



GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP
DIRECTORATE GENERAL OF TRAINING
NATIONAL SKILL TRAINING INSTITUTE

NSTI (W) SALT LAKE, KOLKATA-700091

CERTIFICATE

This is to certify that following trainee have completed their project titled

“NSTI Smart Cloud Campus”

For IBM Program – IT, Networking and Cloud (Technical Diploma)

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ABSTRACT

This application is developed using NodeJS and the Express framework, An online Bakery shop that allows users to check for various bakery products available at the online store and purchase online. The project consists of list of bakery products displayed in various categories. The user may browse through these items as per categories. If the user likes a product he may add it to his shopping cart. Once user wishes to checkout he must register on the site first. He can then login using same id password next time. Now he may pay through a credit card or cash on delivery. Once the user makes a successful transaction he gets a copy of the shopping receipt on his email id. Here we use user friendly interface to make the entire frontend. The middle tier or code behind model is designed for fast processing. And SQL serves as a backend to store bakery products lists data. Thus, the online Bakery shopping project brings an entire bakery shop online and makes it easy for both buyer and seller.

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CHAPTER 1

INTRODUCTION

- 1.1 Overview**
- 1.2 Feature**
- 1.3 Advantages**
- 1.4 Scope**
- 1.5 Future Work**

1.1 Overview

The project is one of the standard teaching methods. It is generally considered a means by which students can: develop independence and responsibility .Practice social and democratic modes of behaviour. The project method is a genuine product of the American progressive education movement. Whenever constructivist concepts, inquiry-based learning, problem-solving, and design are discussed in American education, the "project" is considered to be one of the best and most appropriate methods of teaching. In this new context, interdisciplinary learning is promoted and the use of technology is encouraged. Projects are at the heart of this communicative approach.

This project is all about developing a website for online baking and download. The software is designed using JQuery,Express,Nodejs,MongodbCompass,and Html,Css. Different bake library owners can access this software using their own unique about, menu & contact.

For example: The baker's owner can view the customers searching details of her/his cake shop.

1.2 Feature

Following are some of the important features that make Node.js the first choice of software architects.

Asynchronous and Event Driven – All APIs of Node.js library are asynchronous, that is, non-blocking. It essentially means a Node.js based server never waits for an API to return data. The server moves to the next API after calling it and a notification mechanism of Events of Node.js helps the server to get a response from the previous API call.

Very Fast – Being built on Google Chrome's V8 JavaScript Engine, Node.js library is very fast in code execution.

Single Threaded but Highly Scalable – Node.js uses a single threaded model with event looping. Event mechanism helps the server to respond in a non-blocking way and makes the server highly scalable as opposed to traditional servers which create limited threads to handle requests. Node.js uses a single threaded program and the same program can provide service to a much larger number of requests than traditional servers like Apache HTTP Server.

No Buffering – Node.js applications never buffer any data. These applications simply output the data in chunks.

License – Node.js is released under the MIT license.

1.3 Advantages

- ∞ Easy to learn. Node. ...
- ∞ Keeping things simple. Before the product launch startups wear many hats and face many challenges. ...
- ∞ Faster time-to-market. Time is priceless for startups.
- ∞ Scalability. ...
- ∞ Battle-tested old hand. ...
- ∞ MVP development. ...
- ∞ Community.

1.4 Scope

Node.js is an open-source, cross-platform server environment, and it enables users to run JavaScript on the server. JavaScript users can make use of the Node.js environment to deploy the language for scripting on the server-side, while also running scripts to generate the dynamic web page content. The scope is the binding part between the HTML (view) and the JavaScript (controller). The scope is an object with the available properties and methods. The scope is available for both the view and the controller. You have more detailed explanation here. The scope of a variable are the locations where it is accessible. For example: ... Browsers and Node.js have global variables for referring to the global object.

1.5 Future Work

Whether it is about the micro service development, delivery of handy mobile apps, or the integration of the non-web system with the server less framework, **NodeJs** offers a strong foundation. IT industry always looks for a long term solution and the It is the real **future**.

CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Services Used

2.2 Tools and Software Used

2.3 Hardware's used

2.2.1 J-Query

2.2.2 NodeJS

2.2.3 Express Node JS

2.2.4 MongoDB Compass

2.2.5 HTML

2.2.6 CSS

2.1 Services Used

- ∞ Chrome
- ∞ Visual Studio Code Editor

2.2 Tools and Software's used

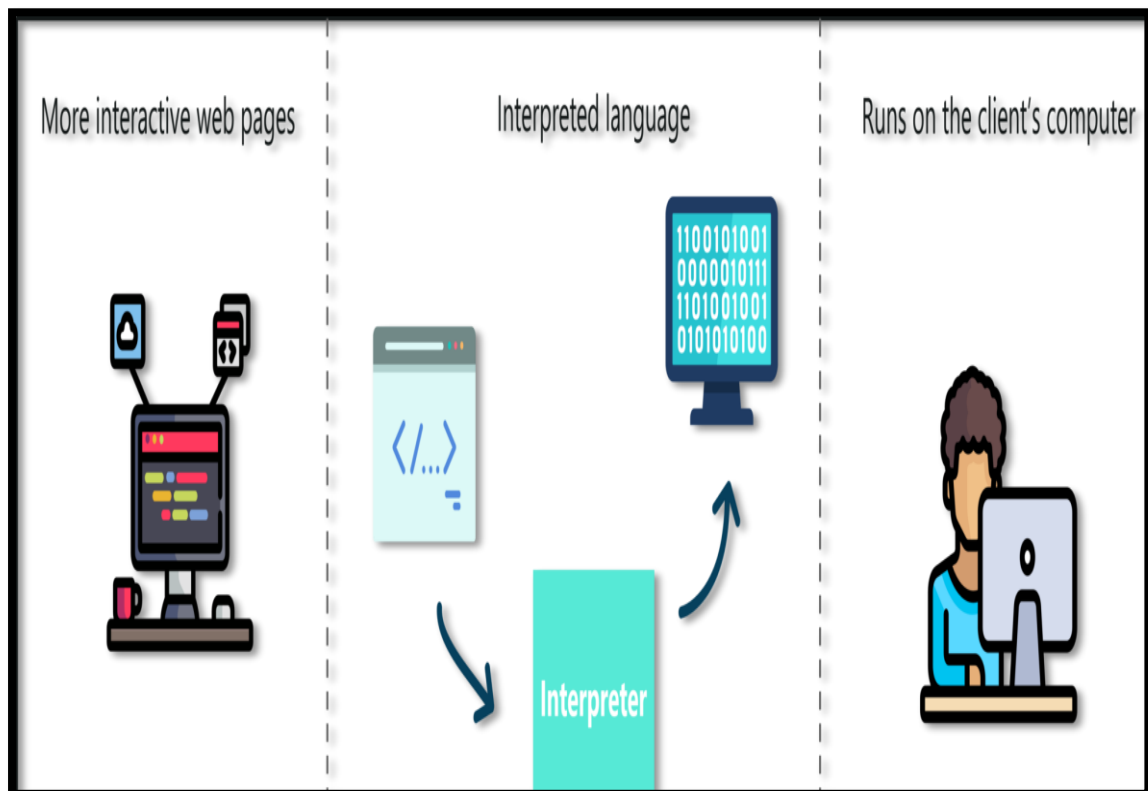
- ∞ Npm Express
- ∞ Node-Js
- ∞ Package.Json
- ∞ JQuery
- ∞ Mongodb
- ∞ Html
- ∞ Css

2.3 Hardware's used

- ∞ Operating System: Windows 10
- ∞ Browser: - Chrome
- ∞ COMPUTER Processor: Intel core i3 & RAM: 4GB

2.2.1 J-Query

J-Query is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of versatility and extensibility, J-Query has changed the way that millions of people write JavaScript.



2.2.2 NodeJS

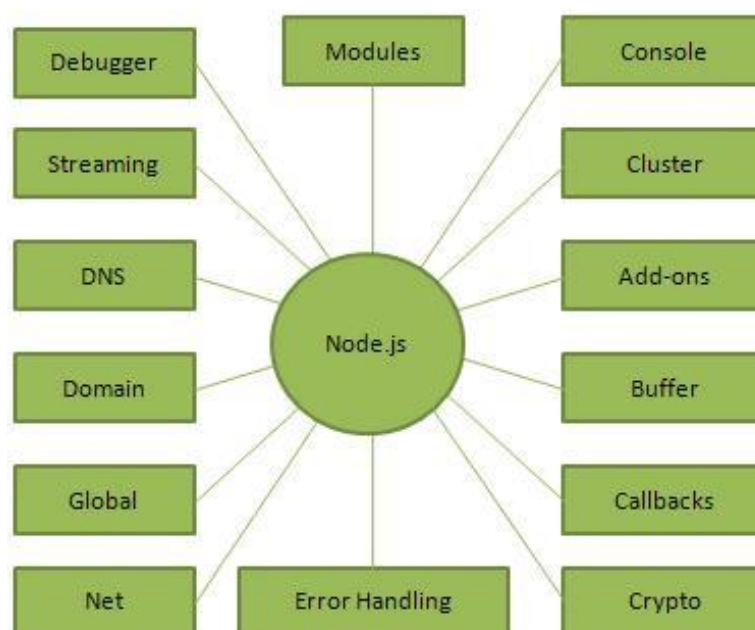
Node.js is a server-side platform built on Google Chrome's JavaScript Engine (V8 Engine). Node.js is a platform built on Chrome's JavaScript runtime for easily building fast and scalable network applications. Node.js uses an event-driven, nonblocking I/O model that makes it lightweight and efficient, perfect for data-intensive 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.

Node.js = Runtime Environment + JavaScript Library

Features of Node.js: Asynchronous and Event Driven, Very Fast, Single Threaded but Highly Scalable ,No Buffering .

Concepts: The following diagram depicts some important parts of Node.js which we will discuss in detail in the subsequent chapters.



2.2.3 Express Node-Js

Web applications Express is a minimal and flexible Node.js web application framework that provides a robust set of features for web and mobile applications.

Apis.

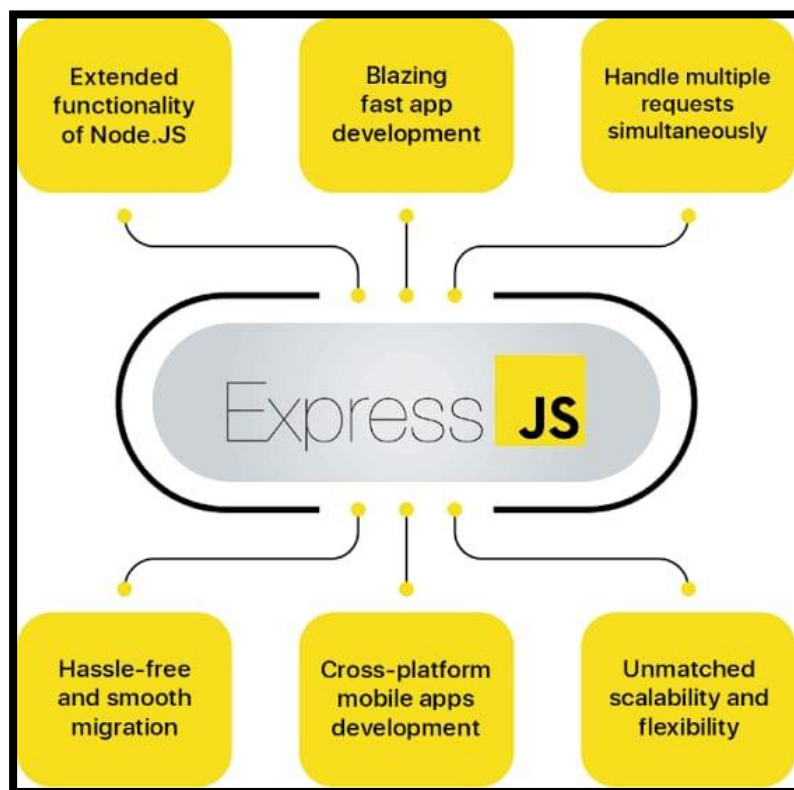
With a myriad of http utility methods and middleware at your disposal, creating a robust api is quick and easy.

Performance.

Express provides a thin layer of fundamental web application features , without obscuring node.js features that you know and love.

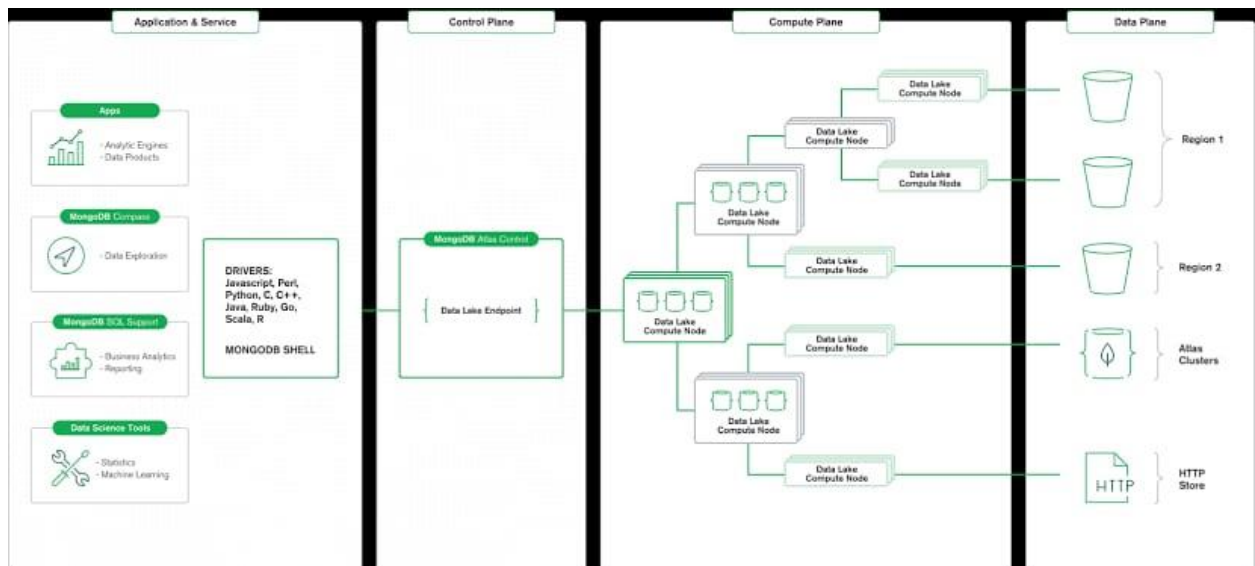
Frameworks.

Many popular frameworks are on express.



2.2.4 MongoDB Compass

MongoDB Compass is a GUI for MongoDB. It is also known as MongoDB GUI. MongoDB allows users to analyze the content of their stored data without any prior knowledge of MongoDB query syntax. When we explore exploring our data in the visual environment, we can use Compass GUI to optimize performance, manage indexes, and implement document-validation. All the versions of MongoDB Compass are open source (i.e., we can freely deploy and view the repositories of all MongoDB GUI versions). The source repositories of MongoDB compass can be found on the following link of GitHub.



2.2.2 HTML

HTML stands for Hyper Text Markup Language

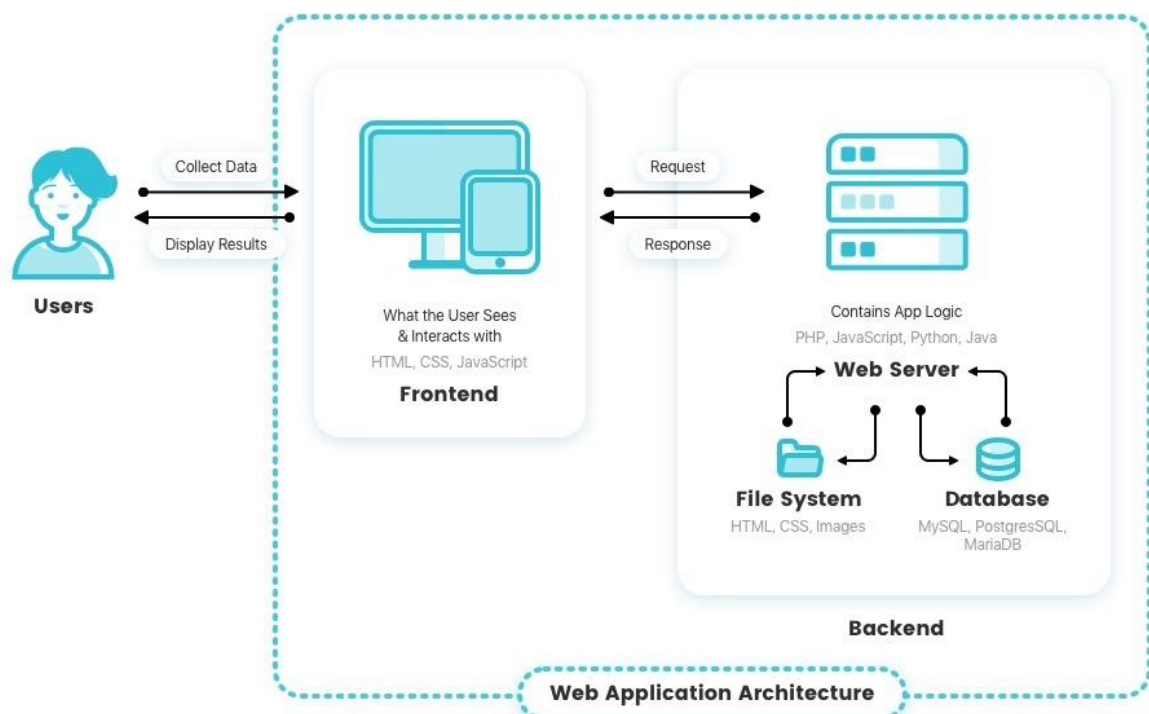
HTML is the standard markup language for creating Web pages

HTML describes the structure of a Web page

HTML consists of a series of elements

HTML elements tell the browser how to display the content

HTML allows users to create and structure sections, headings, links, paragraphs, and more, on a website using various tags and elements. Almost everything you want to create on a web page can be done using a specific HTML code.

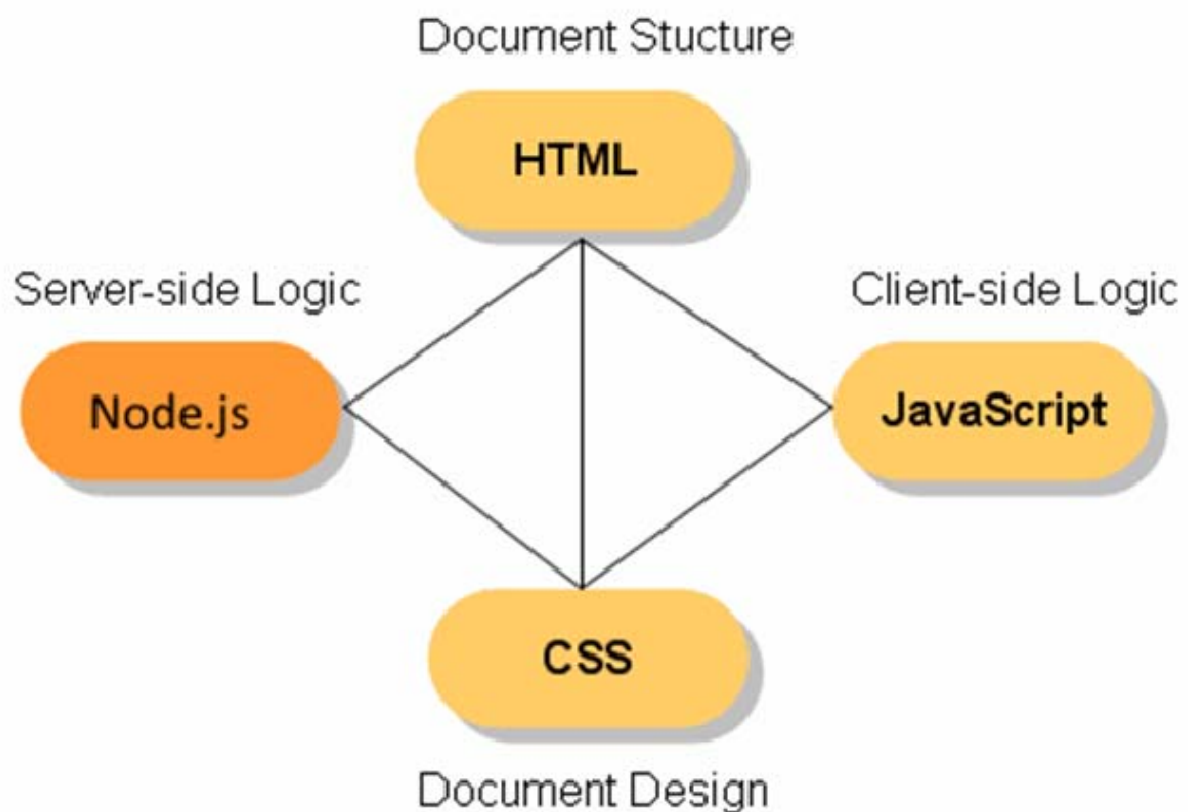


2.2.3 CSS

CSS is the language we use to style a Web page. CSS is the acronym for "Cascading Style Sheet". This tutorial covers both the versions CSS1, CSS2 and CSS3, and gives a complete understanding of CSS, starting from its basics to advanced concepts.

- CSS stands for Cascading Style Sheets
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External style sheets are stored in CSS files

CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.

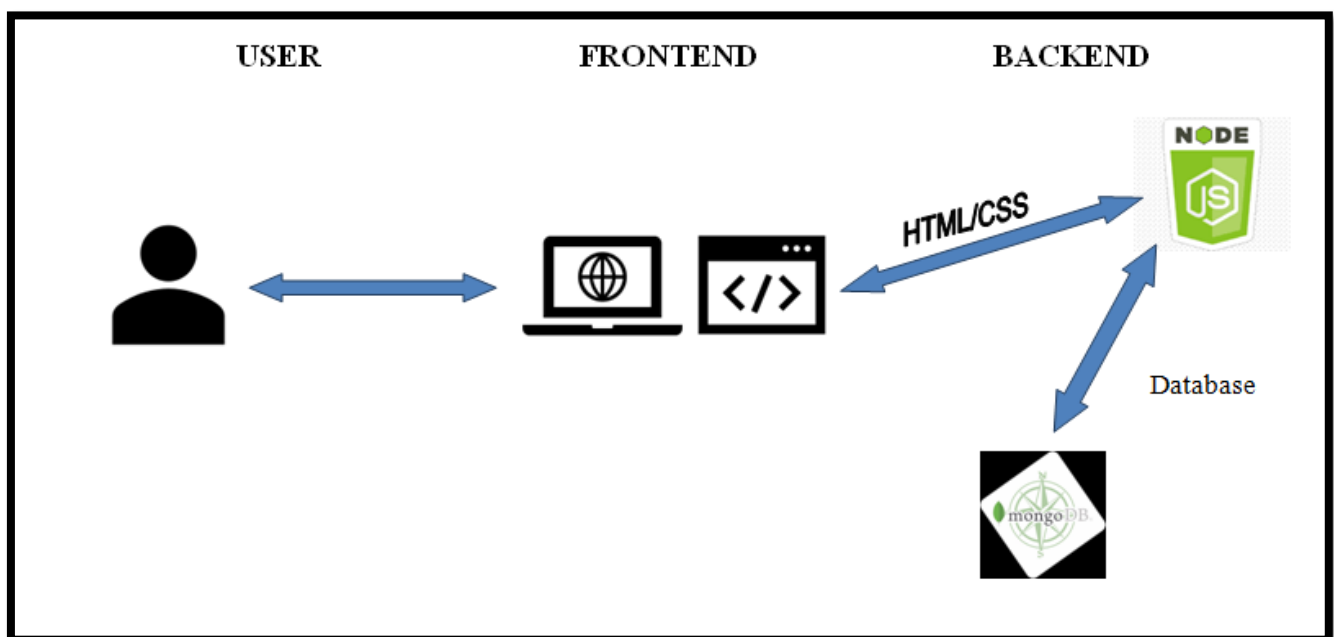


CHAPTER 3

PROJECT ARCHITECTURE

3.1 Architecture

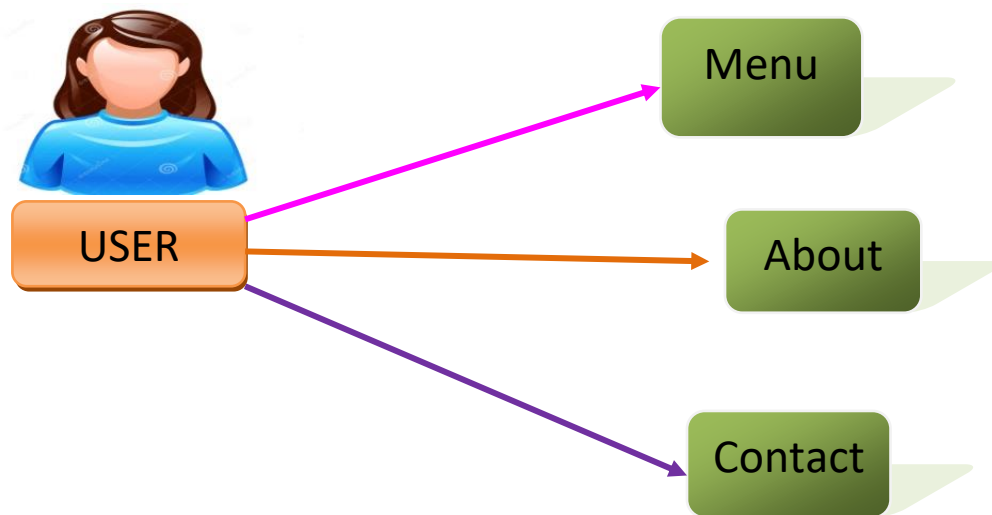
Node. Js uses the “Single Threaded Event Loop” architecture to handle multiple concurrent clients. Node. Js Processing Model is based on the JavaScript event-based model along with the JavaScript callback mechanism.



CHAPTER 4

ARCHITECTURE BLOCKS DETAIL WORKING

Use Case Diagram



CODE

App.js code

```
var express=require('express');
var bodyParser=require('body-parser');
const mongoose = require('mongoose');
mongoose.connect('mongodb://localhost:27017/baking');
var db=mongoose.connection;
db.on('error', console.log.bind(console, 'connection error'));
db.once('open', function(callback){
    console.log('connection succeeded');
})

var app=express()
var path=require('path');
app.use(bodyParser.json());
app.use(express.static('public'));
app.use('/images', express.static(__dirname + '/Images'));
app.use(bodyParser.urlencoded({
    extended: false
}));
app.set('view engine','ejs');
app.post('/index', function(req,res){
    var name = req.body.name;
    var email =req.body.email;
    var message =req.body.message;
```

```
var data = {"name":name,"email":email,"message":message}

    db.collection('details').insertOne(data,function(err, collection){

        if (err) throw err;

        console.log("Record inserted Successfully");

    });

    return res.render('message');

})
app.get('/message',function(req,res){
    res.sendFile( path.join(__dirname + '/index.html'));
})
app.get('/',function(req,res){
    res.sendFile( path.join(__dirname + '/index.html'));
}).listen(7200)
```

Html,Css,Bootstrap source Code:

index.html

```
<!DOCTYPE html>
<html>
<title>Project</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
<style>
body {font-family: "Times New Roman", Georgia, Serif;}
h1, h2, h3, h4, h5, h6 {
  font-family: "Playfair Display";
  letter-spacing: 5px;
}
</style>
<body>

<!-- Navbar (sit on top) -->
<div class="w3-top">
  <div class="w3-bar w3-white w3-padding w3-card" style="letter-spacing:4px;">
    <a href="#home" class="w3-bar-item w3-button"> R I M U S B A K E</a>
    <!-- Right-sided navbar links. Hide them on small screens -->
    <div class="w3-right w3-hide-small">
      <a href="#about" class="w3-bar-item w3-button">About</a>
      <a href="#menu" class="w3-bar-item w3-button">Menu</a>
      <a href="#contact" class="w3-bar-item w3-button">Contact</a>
    </div>
  </div>
</div>

<!-- Header -->
<header class="w3-display-container w3-content w3-wide" style="max-
width:1600px;min-width:500px" id="home">
  
  <div class="w3-display-bottomleft w3-padding-large w3-opacity">
    <h1 class="w3-xxlarge">Bake Shop</h1>
  </div>
</header>

<!-- Page content -->
<div class="w3-content" style="max-width:1100px">

  <!-- About Section -->
  <div class="w3-row w3-padding-64" id="about">
```

```

<div class="w3-col m6 w3-padding-large w3-hide-small">
  
</div>

<div class="w3-col m6 w3-padding-large">
  <h1 class="w3-center">About Bakery</h1><br>
  <h5 class="w3-center">Tradition since 2019</h5>
  <p class="w3-
large">The Catering was founded in Howrah by Miss. Soma Santra & Rima Santra i
n lorem ipsum dolor sit amet, consectetur adipiscing elit consectetur adipisci
ng elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut
enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliqu
ip ex ea commodo consequat. Duis aute iruredolor in reprehenderit in voluptate
velit esse cillum dolore eu fugiat nulla pariatur.We only use seasonal
  </span> ingredients.</p>
  <p class="w3-large w3-text-grey w3-hide-
medium">Excepteur sint occaecat cupidatat non proident, sunt in culpa qui offi
cia deserunt mollit anim id est laborum consectetur adipiscing elit, sed do ei
usmod temporincidunt ut labore et dolore magna aliqua. Ut enim ad minim veni
am, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo co
nsequat.</p>
  </div>
</div>
<hr>
<!-- Menu Section -->
<div class="w3-row w3-padding-64" id="menu">
  <div class="w3-col l6 w3-padding-large">
    <h1 class="w3-center">Our Menu</h1><br>
    <h4>Bread Basket</h4>
    <p class="w3-text-
grey">Assortment of fresh baked fruit breads and muffins </p><br>
    <h4>Honey Almond Granola with Choclate,Ice-Cream</h4>
    <p class="w3-text-
grey">Natural cereal of honey toasted oats, raisins, almonds ETC.</p><br>

    <h4>Belgian Cookies</h4>
    <p class="w3-text-
grey">Vanilla flavored batter with malted flour </p><br>

    <h4>Scrambled Pizza</h4>
    <p class="w3-text-
grey">Scrambled eggs, roasted red pepper and garlic, with green onions,Chicken
or corn</p><br>

    <h4>Blueberry Pancakes</h4>
    <p class="w3-text-grey">With syrup, butter and lots of berries </p>
  </div>

```

```

        <div class="w3-col 16 w3-padding-large">
            
        </div>
    </div>
</div>
<hr>

<!-- Contact Section -->
<div class="w3-container w3-padding-64" id="contact">
    <h1>Contact</h1><br>
    <p>We offer full-
service catering for any event, large or small. We understand your needs and w
e will cater the food to satisfy the biggerst criteria of them all, both look
and taste. Do not hesitate to contact us.</p>
    <p class="w3-text-blue-grey w3-
large"><b>Baking Service, (Home Delivery Available) Kona Naskarpara, Kona Howr
ah-14, WestBengal, INDIA</b></p>
    <p class="w3-text-
green"><b>You can also contact us by phone 8981690091/7980186634 or email-
id somasantrabiswas@gmail.com or you can send us a message here:</b></p>
    <form action="/action_page.php" target="_blank">
        <p><input class="w3-input w3-padding-
16" type="text" placeholder="Name" required name="Name"></p>
        <p><input class="w3-input w3-padding-
16" type="number" placeholder="Cakes or Chocklate Quantity" required name="Cak
es or Chocklate Quantity"></p>
        <p><input class="w3-input w3-padding-16" type="datetime-
local" placeholder="Delivery Date" required name="date"></p>
        <p><input class="w3-input w3-padding-
16" type="text" placeholder="Message \ Special requirements Our Bakery" requir
ed name="Message"></p>
        <p><button class="w3-button w3-light-grey w3-
section" type="submit">SEND MESSAGE</button></p>
    </form>
</div>

<!-- End page content -->
</div>
<!-- Footer -->
<footer class="w3-center w3-light-grey w3-padding-32">
    <p>Powered by <a href="https://www.w3schools.com/w3css/default.asp" title="R
IMUS_BAKE" target="_blank" class="w3-hover-text-green">SOMA SANTRA</a></p>
</footer>

</body>
</html>

```

Project Snippet



About Page:

localhost:8080/#about

R I M U S B A K E

[About](#) [Menu](#) [Contact](#)



About Bakery

Tradition since 2019

The Catering was founded in Howrah by Miss. Soma Santra & Rima Santra in lorem ipsum dolor sit amet, consectetur adipiscing elit consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. We only use seasonal ingredients.

Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

localhost:8080/#menu

Our Menu

Bread Basket

Assortment of fresh baked fruit breads and muffins

Honey Almond Granola with Chocolate, Ice-Cream

Natural cereal of honey toasted oats, raisins, almonds ETC.

Belgian Cookies

Vanilla flavored batter with malted flour

Scrambled Pizza

Scrambled eggs, roasted red pepper and garlic, with green onions, Chicken or corn

Blueberry Pancakes

With syrup, butter and lots of berries



localhost:8080/#contact

Contact

We offer full-service baking for any event, large or small. We understand your needs and we will cater the cake, icecream & Pizza to satisfy the biggest criteria of them all, both look and taste. Do not hesitate to contact us.

Baking Service, (Home Delivery Available) Kona Naskarpara, Kona Howrah-14, WestBengal, INDIA

You can also contact us by phone 8981690091/7980186634 or email-id somasantrabiswas@gmail.com or you can send us a message here:

Name

Cakes or Chocklate Quantity

dd-mm-yyyy --:--



Message \ Special requirements Our Bakery

SEND MESSAGE

Present by [SOMA SANTRA](#)

CONCLUSION

The NodeJS is more advantageous to the developers in comparison to its disadvantages. What's more important is the fact that it has extended the area of JavaScript application and can be evidently used for both frontend as well as backend servers. With the progress of time, more and more business organization have adopted Node.js and have ended getting positive results. Node.js is, without a doubt, one of the more interesting technologies in use today, and it has grown into one of the most popular platforms used for web applications, services, and desktop apps. It's my hope that after watching this course, you now have a solid foundation to start writing your own Node applications. It could probably be argued that most of the purposes contained in these HTML exercises could also be attained without reference to HTML; that, in fact, HTML is unnecessary for raising issues of audience, purpose, design, and accessibility

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Thank You...