“A massive industry relevant skill enhancement initiative for the youth of Tamil Nadu.”

GOVERNMENT COLLEGE OF ENGINEERING SALEM-011

A Full Stack project report on

E –COMMERCE APPLICATION

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INTRODUCTION

1.1. INTRODUCTION:

Online shopping is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser or a mobile app. Consumers find a product of interest by visiting the website of the retailer directly or by searching among alternative vendors using a shopping search engine, which displays the same product's availability and pricing at different e-retailers.

1.2. OBJECTIVE:

- To shop without having to step out of the door • To provide customers with upcoming trends
- Provide home delivery at low cost.
- Sell at lower rate due to less over head.
- Provide secured transaction.

1.3. SCOPE:

- The current system can be extended to allow the users to create accounts and save products in to wish list.
- The users could subscribe for price alerts which would enable them to receive messages when price for products fall below a particular level.
- The current system is confined only to the shopping cart process. It can be extended to have an easy to use check out process.

- Users can have multiple shipping and billing information saved. During checkout they can use the drag and drop feature to select shipping and billing information.

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FEASIBILITY REPORT

2.1. Economic Feasibility:

It refers to the benefits or outcomes we are deriving from the product as compared to the total cost we are spending for developing the benefits are more or less the same as the older system then it is not feasible to develop the product.

2.2. Operational Feasibility:

This product is operationally feasible as it is designed specifically for EGovernance. This provides consistent and integrated data management. It also provides information at all levels of people.

2.3. Technical Feasibility:

The system is self-explanting and does not need any entire sophisticated training. A system has been built by concentrating on the graphical uses interface concepts, the application can also be handled very easily with a novice uses. The overall time that a user needs to get trained is less than 15 minutes. The system has been added with features of menu device and button interaction methods, which makes him the master as he starts working through the environment. As the software that were used as developing this application are very economical and are readily available is the market the only time that is lost by the customer is just installation time.

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SOFTWARE REQUIREMENT SPECIFICATION

REQUIREMENT SPECIFICATION:

A major element in building a system is the section of compatible software since the software in the market is experiencing in geometric progression. Selected software should be acceptable by the firm and one user as well as it should be feasible for the system. This document gives a detailed description of the software requirement specification. The study of requirement specification is focused specially on the functioning of the system. It allows the developer or analyst to understand the system, function to be carried out the performance level to be obtained and corresponding interfaces to be established.

Developers Responsibilities Overview:

The developer is responsible for:

- Developing the system, which meets the SRS and solving all the requirements of the systems.
- Submitting the required user manual describing the system interfaces to work on it and also the documents of the system.
- Conducting any user training that might be needed for using the system.
- Maintain the system for a period of one year after installation.

Functional Requirements:

OUTPUT DESIGN

Outputs from computer systems are required primarily to communicate the results of processing to users. They are also used to provide a permanent copy of the results for later consultation. The various types of outputs in general are:

- External Outputs, whose destination is outside the organization.
- Internal Outputs whose destination is within the organization and they are the user's main interface with the computer.
- Operational outputs whose use is purely within the computer department.

OUTPUT DEFINITION

The outputs should be defined in terms of the following points:

- Type of the output
- Content of the output
- Format of the output
- Location of the output
- Frequency of the output
- Volume of the output
- Sequence of the output

It is not always desirable to print or display data as it is held on a computer. It should be decided as which form of the output is the most suitable. For Example

- The decimal points need to be inserted.
- It should lead zeros be suppressed.

Outputs Media:

In the next stage it is to be decided that which medium is the most appropriate for the output. The main considerations when deciding about the output media are:

- The suitability for the device to the particular application.
- The need for a hard copy.
- The response time required.
- The location of the users.
- The software and hardware available.

Keeping in view the above description the project is to have outputs mainly coming under the category of internal outputs. The main outputs desired according to the requirements specification are:

The outputs were needed to be generated as a hot copy and as well as quires to be viewed on the screen. Keeping in view these outputs, the format for the output is taken from the outputs, which are currently being obtained after

manual processing. The standard printer is to be used as output media for hard copies.

INPUT DESIGN

Input design is a part of overall system design. The main objective during the input design is as given below:

- To produce a cost-effective method of input.
- To archive the highest possible level of accuracy.
- To ensure that the input is acceptable and understood by the user.

INPUT STAGES

The main input stages can be listed as below

- Data Recording
- Data transcription
- Data conversion
- Data verification
- Data control
- Data transmission
- Data validation
- Data correction

PERFORMANCE REQUIREMENTS:

Performance is measured in terms of the output provided by the application. Requirement specification plays an important part in the analysis of a system. Only when the requirement specifications are properly given, it is possible to design a system, which will fit into required environment. It rests largely in the part of the users of the existing system to give the requirement specifications because they are the people who finally use the system. This is because the requirements have to be known during the initial stages so that the system can be designed according to those requirements

The requirement specification for any system can be broadly stated as given below

- The system should be able to interface with the existing system
- The system should be accurate
- The system should be better than the existing system

The existing system is completely dependent on the user to perform all the duties.

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SELECTED SOFTWARE:

4.1. VISUAL STUDIO CODE

Visual Studio Code is a code editor in layman's terms. Visual Studio Code is "a free-editor that helps the programmer write code, helps in debugging and corrects the code using the intelli-sense method". In normal terms, it facilitates users to write the code in an easy manner. Many people say that it is half of an IDE and an editor, but the decision is up to the coders. Any program/software that we see or use works on the code that runs in the background. Traditionally coding was used to do in the traditional editors or even in the basic editors like notepad! These editors used to provide basic support to the coders.

With advancements in technology day-by-day, Visual Studio Code is going to play a pivotal role in the development of software. With its ever-evolving features and soon-to-beaded new settings, which will enable users to work with it from anywhere, it is certainly "THE THING" to keep one ahead of everyone in this ever-increasing IT market.

4.2 NODE JS

Node.js is a server-side platform built on Google Chrome's JavaScript Engine (V8 Engine). Node.js was developed by Ryan Dahl in 2009 and its latest version is v0.16.36. The definition of Node.js as supplied by its official documentation is as follows –

Node.js is a platform built on Chrome's JavaScript runtime for easily building fast and scalable network applications. Node.js uses an event-driven, nonblocking I/O model that makes it lightweight and efficient, perfect for dataintensive real-time applications that run across distributed devices.

Node.js is an open source, cross-platform runtime environment for developing server-side and networking applications. Node.js applications are written in JavaScript, and can be run within the Node.js runtime on OS X, Microsoft Windows, and Linux.

Node.js also provides a rich library of various JavaScript modules which simplifies the development of web applications using Node.js to a great extent.

4.3 ANGULAR

Angular is a development platform, built on TypeScript. As a platform, Angular includes:

A component-based framework for building scalable web applications. A collection of well-integrated libraries that cover a wide variety of features, including routing, forms management, client-server communication, and more a suite of developer tools to help you develop, build, test, and update your code.

With Angular, you're taking advantage of a platform that can scale from single-developer projects to enterprise-level applications. Angular is designed to make updating as straightforward as possible, so take advantage of the latest developments with minimal effort. Best of all, the Angular ecosystem consists of a diverse group of over 1.7 million developers, library authors, and content creators.

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PROJECT DESIGN

SOFTWARE ENGINEERING PARADIGM APPLIED

Reliable System

There are two levels of reliability. The first is meeting the right requirement. A carefully and through systems study is needed to satisfy this aspect of reliability. The second level of systems reliability involves the actual working delivered to the user. At this level, the systems reliability is interwoven with software engineering and development. There are three approaches to reliability.

1. Error avoidance: Prevents errors from occurring in software.
2. Error detection and correction: In this approach errors are recognized whenever they are encountered and correcting the error by effect of error of the system does not fail.
3. Error tolerance: In this approach errors are recognized whenever they occur, but enables the system to keep running through degraded perform or Appling values that instruct the system to continue process.

Maintenance:

The key to reducing need for maintenance, while working, if possible, to do essential tasks.

1. More accurately defining user requirement during system development.
2. Assembling better systems documents.
3. Using some effective methods for designing, processing, and communicating information with project team members.
4. Making better use of existing tools and techniques.
5. Managing system engineering process effectively.

Types of output

Whether the output is formatted report or a simple listing of the contents of a file, a computer process will produce the output.

- A Document
- A Message

- Retrieval from a data store
- JSON file in mongo DB

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STEPS TO START THE APPLICATION:

create .env file in *onlineshopping* folder

NODE_ENV = development
PORT = 4050
MONGODB_URI = mongodb://localhost/hostel
MONGOOSE_DEBUG = true
JWT_SECRET = 29fe02c1-7de9-493a-b3c5-d33e56555a98

Run this command

npm install

Run this command for Start Project npm

run start

Run this command for Start Server npm

run server

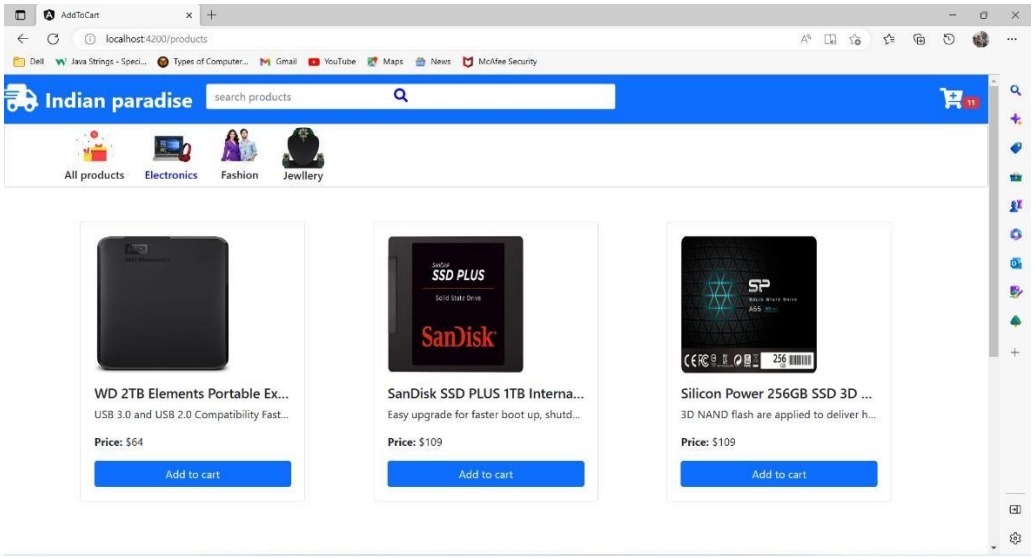
Download Node JS :

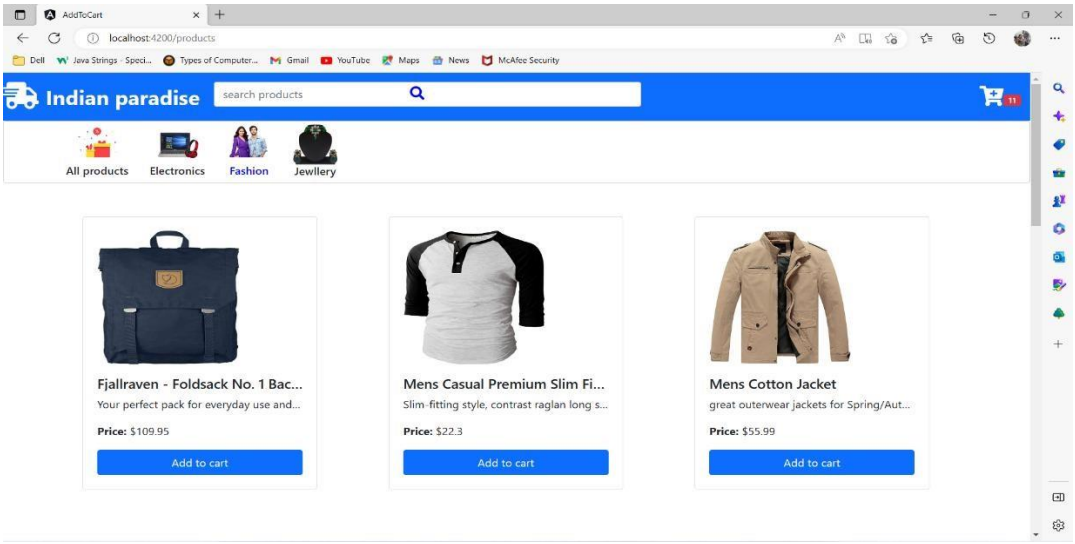
https://nodejs.org/en/download/

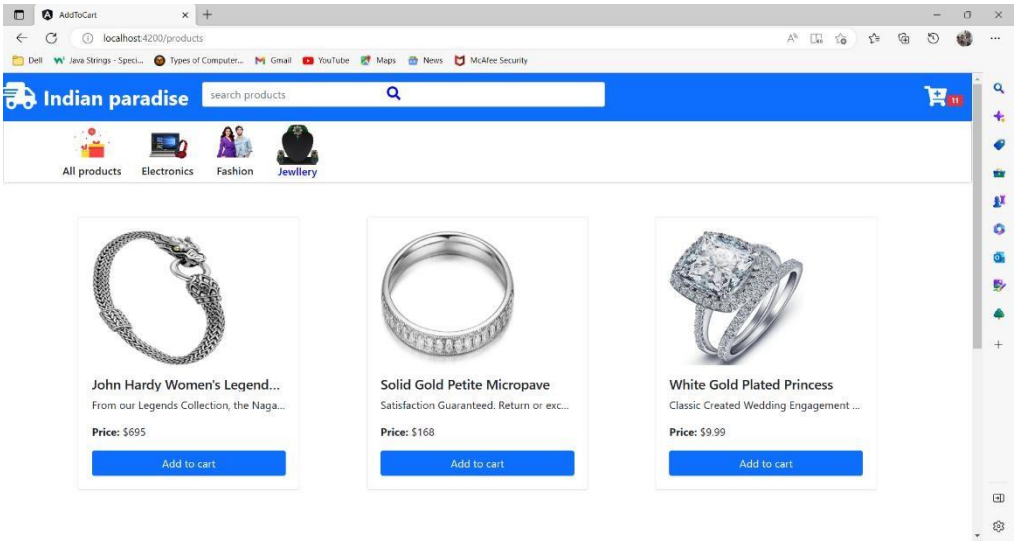
Download MongoDB Compass :

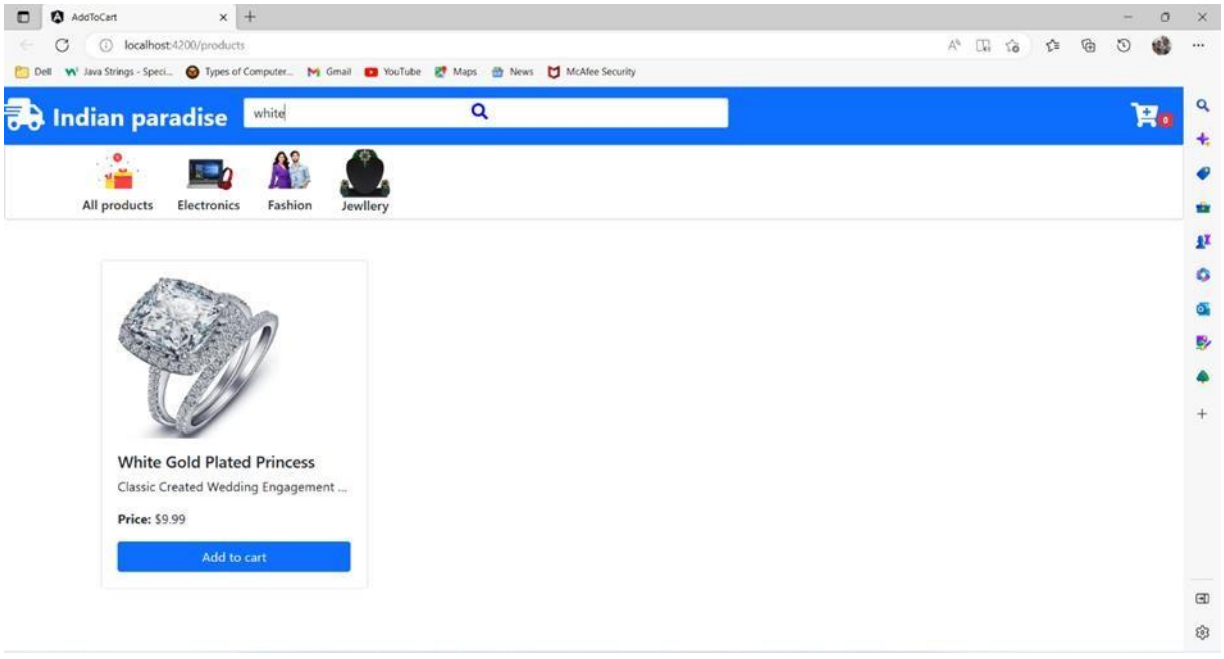
https://www.mongodb.com/try/download/compass ***CHAPTER-7***

SCREENSHOTS:






AddToCart
localhost:4200/products
Indian paradise
search products
All products
Electronics
Fashion
Jewllery
John Hardy Women's Legend...
From our Legends Collection, the Naga...
Price: $695
Add to cart
Solid Gold Petite Micropave
Satisfaction Guaranteed. Return or exc...
Price: $168
Add to cart
White Gold Plated Princess
Classic Created Wedding Engagement ...
Price: $9.99
Add to cart


AddToCart
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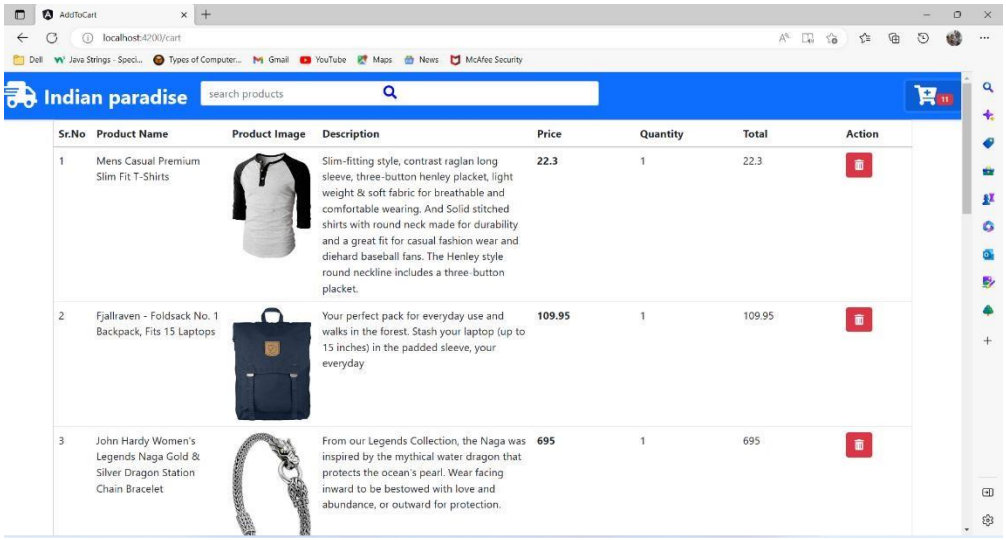
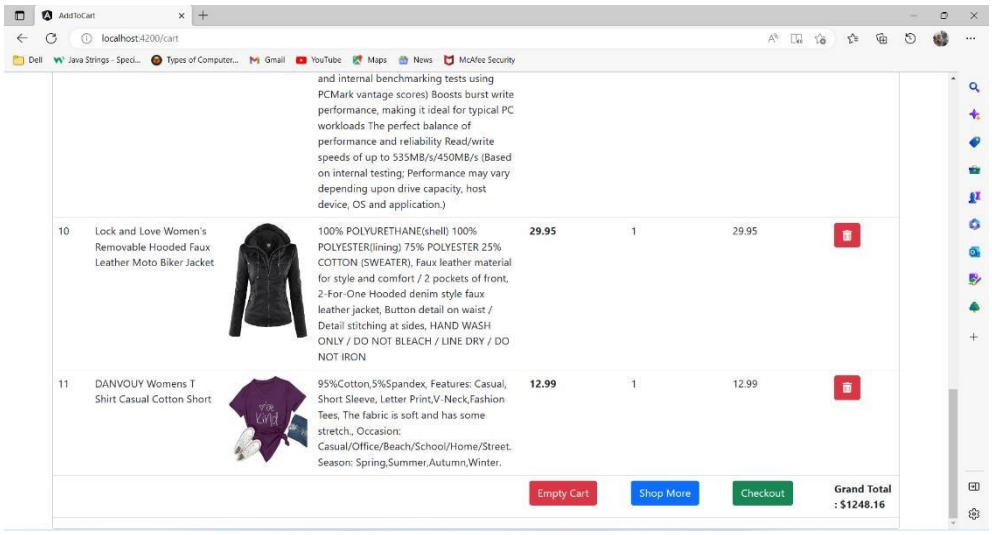
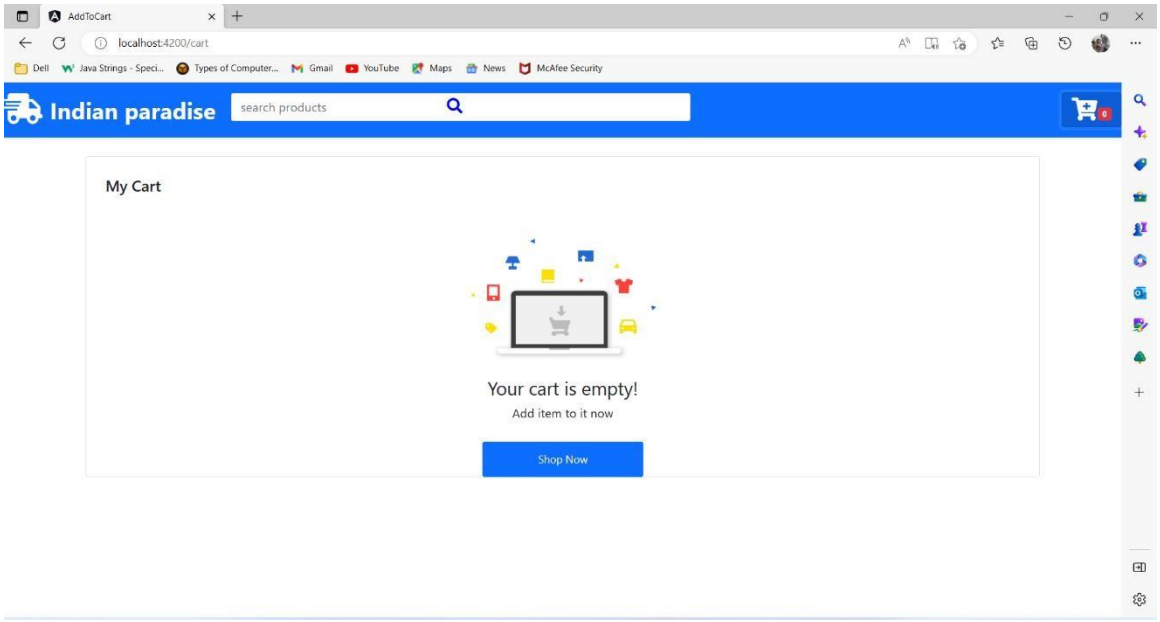
Indian paradise
white
All products
Electronics
Fashion
Jewllery
White Gold Plated Princess
Classic Created Wedding Engagement ...
Price: $9.99
Add to cart


AddToCart
localhost:4200/cart
Indian paradise
search products
Sr.No
Product Name
Product Image
Description
Price
Quantity
Total
Action
1
Mens Casual Premium Slim Fit T-Shirts
Slim-fitting style, contrast raglan long sleeve, three-button henley placket, light weight & soft fabric for breathable and comfortable wearing. And Solid stitched shirts with round neck made for durability and a great fit for casual fashion wear and diehard baseball fans. The Henley style round neckline includes a three-button placket.
22.3
1
22.3
2
Fjallraven - Foldsack No. 1 Backpack, Fits 15 Laptops
Your perfect pack for everyday use and walks in the forest. Stash your laptop (up to 15 inches) in the padded sleeve, your everyday
109.95
1
109.95
3
John Hardy Women's Legends Naga Gold & Silver Dragon Station Chain Bracelet
From our Legends Collection, the Naga was inspired by the mythical water dragon that protects the ocean's pearl. Wear facing inward to be bestowed with love and abundance, or outward for protection.
695
1
695


AddToCart
localhost:4200/cart
and internal benchmarking tests using PCMark vantage scores) Boosts burst write performance, making it ideal for typical PC workloads The perfect balance of performance and reliability Read/write speeds of up to 535MB/s/450MB/s (Based on internal testing: Performance may vary depending upon drive capacity, host device, OS and application.)
10
Lock and Love Women's Removable Hooded Faux Leather Moto Biker Jacket
100% POLYURETHANE(shell) 100% POLYESTER(lining) 75% POLYESTER 25% COTTON (SWEATER), Faux leather material for style and comfort / 2 pockets of front, 2-For-One Hooded denim style faux leather jacket, Button detail on waist / Detail stitching at sides, HAND WASH ONLY / DO NOT BLEACH / LINE DRY / DO NOT IRON
29.95
1
29.95
11
DANVOUY Womens T Shirt Casual Cotton Short
95%Cotton,5%Spandex, Features: Casual, Short Sleeve, Letter Print,V-Neck,Fashion Tees, The fabric is soft and has some stretch., Occasion: Casual/Office/Beach/School/Home/Street. Season: Spring,Summer,Autumn,Winter.
12.99
1
12.99
Empty Cart
Shop More
Checkout
Grand Total : $1248.16


AddToCart
localhost:4200/cart
Dell
Java Strings - Speci...
Types of Computer...
Gmail
YouTube
Maps
News
McAfee Security
Indian paradise
search products
My Cart
Your cart is empty!
Add item to it now
Shop Now

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CONCLUSION:

The system has been developed with much care and free of errors and at the same time it is efficient and less time consuming. The purpose of this project was to develop a web application and an android application for purchasing items from a shop.

This project helped us in gaining valuable information and practical knowledge on several topics like designing web pages using html & css, usage of responsive templates, designing of android applications, and management of database using mysql . The entire system is secured. Also the project helped us understanding about the development phases of a project and software development life cycle. We learned how to test different features of a project.

This project has given us great satisfaction in having designed an application which can be implemented to any nearby shops or branded shops selling various kinds of products by simple modifications. There is a scope for further development in our project to a great extend.

A number of features can be added to this system in future like providing moderator more control over products so that each moderator can maintain their own products. Another feature we wished to implement was providing classes for customers so that different offers can be given to each class. System may keep track of history of purchases of each customer and provide suggestions based on their history. These features could have implemented unless the time did not limited us.