Technical Requirements for E-Commerce Marketplace

Marketplace Type: General E-Commerce

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Frontend Requirements:

User-frinedly Interface:

Inituitive browsing with clear navigations.

Responsive Design:

Seamless experience across mobile and desktop services.

Essential Pages:

- Home
- Products
- Cart
- Checkout
- Order Confirmation
- About
- Contact

Backend:

Content Management (Sanity CMS):

Manage Product data, Customer details and orders.

Create Schemas For:

Products, Categories.

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Third-Party APIs:

Payment Gateaway:

Secure integration for transaction processing.

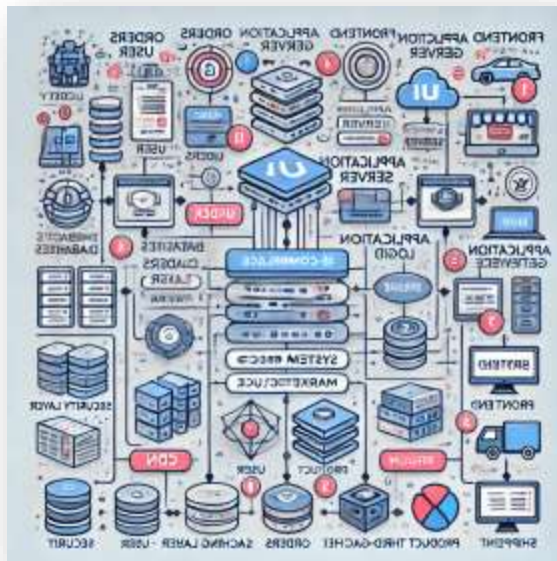**Shipment Tracking:**

Enable Order tracking for customers.

Tech Stack:

- ✓ **Frontend:**

  Nextjs, Typescript,Tailwand CSS.

- ✓ **Backend:**

  Sanity CMS.

System Architecture Visualized:

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Sanity Schemas:

1. Product:

```javascript
import { defineType, defineField } from "sanity"

export const product = defineType({
    name: "product",
    title: "Product",
    type: "document",
    fields: [
        defineField({
            name:"category",
            title:"Category",
            type:"reference",
            to:[{
                type:"category"
            }]
        }
        ),
        defineField({
            name: "name",
            title: "Title",
            validation: (rule) => rule.required(),
            type: "string"
        }),
        defineField({
            name: "slug",
            title: "Slug",
            validation: (rule) => rule.required(),
            type: "slug"
        }),
        defineField({
            name: "image",
            type: "image",
            validation: (rule) => rule.required(),
            title: "Product Image"
        }),
        defineField({
            name: "price",
            type: "number",
            validation: (rule) => rule.required(),
            title: "Price",
```

```
    }),
    defineField({
        name: "quantity",
        title: "Quantity",
        type: "number",
        validation: (rule) => rule.min(0),
    }),
    defineField({
        name: "tags",
        type: "array",
        title: "Tags",
        of:[{
            type: "string"
        }]
    }),
    defineField({
        name: 'description',
        title: 'Description',
        type: 'text',
        description: 'Detailed description of the product',
    }),
    defineField({
        name: 'features',
        title: 'Features',
        type: 'array',
        of: [{ type: 'string' }],
        description: 'List of key features of the product',
    }),
    defineField({
        name: 'dimensions',
        title: 'Dimensions',
        type: 'object',
        fields: [
            { name: 'height', title: 'Height', type: 'string' },
            { name: 'width', title: 'Width', type: 'string' },
            { name: 'depth', title: 'Depth', type: 'string' },
        ],
        description: 'Dimensions of the product',
    }),
    ]
})
```

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2. Category:

```javascript
import { defineType,defineField } from "sanity";

export const Category = defineType({
    name: "category",
    title: "Category",
    type: "document",
    fields:[
        defineField({
            name: "name",
            title: "Name",
            type: "string",
            validation: (rule) => rule.required(),
        }),
        defineField({
            name: "slug",
            title: "Slug",
            type: "slug",
            validation: (rule) => rule.required(),
            options: {
                source: "name",
            }
        })
    ]
})
```

3. Order:

```javascript
// import { default } from "sanity"

export default {
    name: 'order',
    type: 'document',
    title: 'Order',
    fields: [
      {
        name: 'orderId',
        type: 'string',
```

```
      title: 'Order ID'
    },
    {
      name: 'customer',
      type: 'reference',
      to: [{ type: 'customer' }],
      title: 'Customer'
    },
    {
      name: 'products',
      type: 'array',
      of: [
        {
          type: 'object',
          fields: [
            {
              name: 'product',
              type: 'reference',
              to: [{ type: 'product' }],
              title: 'Product'
            },
            {
              name: 'quantity',
              type: 'number',
              title: 'Quantity'
            },
          ],
        },
      ],
      title: 'Products',
    },
    {
      name: 'totalAmount',
      type: 'number',
      title: 'Total Amount'
    },
    {
      name: 'status',
      type: 'string',
      title: 'Order Status',
      options: { list: ['Pending', 'Shipped', 'Delivered'] }
    },
    {
      name: 'createdAt',
      type: 'datetime',
```

```
        title: 'Order Date'
    },
  ],
};
```