PHASE 4

# Ecommerce Application

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**Abstract:**

The E-commerce Application on IBM Cloud Foundry project aims to develop a scalable, secure, and efficient e-commerce platform that leverages IBM Cloud Foundry services to host and manage the application. This project addresses the growing demand for online shopping and the need for businesses to establish a robust digital presence. By harnessing the capabilities of IBM Cloud Foundry, this application can ensure high availability, flexibility, and seamless scaling, all while maintaining top-notch security for both customers and the business.

**Project Overview:**

Users to manage their profile information, including password changes and email updates. It Allow users to log in using third-party identity providers (e.g., Google, Facebook) for a seamless experience. Conduct regular security audits and penetration testing to identify and address vulnerabilities. By implementing these features e-commerce application's user registration and login processes are secure, user-friendly, and privacy-conscious . Additionally, it's essential to stay updated on evolving security threats and technologies to adapt your security measures accordingly. Collect shipping information, including name, address, and contact details. Offer options for different shipping methods with associated Collect billing information, if different from shipping details. Allow users to save billing information for future purchases. Provide various payment options, such as credit/debit cards, digital wallets, and PayPal. Display logos of accepted payment methods for user trust. Provide a field for users to enter promotional codes. Automatically apply discounts and update the order total. Display an order confirmation page with a summary of the purchase. Send a confirmation email to the user with order details and a receipt. Offer order tracking and status updates for registered users. Integrate with a secure payment gateway to process payments and handle refunds if necessary. Choosing a database (e.g., MongoDB, PostgreSQL) and set up a connection. Creating a user model that defines the schema for user data, including fields like username, email, and hashed password. Creating a route for user registration, which accepts user data (username, email, password).Hash the password using a library like crypt and save the user data to the database. Implementing a route for user authentication, which accepts user credentials (email/username and password).Verify the provided credentials, generate a JWT token using a library like JSON web token , and return it to the client. creating middleware to protect routes that require authentication. Verify the JWT token and provide access if it's valid. implementing a route for users to reset their passwords. This typically includes generating a reset token, sending it to the user's email, and allowing them to set a new password. creating routes for users to update their profiles, change passwords, and log out. implementing proper error handling and input validation to ensure data integrity and security. initialize a new Python project and install Flask. Organize your project structure. choosing a database (e.g., SQLite, PostgreSQL) and establishing a connection. Creating a user model that defines the schema for user data, including fields like username, email, and hashed password. Creating a route for user registration, accepting user data (username, email, password). hash the password using a library like crypt and save the user data to the database. Implementing a route for user authentication, accepting user credentials (email/username and password).Creating middleware to protect routes that require authentication Implementing a route for users to reset their passwords. This typically includes generating a reset token, sending it to the user's email, and allowing them to set a new password. create routes for users to update their profiles, change passwords, and log out. Implement proper error handling and input validation to ensure data integrity and security.

### HTML CODE:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1, minimum-scale=0">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<title>Velzck Shop</title>

<link rel="stylesheet" href="https://pro.fontawesome.com/releases/v5.10.0/css/all.css"

integrity="sha384-AYmEC3Yw5cVb3ZcuHtOA93w35dYTsvhLPVnYs9eStHfGJvOvKxVfELGroGkvsg+p" crossorigin="anonymous" />

<link rel="stylesheet" href="/css/normalize.css">

<link rel="preconnect" href="https://fonts.googleapis.com">

<link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>

<link href="https://fonts.googleapis.com/css2?family=Raleway:wght@400;700&display=swap" rel="stylesheet">

<link rel="stylesheet" href="/css/style.css">

<link rel="stylesheet" href="/css/responsive.css">

</head>

<body>

<header id="top">

<div class="cont-nav pMain">

<a href="#top">

<h1 class="tittle"> <span>ARS </span> Shoes</h1>

</a>

<div class="menuBar"></div>

<div class="nav-main">

<nav>

<ul class="nav-cont ">

<div class="dec-bar"></div>

<div class="ul-cont ul1">

<li><a href="#shop"> Shop</a></li>

</div>

<div class="ul-cont ul2">

<li><a href="#aboutUs">about us</a></li>

</div>

<div class="ul-cont ul3">

<li><a href="#contact">Contact</a></li>

</div>

<div class="ul-cont ul4">

<li><a href="#FAQ">FAQ</a></li>

</div>

</ul>

</nav>

</div>

<div class="menu-btn"><i class="fas fa-bars"></i></div>

<div class="menu-btn-active"><i class="fas fa-times"></i></div>

</div>

</header>

<script src="https://code.jquery.com/jquery-3.6.0.js"></script>

<script type="text/javascript">

$(document).ready(function () {

$('.menu-btn').click(function () {

$('.nav-cont').toggleClass('active')

$('.menu-btn').toggleClass('btn-active')

$('.menu-btn-active').toggleClass('close-active')

$('.ul1').toggleClass('active')

$('.ul2').toggleClass('active')

$('.ul3').toggleClass('active')

$('.ul4').toggleClass('active')

$('.ul5').toggleClass('active')

});

$('.ul-cont').click(function () {

$('.nav-cont').toggleClass('active')

$('.menu-btn').toggleClass('btn-active')

$('.menu-btn-active').toggleClass('close-active')

$('.ul1').toggleClass('active')

$('.ul2').toggleClass('active')

$('.ul3').toggleClass('active')

$('.ul4').toggleClass('active')

$('.ul5').toggleClass('active')

});

});

</script>

<div class="hero-parallax">

<div class="rellax snkbg" data-rellax-speed="-2.5" data-rellax-zindex="0"></div>

<div class="rellax snk" data-rellax-speed="-1" data-rellax-zindex="1"></div>

<script src="/rellax.min.js"></script>

<script>

var rellax = new Rellax('.rellax');

</script>

</div>

</div>

<div class="hero-cont">

<div class="hero">

<div class="heroText-cont">

<div class="heroText">

<div class="hText-cont">

<h2 class="hText-main">Wear your feet with</h2>

<div class="tbs-cont">

<div class="scrollText-cont">

<div class="scrollText">

<h2>

<span>mike.</span>

</h2>

<h2>

<span>the finer.</span>

</h2>

<h2>

<span>the greater.</span>

</h2>

<h2>

<span>the best.</span>

</h2>

<h2>

<span>mike.</span>

</h2>

</div>

</div>

</div>

<p class="hText-p">Wear light on your feet, go strong in your life</p>

<div class="cta-cont">

<a class="cta" href="#" target="\_blank" rel="noopener noreferrer">learn more</a>

</div>

</div>

</div>

</div>

</div>

</div>

<main class="mn">

<div class="noticeBar" id="shop">

<h2 id="tx0">free shipping</h2>

<h2 id="tx1">50% discount</h2>

<h2 id="tx2">worldwide</h2>

<h2 id="tx3">50% discount</h2>

<h2 id="tx4">free shipping</h2>

</div>

<div class="product-cont">

<div tabindex="0" id="snkc" class="sneaker-cont1">

<img loading="lazy" class="sneaker-img" src="/imgs/1.1.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike air grey</h2>

<div class="snk-class">

<h3>jordan 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont2">

<img loading="lazy" class="sneaker-img" src="/imgs/1.2.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike air red</h2>

<div class="snk-class">

<h3>jordan 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont3">

<img loading="lazy" class="sneaker-img" src="/imgs/1.3.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike air mid</h2>

<div class="snk-class">

<h3>jordan 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>8</span>

<span>9</span>

<span>10</span>

<span>11</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont4">

<img loading="lazy" class="sneaker-img" src="/imgs/1.4.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike green</h2>

<div class="snk-class">

<h3>air force 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont5">

<img loading="lazy" class="sneaker-img" src="/imgs/1.5.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike valentine</h2>

<div class="snk-class">

<h3>air force 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>8</span>

<span>9</span>

<span>10</span>

<span>11</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont6">

<img loading="lazy" class="sneaker-img" src="/imgs/1.7.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike champagne</h2>

<div class="snk-class">

<h3>air max 95</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>8</span>

<span>9</span>

<span>10</span>

<span>11</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont7">

<img loading="lazy" class="sneaker-img" src="/imgs/2.8.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike platinum</h2>

<div class="snk-class">

<h3>air max 270</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont8">

<img loading="lazy" class="sneaker-img" src="/imgs/2.9.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike react eng</h2>

<div class="snk-class">

<h3>air max 270</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont9">

<img loading="lazy" class="sneaker-img" src="/imgs/2.3.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike fontanka</h2>

<div class="snk-class">

<h3>air force 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont10">

<img loading="lazy" class="sneaker-img" src="/imgs/2.6.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike low black</h2>

<div class="snk-class">

<h3>air force 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont11">

<img loading="lazy" class="sneaker-img" src="/imgs/2.4.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike wmns</h2>

<div class="snk-class">

<h3>air max 95</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont12">

<img loading="lazy" class="sneaker-img" src="/imgs/2.2.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike mid smoke</h2>

<div class="snk-class">

<h3>jordan 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont13">

<img loading="lazy" class="sneaker-img" src="/imgs/1.8.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>Retro High Tie Dye</h2>

<div class="snk-class">

<h3>jordan 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont14">

<img loading="lazy" class="sneaker-img" src="/imgs/2.5.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike low raygun</h2>

<div class="snk-class">

<h3>air force 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont15">

<img loading="lazy" class="sneaker-img" src="/imgs/1.9.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike mid satin grey</h2>

<div class="snk-class">

<h3>jordan 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div tabindex="0" id="snkc" class="sneaker-cont16">

<img loading="lazy" class="sneaker-img" src="/imgs/2.7.webp" alt="mike Jordan SB">

<div class="sneakerDesc">

<div class="sneaker-decor"></div>

<div class="data-cont">

<div class="sneakerName">

<h2>mike low white</h2>

<div class="snk-class">

<h3>air force 1</h3>

</div>

</div>

<div class="btnBuy-cont">

<div class="btnBuy">

<h3><i class="fas fa-shopping-cart"></i></h3>

</div>

</div>

<div class="sneakerSize">

<h3>Sizes</h3>

<div class="sizes">

<span>7</span>

<span>8</span>

<span>9</span>

<span>10</span>

</div>

</div>

</div>

</div>

</div>

<div class="scrollImage-cont">

<div id="snk" class="sneakerCont">

<img src="/imgs/3.1.webp" alt="">

</div>

<div id="snk" class="sneakerCont">

<img src="/imgs/3.2.webp" alt="">

</div>

<div id="snk" class="sneakerCont">

<img src="/imgs/3.3.webp" alt="">

</div>

<div id="snk" class="sneakerCont">

<img src="/imgs/3.4.webp" alt="">

</div>

<div id="snk" class="sneakerCont">

<img src="/imgs/3.1.webp" alt="">

</div>

</div>

<div class="scrollImage-cont2">

<div id="snk" class="sneakerCont">

<img src="/imgs/3.5.webp" alt="">

</div>

<div id="snk" class="sneakerCont">

<img src="/imgs/3.6.webp" alt="">

</div>

<div id="snk" class="sneakerCont">

<img src="/imgs/3.7.webp" alt="">

</div>

<div id="snk" class="sneakerCont">

<img src="/imgs/3.8.webp" alt="">

</div>

<div id="snk" class="sneakerCont">

<img src="/imgs/3.5.webp" alt="">

</div>

</div>

</div>

<div class="scrollpage-cont">

</div>

</main>

<div class="aboutUs-cont">

<div class="aboutUsTop-cont">

<div class="aboutUs-bar2"></div>

<div class="aboutUsTop">

<div id="aboutUs" class="aboutUsText">

<div class="icon\_text">

<div class="aboutUsTop-icon"><i class="fas fa-globe"></i></div>

<div class="aboutUsTop-text">

<h2>worldwide shipping</h2>

</div>

</div>

<div class="icon\_text">

<div class="aboutUsTop-icon"><i class="fas fa-shipping-fast"></i></i></div>

<div class="aboutUsTop-text">

<h2>ready to deliver</h2>

</div>

</div>

<div class="icon\_text">

<div class="aboutUsTop-icon"><i class="far fa-clock"></i></div>

<div class="aboutUsTop-text">

<h2>arrives in one week</h2>

</div>

</div>

</div>

</div>

</div>

<div class="aboutUs">

<div id="a1" class="us-cont">

<h2>our values</h2>

<div class="aboutUs-bar"></div>

<p>

To provide a most affordable and comfortable footwears

</p>

</div>

<div id="a2" class="us-cont">

<h2>about us</h2>

<div class="aboutUs-bar"></div>

<p>

We are a Local Shoe brand,since 2004

</p>

</div>

<div id="a3" class="us-cont">

<h2>our mission</h2>

<div class="aboutUs-bar"></div>

<p>We are committed to providing the highest quality products to our customers through the use of the best technology, latest designs, highest quality raw materials and world class systems and processes</p>

</div>

</div>

</div>

<footer>

<div id="contact" class="footerBar-cont">

<div class="footerBar"></div>

</div>

<div class="footerBar-cont2">

<div class="footerBar2"></div>

</div>

<div class="footer-cont">

<div class="address-cont">

<div class="address">

<h2>address</h2>

<p>4/7 kesavan nagar , thirupapuliyur.</p>

</div>

<div class="contact">

<h2>contact number</h2>

<li><span>direct line:</span> 9789797202.</li>

<li><span>business:</span> 9487118838</li>

</div>

</div>

<div id="FAQ" class="FAQ-cont">

<div class="FAQ">

<h2>faq</h2>

<li>How long does shipping take?</li>

<li>How can i track my order?</li>

<li>Can i change the product if it doesn't fit?</li>

<li>What methods of payment are there?</li>

<li>Can i cancel my order?</li>

</div>

</div>

<div class="socialIcons">

<a href="https://api.whatsapp.com/send?phone=573008211647&text=Hi,%20Alejandro,%20i'm%20interested%20on%20your%20web%20design%20services."

target="\_blank">

<i title="WhatsApp" class="fab fa-whatsapp"></i>

</a>

<a href="https://github.com/VelzckC0D3" target="\_blank">

<i title="GitHub" class="fab fa-github"></i>

</a>

<a href="https://www.instagram.com/alejandro.velzck/" target="\_blank">

<i title="Instagram" class="fab fa-instagram"></i>

</a>

<a id="in" href="https://www.linkedin.com/in/velzckcode/" target="\_blank">

<i title="Linkedin" class="fab fa-linkedin-in"></i>

</a>

</div>

</div>

<div class="velzck-cont">

<div class="velzck">

<h2 class="v2"><i class="fas fa-map-marker-alt"></i> Cuddalore, TamilNadu.</h2>

</div>

</div>

</footer>

</body>

</html>

## Home Page of E-Commerce Application:

