**Plane for Day 3 –**

**API Integration and Data Migration…**

#### **2. Chart Layout:**

| **Section** | **Details** | **Flow/Examples** |
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| **Objective** | API integration with Next.js and data migration into Sanity CMS. | 1. API methods. 2. Schema compatibility. |
| **Key Learning Outcomes** | 1. API Integration.  2. Data Migration.  3. Explore e Commerce platforms.  4. Validate schemas with real-world data. | Example: Fetch data from Shopify or Woo Commerce. |
| **Integration Steps** | **Step 1:** Fetch data from an API. **Step 2:** Validate it with Sanity schema. **Step 3:** Migrate into Sanity CMS using APIs. | fetch() + Sanity schema validation |
| **Provided APIs** | Templates (0-9) for examples. APIs are read-only for guidance in schema creation and data validation. | Import API templates into your project. |
| **Final Goal** | Build a functional backend marketplace with customized data sources and a seamless Next.js-Sanity integration. | Example: A mini marketplace showing imported products. |

#### **Key Outcomes:**

1. **API Integration in Next.js:**
   * Learn how to fetch data from external APIs.
   * Handle API responses and errors effectively (step-by-step process).
2. **Data Migration:**
   * Validate fetched data with Sanity schemas.
   * Migrate external data into Sanity CMS without losing compatibility.
3. **Explore e Commerce Platforms:**
   * Shopify, Woo Commerce, Salesforce, and others.
4. **Schema Validation:**
   * Build schemas that match real-world data structures and ensure smooth API integration.

#### **Workflow/Steps for Integration:**

1. **Step 1: Fetch API Data**
   * Use the given APIs (Templates 0-9).
   * Write a fetch function in Next.js to retrieve data.
   * Validate fetched data by testing its format.
2. **Step 2: Sanity CMS Schema Setup**
   * Create schemas in Sanity CMS (e.g., Product, User, Order schemas).
   * Match API data fields with your schema fields.
   * Example: API data for a product may have:
     + Title → Product Name
     + Price → Cost
     + Description → Details
3. **Step 3: Data Migration**
   * Import validated API data into Sanity CMS.
   * Ensure data is saved in the correct format within Sanity.
   * Test migrations by fetching and displaying data in Next.js.
4. **Step 4: Final Testing**
   * Fetch migrated data from Sanity CMS.
   * Display data dynamically in Next.js.
   * Example: Render a product list or marketplace page.

#### **Tools/Resources Required:**

* Next.js for Frontend.
* Sanity CMS for Backend.
* Provided APIs for data population.
* Postman (optional) for testing API responses.

#### **API Overview:**

* **Provided APIs:** Templates 0-9.
* These APIs are read-only and serve as guidance for validation and migration.
* Freedom to:
  1. Populate Sanity CMS directly.
  2. Manually import data.

**Conclusion:**

By the end of this module, we’ll:

* Successfully integrate APIs into your Next.js project.
* Migrate data into Sanity CMS with properly validated schemas.
* Build a functional marketplace backend.