## PLANNING THE TECHNICAL FOUNDATION

## Step 1: DEFINE TECHNICAL REQUIREMENTS

### **Frontend Requirements:**

```
1. Framework: Next.js + TailwindCSS
2. Pages:
 Home

    Product Listing

    Product Details

 Cart

    Checkout

    Order Confirmation

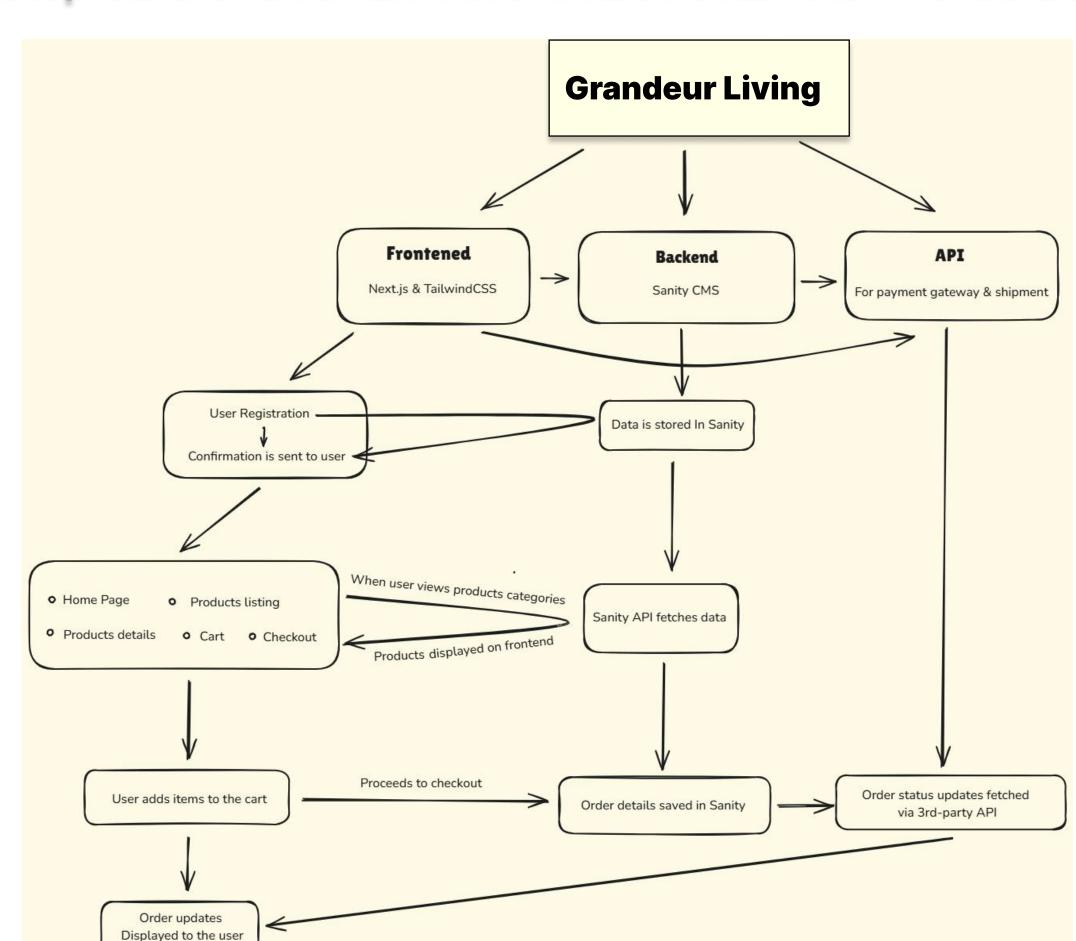
3. Mobile-friendly & responsive UI
```

# **Backend Requirements (Using Sanity CMS + APIs):**

- 1. Sanity CMS for managing: Products
- Customers Orders

### **Third-Party APIs for:**

- Stripe for payment processing. • Authentication system.
- Shipment tracking API.
- Step 02 & 3: SYSTEM ARCHITECTURE AND WORKFLOW



## The necessary API endpoints for product retrieval, order management, shipment tracking, payment processing,

Step 04: API SPECIFICATION

and authentication.

### GET /products → Fetch all available products

**Products API:** 

- GET /product/:id → Fetch details of a specific product
- **Orders API:**

#### POST /orders → Create a new order GET /order/:id → Fetch details of a specific order

**Shipment API:** 

 GET /shipment/:orderld → Fetch shipment tracking info **Checkout & Payment API:** 

### POST /checkout → Process payment through Stripe

**Authentication API:** 

### POST /auth/register → Register a new customer

POST /auth/login → Authenticate user & issue token

Step 05: DATA SCHEMA DESIGN

# **Product Schema:**

## export default {

name: 'product',

title: 'Product',

```
type: 'document',
   fields: [
    { name: 'name', type: 'string', title: 'Product Name' },
    { name: 'description', type: 'text', title: 'Description' },
    { name: 'price', type: 'number', title: 'Price' },
    { name: 'stock', type: 'number', title: 'Stock Level' },
    { name: 'category', type: 'reference', to: [{ type: 'category' }], title: 'Category' },
    { name: 'images', type: 'array', of: [{ type: 'image' }], title: 'Product Images' },
    { name: 'tags', type: 'array', of: [{ type: 'string' }], title: 'Tags' }
Category Schema:
   export default {
```

# { name: 'name', type: 'string', title: 'Category Name' },

fields: [

name: 'category',

type: 'document',

title: 'category',

```
{ name: 'description', type: 'text', title: 'Description' },
    { name: 'parentCategory', type: 'reference', to: [{ type: 'category' }],
        title: 'Parent Category' },
  };
Customer Schema:
  export default {
   name: 'customer',
   title: 'customer',
   type: 'document',
```

{ name: 'name', type: 'string', title: 'Full Name' },

{ name: 'phone', type: 'string', title: 'Phone number' },

{ name: 'email', type: 'string', title: 'email' },

# { name: 'address', type: 'text', title: 'address' },

**}**;

fields: [

```
};
Order Schema:
export default {
 name: 'order',
 title: 'Order',
 type: 'document',
 fields: [
   { name: 'customer', type: 'reference', to: [{ type: 'customer' }],
       title: 'Customer' },
   { name: 'products', type: 'array', of: [{ type: 'reference', to:
       [{ type: 'product' }] }], title: 'Products' },
   { name: 'totalAmount', type: 'number', title: 'Total Amount' },
   { name: 'status', type: 'string', title: 'Status',
```

```
{ name: 'timestamp', type: 'datetime', title: 'Order Date' }
};
Payment Schema:
export default {
 name: 'payment',
 title: 'payment',
 type: 'document',
 fields: [
  { name: 'order', type: 'reference', to: [{ type: 'order' }], title: 'Order' },
  { name: 'amount', type: 'number', title: 'Amount' },
  { name: 'method', type: 'string', title: 'Payment Method',
      options: { list: ['Credit Card', 'PayPal', 'Cash on Delivery'] } },
  { name: 'status', type: 'string', title: 'Status',
      options: { list: ['Paid', 'Pending', 'Failed'] } },
  { name: 'timestamp', type: 'datetime', title: 'Order Date' }
```

options: { list: ['Pending', 'Shipped', 'Delivered', 'Canceled'] } },