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
- Track Order

Backend:

Content Management (Sanity CMS):

Manage Product data, Customer details and orders.

Create Schemas For:

Products, Categories, Customer Info, Orders

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Third-Party APIs:
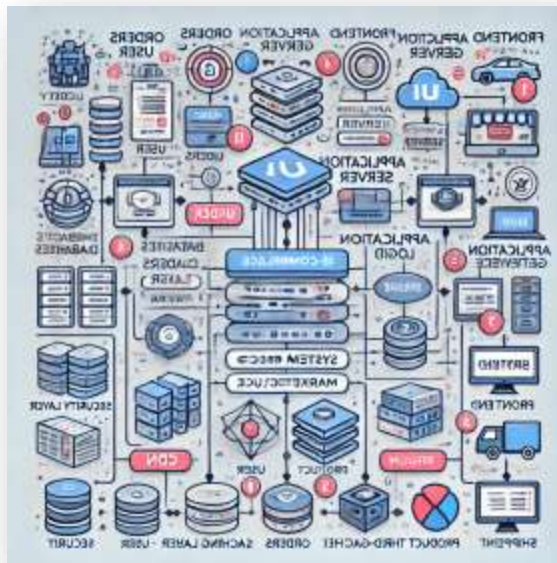
Payment Gateaway:

Stripe For transaction processing.

Tech Stack:

✓ **Frontend:**

Nextjs, Typescript,Tailwand CSS.

✓ **Backend:**

Sanity CMS.

System Architecture Visualized:

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',
        }),
    ]
})
```

2. Category:

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

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```
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:

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

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

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```
        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'
      },
    ],
};
```