PROJECT

(2019-2020)

E-COMMERCE WEBSITE (FabBasket)

(Web Development)

SYNOPSIS

Department of Computer Engineering and Applications

Institute of Engineering and Technology

SUBMITTED TO:

Mr. Sharad Gupta
(Assistant Professor)

SUBMITTED BY:

Kabir Kararia (171500150)
Anukriti Pathak (171500056)
Gitansh Sehgal (171500110)
Aditya Vikram Singh (171500021)

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Kabir Kararia
(171500150)
Anukriti Pathak
(171500056)
Gitansh Sehgal
(171500110)
Aditya Vikram Singh
(171500021)

E-Commerce Website

- **Fab Basket** is a web application where user will be able to buy products in wholesale quantities.
- From the website we will be able to order multiple items in one go. The interface will be easy to use & website will quickly scale with increasing traffic load.
- All the services like **Hosting, Authentication, Cloud Functions** will be given by Firebase.
- The customer will be able choose products from long list and order them easily.
- For authentication we will have password-based service, this safeguards that every mail id from which products are purchased is genuine one.
- The database will be **Realtime Database** which is a NoSQL DB offered by firebase.
- After an order is placed, the customer will get an email receipt confirming the placement of his/her order.

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1.Project Analysis

Introduction

1.1 General Introduction

An ecommerce website is a website which allows your business to sell products and services to their online audience.

The Indian e-commerce market is expected to grow **to US$ 200 billion by 2026 from US$ 38.5 billion as of 2017.**

An E-commerce platform will play an important role to push Indian economy. An e-commerce website gives us a broader audience and hence possibility of better overall sales.

We can be open **24/7** which helps you to make more sales. Having an ecommerce platform helps you to increase your conversion rate since people get a chance to immediately buy from you rather than wait to visit the store.

1.2 Area of Computer Science

This project mainly covers the Area of **Web Development** of Computer Science. Through this project, we are trying to climb one step in this vast field of Computer Science.

- Web development is a specialized type of computer programming focused on websites and web applications.

- Web development deals with building technical front-end and/or back-end code that informs site function. Web developers may work exclusively on front-end code, back-end code, or both.

1.3 Hardware and Software Requirements

- **Hardware**

1. Personal computer with minimum 2GB RAM
2. Internet Connection
3. Minimum i3/Amd 3 processor
4. Minimum 20 GB of hard disk.

- **Software**
    1. **System Software**
        - Operating System(Windows , Linux)
    2. **Application Software**

        - Bracket (Text Editor), Sublime

        - **Server**

            a) Node.js Server

        -**Front-end**

            a) HTML

            b) CSS

            c) JavaScript

        -**Back-end**

            a) FireBase(DataBase)

2.PROBLEM DEFINITION

- The motivation for the problems faced for this project came from our self-experience. E-commerce website can be open **24/7** which helps you to make more sales.
- Having an ecommerce platform helps you to increase your conversion rate since people get a chance to immediately buy from you rather than wait to visit the store.
- An E-commerce website will play an important role to push Indian economy. An e-commerce platform gives us a broader audience and hence possibility of better overall sales.
- The e-commerce has transformed the way business is done in India.
- E-commerce transactions can be either **B2B, B2C, C2C, or C2B**.
- **Flipkart** is one of the pioneers among India's successful e-commerce startups. Founded in 2007, it was the brainchild of Sachin and Binny Bansal, both IIT-Delhi graduates.
- It even went on to acquire competitors **Myntra** for $280 million and **Jabong** for $70 million, and more.

3.OBJECTIVE

The e-commerce industry in India is growing fast, booming, and expanding at a larger rate. The concept of online shopping has attracted the Indian population tremendously. Exposure to Internet has been highly instrumental in the e-commerce success.

The following objectives could be fulfilled by this project:

1. From the website we will be able to order **multiple item**s in one go
2. The interface will be **easy to use** & website will quickly scale with increasing traffic load.
3. The customer will be able choose products from long list and order them easily.
4. For authentication we will have **password-based service**, this safeguards that every mail id from which products are purchased is genuine one
5. After an order is placed, the customer will get an **email receipt** confirming the placement of his/her order.
6. Every email receipt has **unique ID** to track each order.

4.ANATOMY OF A DYNAMIC WEBSITE

4.1 Front End: A front-end developer is a web developer that codes the front end of a website. The "front-end" of a website refers to the technology involved in the visual rendering of data in the client's web browser. There are many elements that come together to make this happen including, but not necessarily limited to:

- HTML (Hypertext Markup Language)
- DOM (Document Object Model)

- CSS (Cascading Style Sheets)
- JavaScript/jQuery (or another client-side API/Framework)
- Mobile Device Design Optimization

HTML: The primary purpose of HTML in a web document is to structure the data into something that the browser can read from and then render the read data into a visual format for a user.

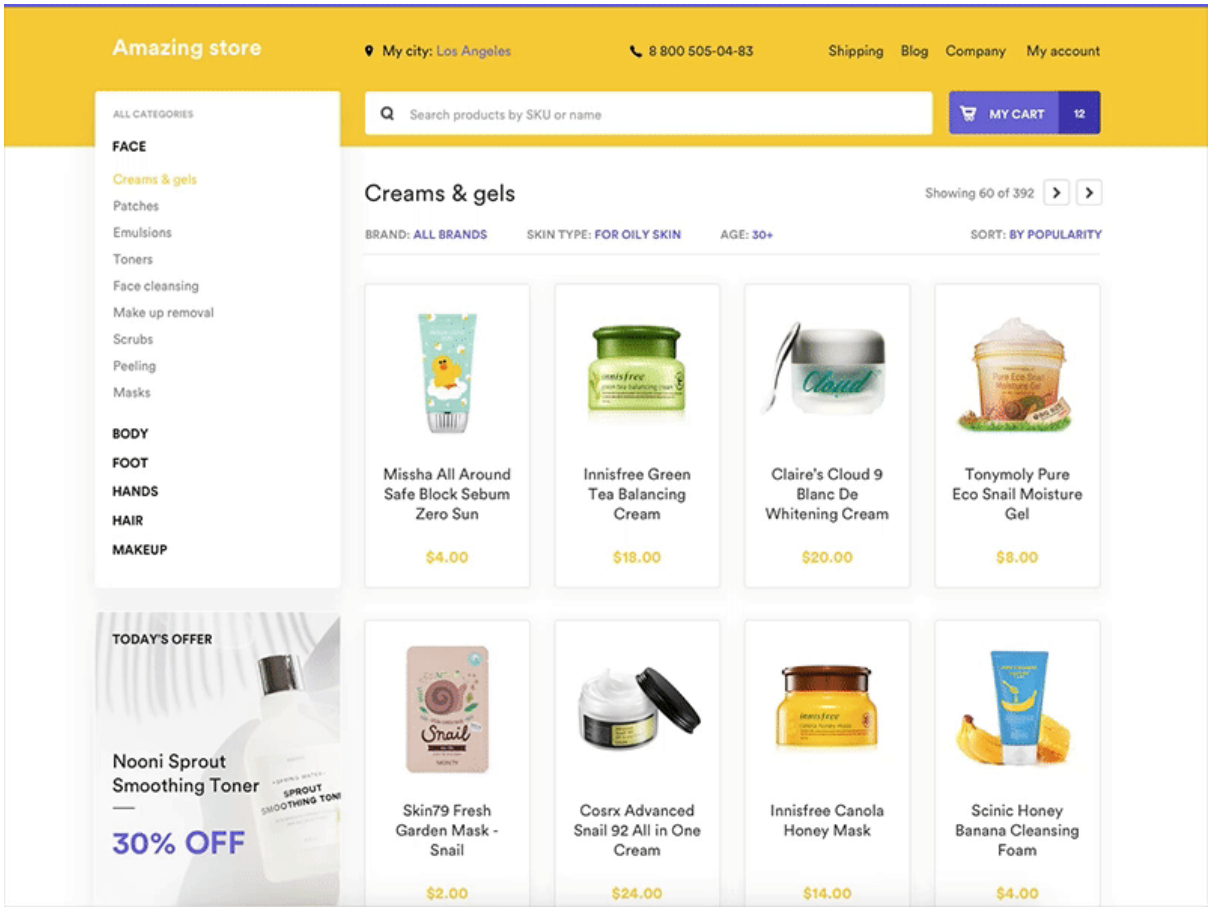
DOM*:* The Document Object Model is the representation of the HTML structure as objects that can be manipulated using client-side scripting languages like CSS or JavaScript.

CSS*:* Cascading Style Sheets are an extremely powerful and effective tool for adding client-side styling and functionality like image rollovers, once only accomplished using JavaScript.

JavaScript/jQuery/Client-Side API: JavaScript is a client-side scripting language that enables developers to deliver a "rich" user experience. This "rich" experience is based on many elements aside from client-side scripting, such as clear and easy navigation, but the term has become hitched to the concept of dynamic mouse-over effects, smooth transitions, and AJAX interaction. jQuery is a powerful JavaScript API library that allows you to create complex JavaScript effects with very little effort and will be chosen for this article.

Mobile Device Design Optimization: Most web searches are now, and have been for years, conducted on mobile devices. While web development for desktop platforms will continue to thrive, it has become a requirement to create an alternate layout that is optimized for small screens and touch based user input.

4.2 SAMPLE VIEW OF USER INTERFACE



5.FIREBASE

Firebase Services can be divided into two groups:

1) Realtime Database:

The Firebase Realtime Database is a cloud-hosted NoSQL database that lets you store and sync between your users in real-time.

2) Authentication:

Firebase Authentication provides backend services, easy-to-use SDKs, and ready-made UI libraries to authenticate users to your app.

3) Cloud Functions:

Cloud Functions for Firebase let you automatically run backend code in response to events triggered by Firebase features and HTTPS requests.

4) Cloud Storage:

Cloud Storage for Firebase is a powerful, simple, and cost-effective object storage service built for Google scale.

5) Hosting

Firebase Hosting provides fast and secure hosting for your web app, static and dynamic content, and microservices.

6.REFERENCES

6.1 Online References

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