**NANMUDHALVAN**

**-** **CAD101 Cloud Application Development - Group 1**

**COLLEGE NAME: JEPPIAAR INSTITUTE OF TECHNOLOGY**

**TITLE: 2106-E-commerece Application on IBM Cloud Foundry**

**TEAM NAME: Proj\_228508\_Team\_2**

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**PHASE2: Innovation**

In this phase you need to put your design into innovation to solve the problem.

Explain in detail the complete steps that will be taken by you to put your design that you thought of in previous phase into transformation.

Create a document around it and share the same for assessment.

**Objectives:**

An e-commerce app is a software designed for shopping online using smartphones or tablets. With an e-commerce app, users can easily browse various products, compare prices, read reviews, and place orders with just a few taps. These apps enhance the convenience and enjoyment of shopping by providing access to thousands of items from anywhere and at any time. Furthermore, e-commerce apps are beneficial for businesses as they expand their reach, increase sales, and foster customer loyalty.

**Algorithm:**

**Step 1. Choose Your Content Management System (CMS):**

When deciding on the most suitable content management system (CMS) for your e-commerce venture, several choices are at your disposal, each catering to different requirements, including factors such as your budget, expertise, and specific e-commerce demands. Here are some popular CMS options to consider:

- WordPress: A highly adaptable CMS with widespread recognition and usage.

- Shopify: An excellent choice for establishing dropshipping businesses.

- Squarespace: Ideal for novices without prior web design experience.

- Square Online: Suited for established retailers seeking to sell both in-store and online.

- Wix: An all-in-one website builder known for its user-friendliness and high degree of customization.

To identify the most appropriate CMS for your e-commerce needs, it's essential to conduct thorough research and carefully evaluate the available options.

**Step 2. Create an Account (Or Get Web Hosting):**

Once you've settled on your preferred CMS, the next step involves creating an account, unless you've decided to go with WordPress. If you're opting for WordPress to build your e-commerce site, you'll need to procure a web hosting plan. Seek out web hosting services that include a free domain name, offer a complimentary SSL certificate, and facilitate one-click WordPress installation, making the process of configuring your domain and hosting hassle-free.

For website builders such as Shopify, Squarespace, Square Online, or Wix, you can easily sign up for an account directly on their respective websites. If your chosen CMS provides the feature, you can even register your domain name directly through the CMS platform, simplifying the domain setup process. However, in case your chosen CMS doesn't offer domain registration, you may want to consider using a domain name registrar to complete this step.

**Step 3. Select an E-commerce Theme or Template:**

The selection of a theme for your e-commerce website carries significant importance. Themes, which are pre-designed templates, play a pivotal role in establishing a consistent visual identity for your site. Most subscription-based platforms provide a broad array of these templates, ensuring that you have a variety of pre-made options at your disposal, regardless of whether you are using WordPress, Shopify, Wix, or another platform. Although free templates are typically available, some platforms also offer premium (paid) themes. For example, both WordPress and Shopify provide premium themes with a range of pricing options. Premium themes often come with unique and intricate designs, which can help reduce the time and effort needed for customizing your chosen theme.

**Step 4. Customize Your Site and Build Out Web Pages:**

After you've selected the perfect theme or template for your online store, the subsequent step involves initiating the customization process. This includes making adjustments to your site's header and footer, setting up navigation, and crafting essential pages such as your homepage, as well as pages dedicated to refunds and return policies.

**Step 5. Create Product Listings:**

An e-commerce store wouldn't be fully functional without product listings. Once your website is up and running, it's crucial to develop a thorough product catalog that includes individual listings for each product. Properly structure and categorize your listings to ensure easy access for your website visitors and streamlined management for yourself.

**Step 6. Set Up a Payment Gateway, Inventory, and Tax Tools:**

After you've filled your e-commerce website with products, it's time to focus on essential aspects like configuring a payment processing system, managing your inventory, and incorporating tax tools. When it comes to choosing a payment gateway, many online retailers prefer third-party solutions like Stripe or PayPal, as they streamline the process and enhance security. It's crucial to guarantee that customer data is fully encrypted when they are redirected to external websites for payment. Factors to take into account when integrating payment methods include how easy it is to integrate with your platform, security measures, adherence to PCI compliance standards, and any associated fees.

**Integrate Shipping:**

If your chosen platform allows for it, incorporate shipping functionality into your e-commerce website to create a smooth experience for customers and enhance the efficiency of your operations. Define your shipping strategies, which might include options like free shipping, variable fees, flat rates, and so on. Furthermore, it's important to establish clear policies for refunds and returns.

**Add a Sales Tax Calculator (Optional):**

Think about incorporating a tax calculator that can automatically calculate sales tax, shipping costs, and additional fees during the checkout process.

**Step 7. Test and Launch Your E-Commerce Site:**

Before you unveil your e-commerce website to the public, it's vital to perform comprehensive testing. This entails ensuring the functionality of every button and link on the site and creating 404 error pages that align with your chosen theme. Test the ability to add products to the shopping cart and complete the payment process, taking advantage of platforms that offer test modes without actual charges. Confirm that all post-purchase emails are correctly delivered to the designated inboxes and evaluate how your website appears and operates on mobile devices. If possible, assess your site's performance across various web browsers.

Once you've thoroughly tested and confirmed everything, from product descriptions to category pages, you're ready to launch your e-commerce store. Promote the launch through your social media channels, guest posting on relevant retail blogs, influencer marketing, and reaching out to your email subscriber lists. If your budget allows, consider investing in paid advertising on platforms such as Facebook, Google, and other advertising avenues.

**Conclusion:**

To sum up, the creation of a thriving e-commerce application necessitates a keen focus on intricate details, a user-friendly layout, and an effectively executed marketing and promotional plan. By adhering to the outlined steps, you can establish an e-commerce platform that provides a convenient and delightful shopping experience for your customers, all while increasing your online business's sales and fostering customer loyalty.