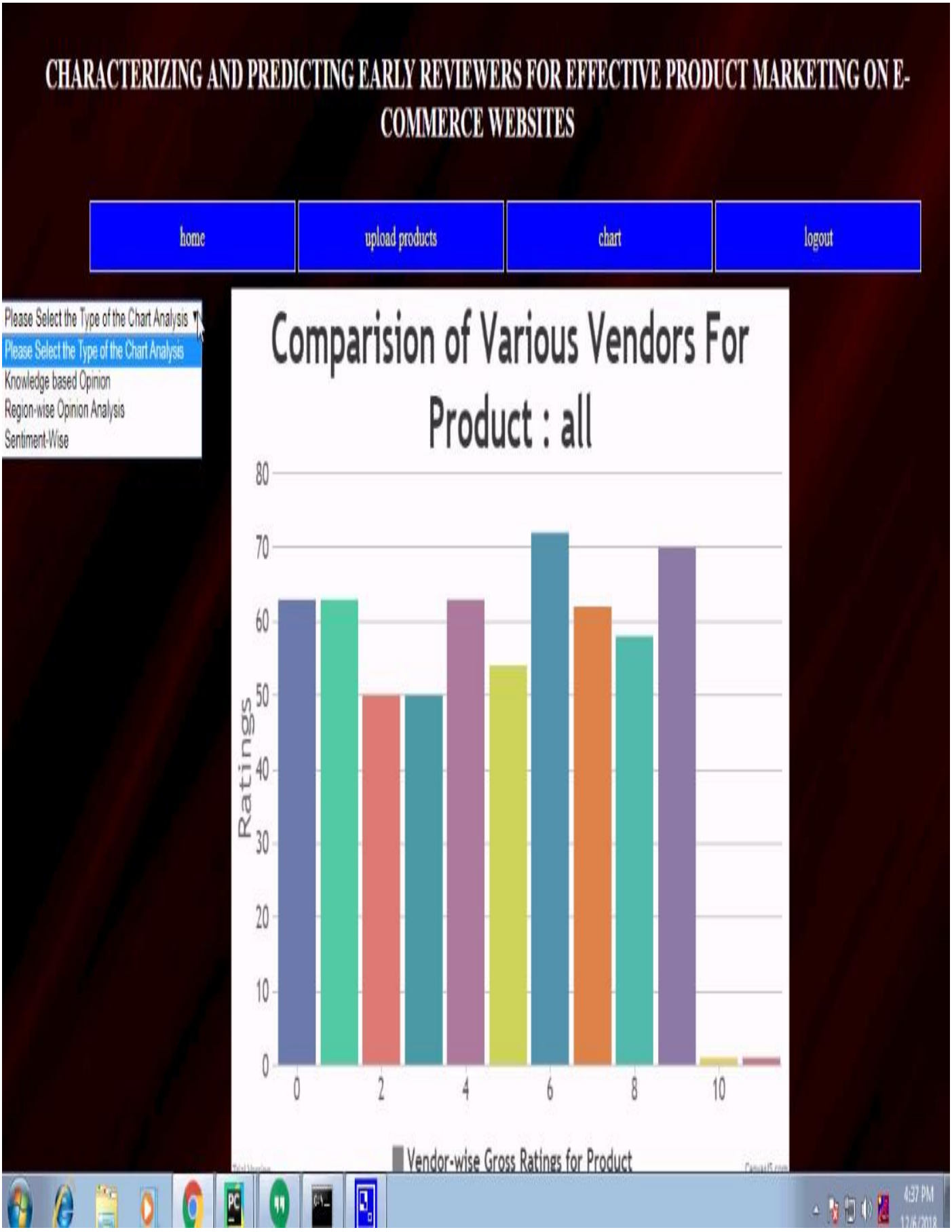
```
(`user_id`) REFERENCES `user_users` (`id`);

--
-- Constraints for table `user_purchase`
--
ALTER TABLE `user_purchase`
  ADD CONSTRAINT `user_purchase_customer_id_d874c240_fk_user_users_id` FOREIGN KEY
(`customer_id`) REFERENCES `user_users` (`id`),
  ADD CONSTRAINT `user_purchase_purhased_id_0f782911_fk_admins_prodcuts_id` FOREIGN
KEY (`purhased_id`) REFERENCES `admins_prodcuts` (`id`);

/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */
```

CHAPTER-11
OUTPUT SCREENSHOTS

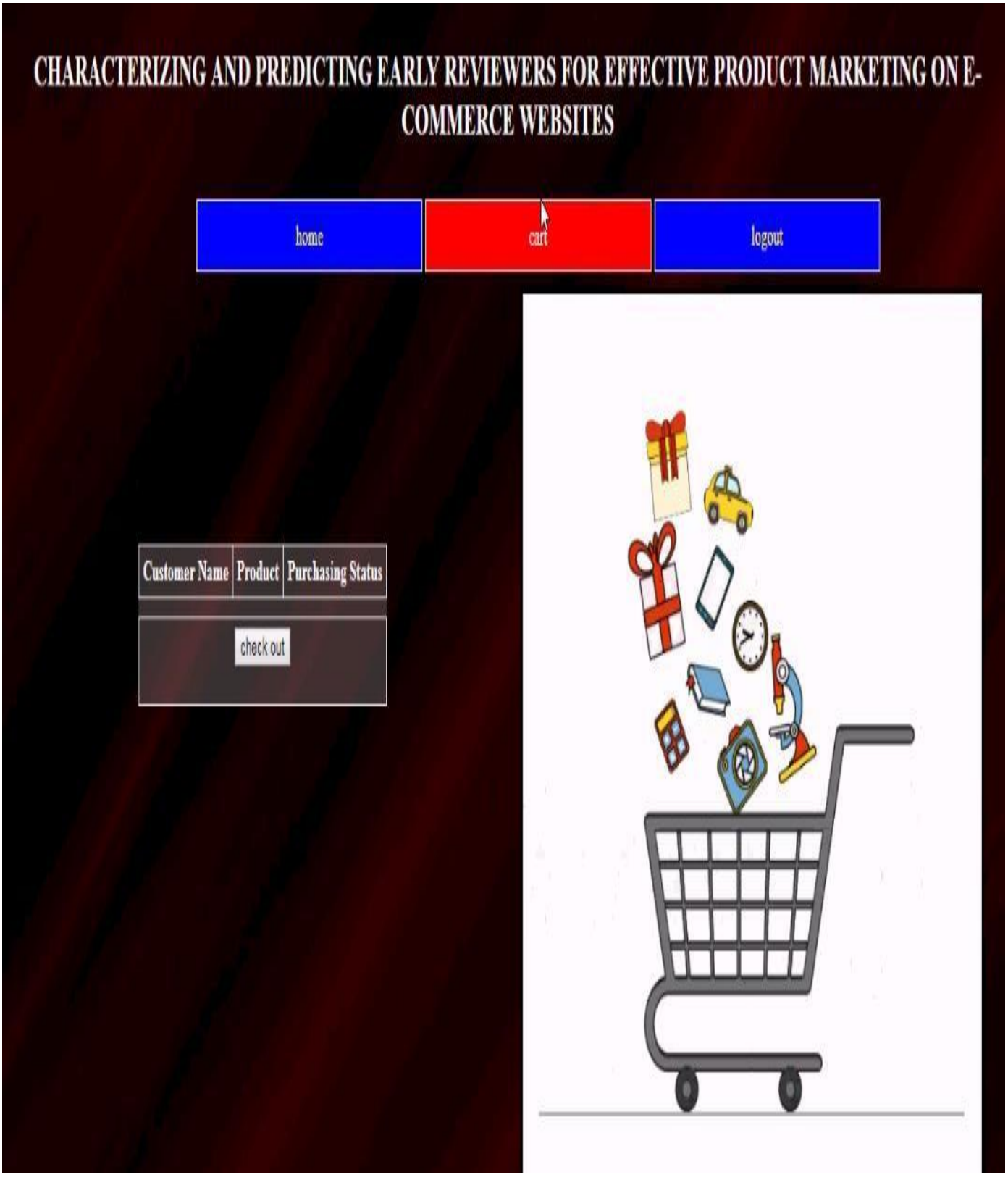


Screen11.1: Member login page

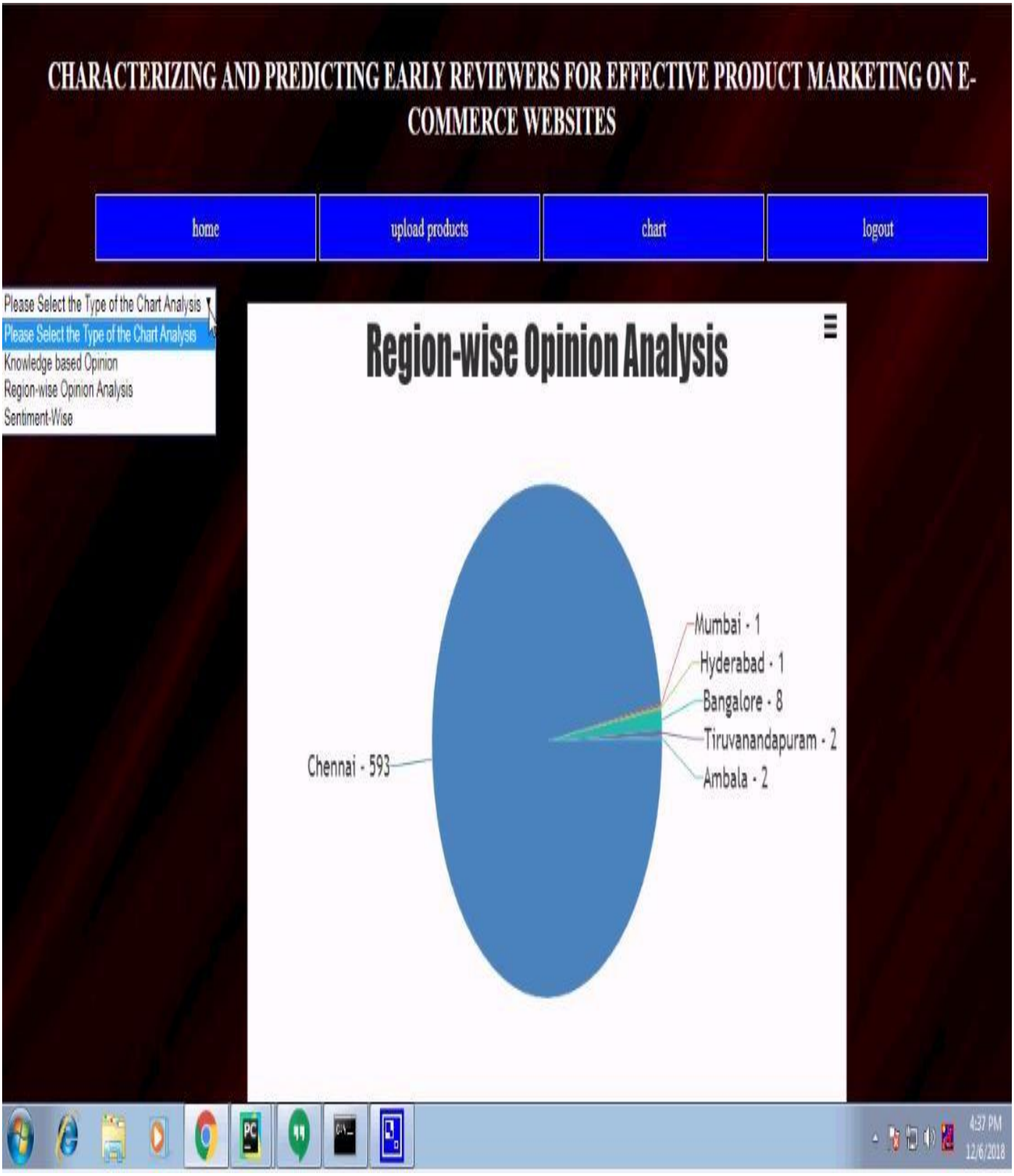
Screen11. 2: Admin view page



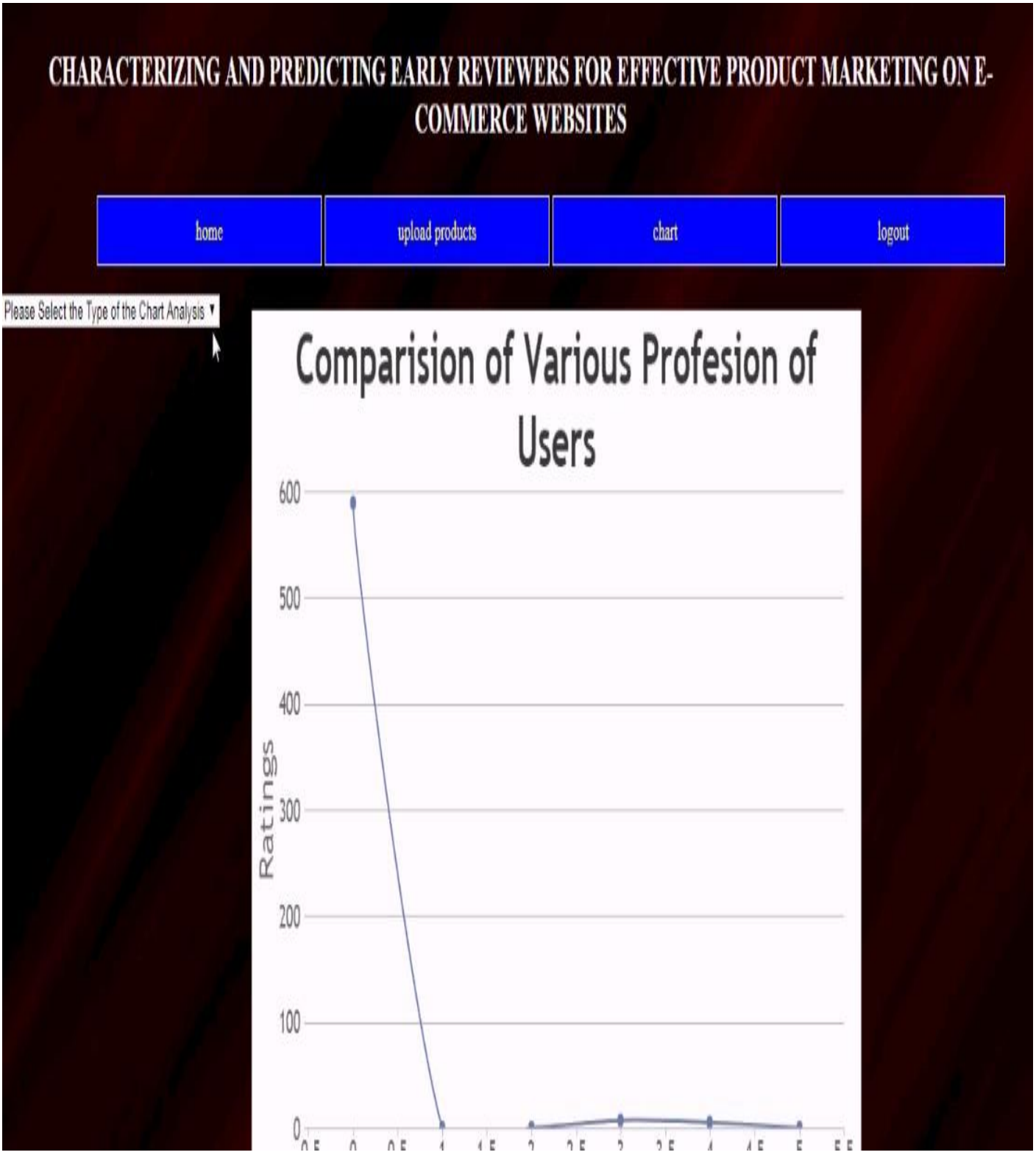
Screen 11. 3: Bar chart of Ratings



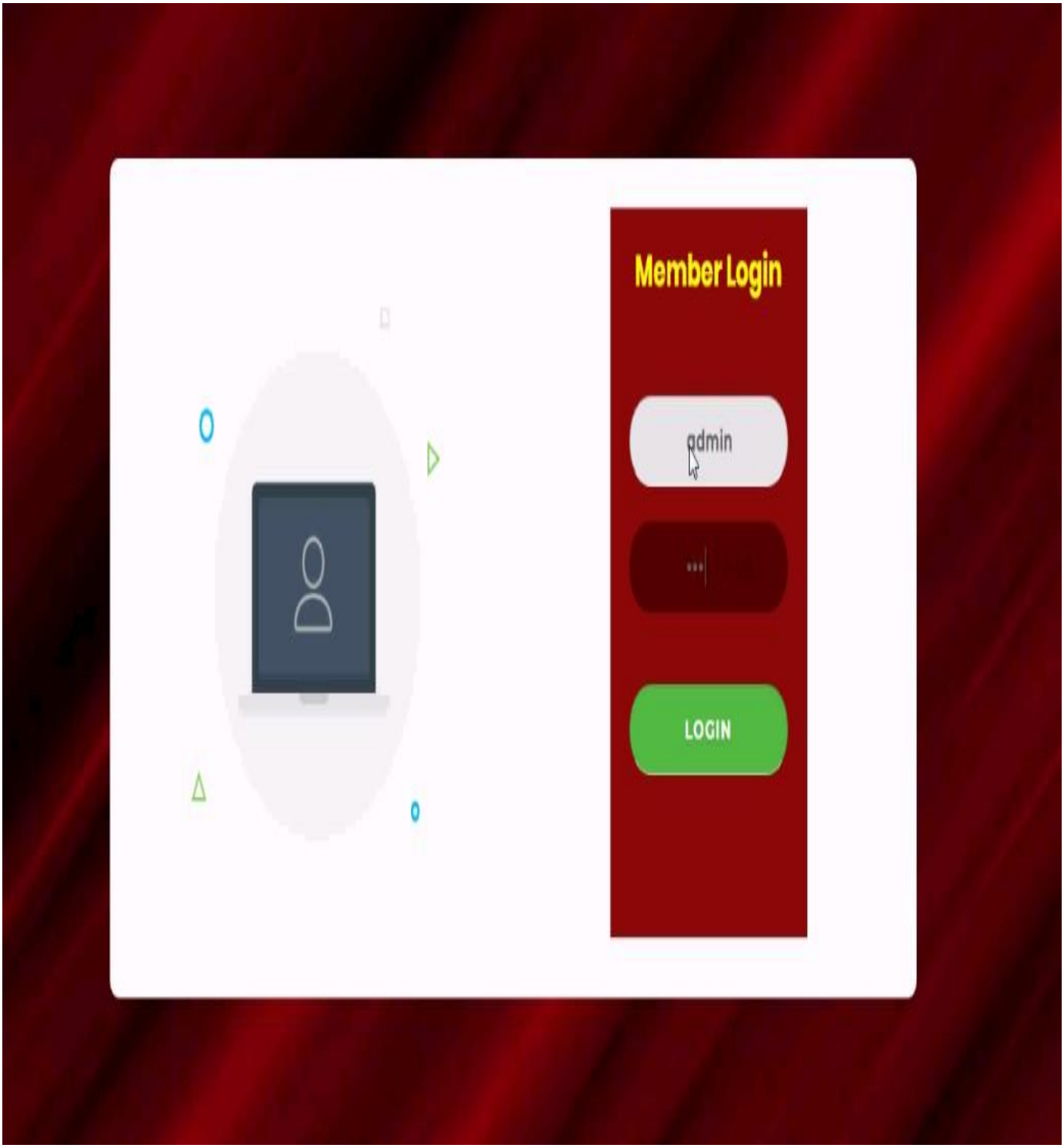
Screen 11. 4: Selected product adding to cart



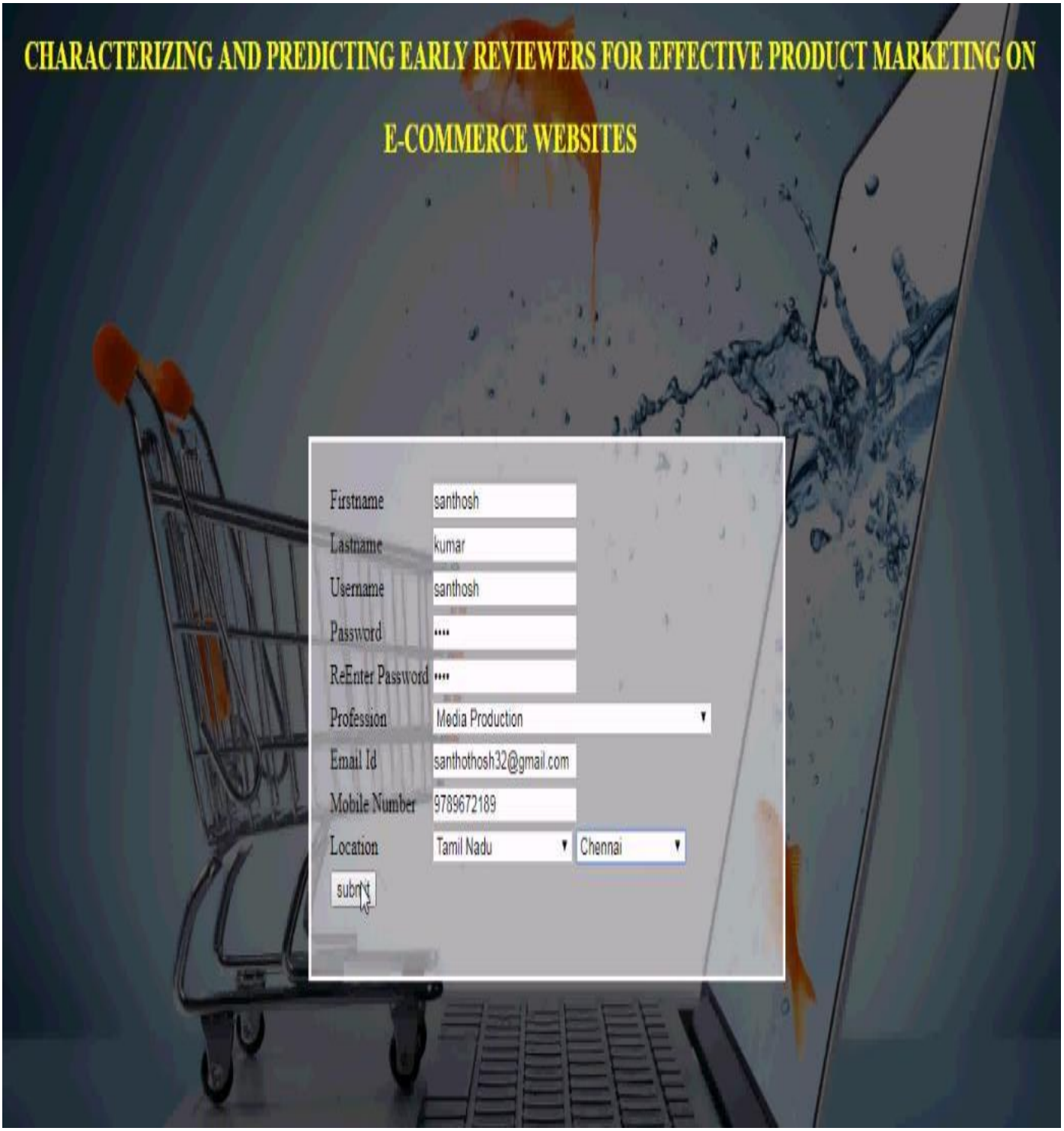
Screen 11. 5 : Pie chart representation of product sales



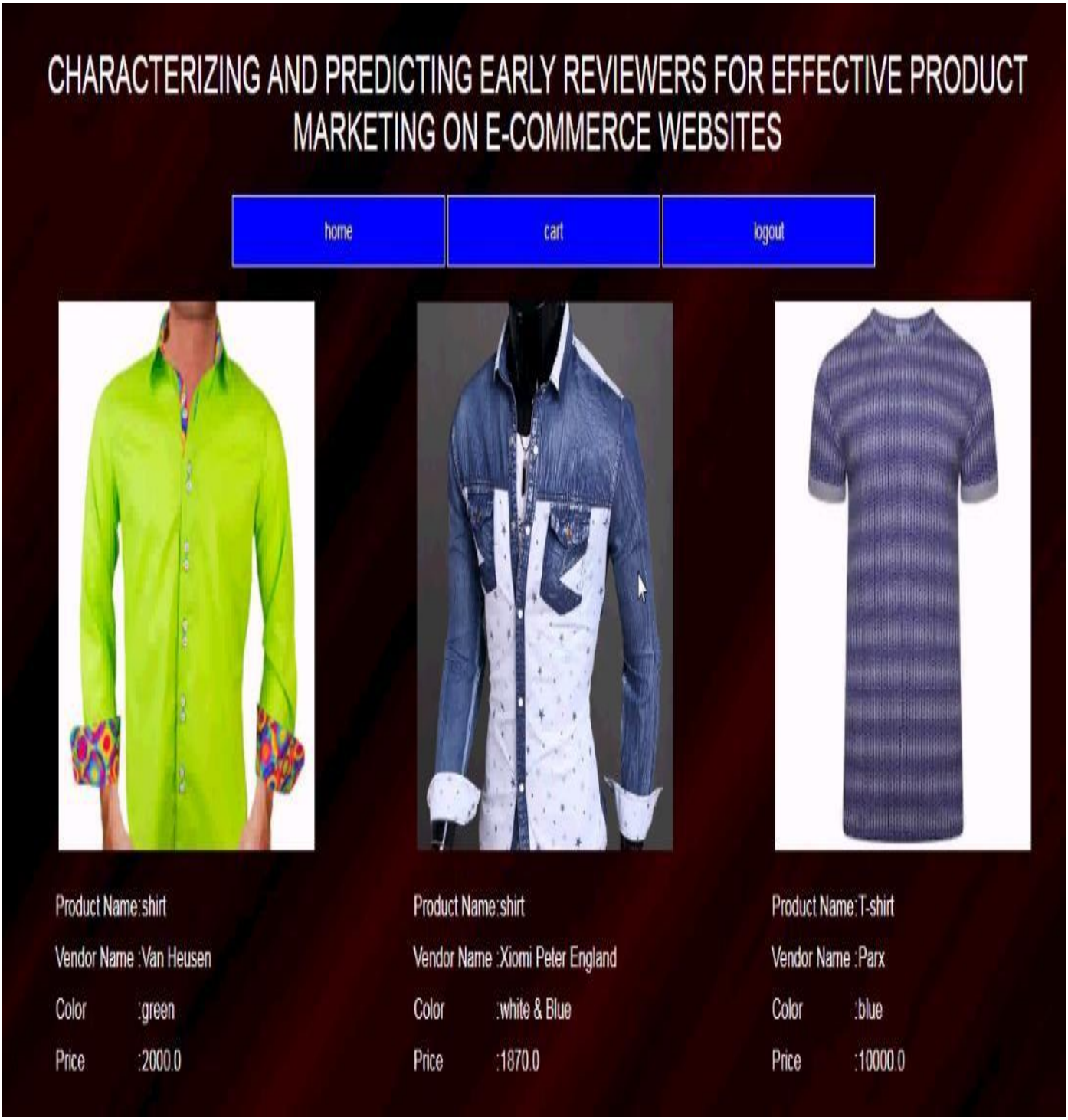
Screen 11. 6: Line chart view



Screen 11. 7: Customer login page



Screen 11.8: Registrations page



Screen 11. 9: Online customers view

Screen 11.10: Product rating page

CHAPTER-12
CONCLUSION

In this paper, we have studied the novel task of early reviewer characterization and prediction on two real-world online review datasets. Our empirical analysis strengthens a series of theoretical conclusions from sociology and economics. We found that (1) an early reviewer tends to assign a higher average rating score; and (2) an early reviewer tends to post more helpful reviews. Our experiments also indicate that early reviewers' ratings and their received helpfulness scores are likely to influence product popularity at a later stage. We have adopted a competition-based viewpoint to model the review posting process, and developed a margin based embedding ranking model (MERM) for predicting early reviewers in a cold-start setting.

CHAPTER-13
REFERENCES

1.https://ieeexplore.ieee.org/document/8329164

2.https://www.researchgate.net/publication/324177104_Characterizing_and_Predicting_Early_Reviewers_for_Effective_Product_Marketing_on_E-Commerce_Websites

3.https://slogix.in/characterizing-and-predicting-early-reviewer-for-effective-product-marketing-on-e-commerce-websites

4.https://scholar.google.co.in/scholar?q=characterizing+and+predicting+online+reviews&hl=en&as_sdt=0&as_vis=1&oi=scholart#d=gs_qabs&u=%23p%3Ddc-DgiLf1c0J

5.http://finalyearprojects.in/characterizing-and-predicting-early-reviewers-