

1. Models and Their Relationships

Models

1. User Profile:

- **Fields:** User (OneToOneField with Django's User model), profile_picture, bio, wishlist (ManyToManyField with Product)

2. Product:

- **Fields:** name, description, price, image(s), pdf, created_at, updated_at

3. Review:

- **Fields:** Product (ForeignKey to Product), user (ForeignKey to User), rating, comment, helpfulness_score, created_at, updated_at

4. Wishlist:

- **Fields:** user (ForeignKey to User), product (ManyToManyField with Product)

5. Shopping Cart:

- **Fields:** user (ForeignKey to User), product (ManyToManyField with Product), quantity

6. Order:

- **Fields:** user (ForeignKey to User), products (ManyToManyField with Product), total_price, created_at

Relationships

- A User can have one User Profile.
- A User can have many Reviews.
- A Product can have many Reviews.
- A User can have many Products in their Wishlist.
- A User can have many Products in their Shopping Cart.
- A User can place many Orders.

2. Views and Templates

Necessary Views

1. **Home Page View:**
 - Display featured products, search bar.
2. **Product List View:**
 - Display all products with filters (category, price range, ratings).
3. **Product Detail View:**
 - Display product details, reviews, add to cart, and wishlist buttons.
4. **User Profile View:**
 - Display user information, order history, wishlist, and profile picture upload.
5. **Review Management View:**
 - Allow users to add, edit, and delete their reviews.
 - Allow customer service to manage reviews.
6. **Shopping Cart View:**
 - Display items in the cart, quantity management, and checkout button.
7. **Admin Dashboard View:**
 - Custom dashboard for product management, review moderation, and analytics.

3. Sketch the Website Layout (**MISSING!**)

4. Define User Roles and Permissions

Role	Permissions
Customer	View products, add to cart, place orders, write reviews, and manage their profile and wishlist.
Admin	Manage products, manage reviews, view analytics, manage users, and deploy the website.
Customer Service	Moderate reviews (approve, delete), and assist with user inquiries.

Designs

Main Idea ⇒ <https://www.canyon.com/en-de/>

Events navigate to external links ⇒ <https://www.giant-bicycles.com/global>

Workflow Proposal

Week 1: Core Functionality and Integration

Day 1-2: Initial Setup and User Management

1. **Initial Setup:**
 - Set up the Django project and initialize Git repository.
 - Create apps: `core`, `users`, `products`, `reviews`, `cart`, `admin_panel`.
 - Configure settings and add apps to `INSTALLED_APPS`.
2. **User Management (Users App):**
 - **Backend Developer:**
 - Define the `CustomUser` model.
 - Create views and URLs for user registration, login, and profile management.
 - Implement user authentication.
 - **Frontend Developer:**
 - Create and style templates for user registration, login, and profile pages.
 - Ensure header and navigation include links to login/register/profile.
3. **Integration:**
 - Ensure user authentication is working across the site.
 - Test user registration, login, and profile management.

Day 3-4: Product Listings

1. **Product Listings (Products App):**
 - **Backend Developer:**
 - Define the `Product` model.
 - Create views and URLs for product listing and detail pages.
 - **Frontend Developer:**
 - Create and style templates for product listing and detail pages.
 - **Integration:**
 - Integrate product listing and detail views.
 - Test product listing and detail functionality.

Day 5-6: Product Reviews

1. **Product Reviews (Reviews App):**
 - **Backend Developer:**
 - Define the `Review` model.
 - Create views and URLs for adding, editing, and displaying reviews.
 - **Frontend Developer:**
 - Create and style templates for review forms and review listings.
 - **Integration:**

- Integrate reviews with product details.
- Test adding, editing, and displaying reviews.

Day 7: Shopping Cart

1. **Shopping Cart (Cart App):**
 - **Backend Developer:**
 - Define the `CartItem` model.
 - Create views and URLs for adding to cart, viewing cart, and updating cart items.
 - **Frontend Developer:**
 - Create and style templates for cart and checkout pages.
 - **Integration:**
 - Integrate cart functionality with products and user profiles.
 - Test adding to cart, viewing cart, and updating cart items.

Week 2: Final Features, Testing, and Deployment

Day 8-9: Admin Panel and Final Features

1. **Admin Panel (Admin Panel App):**
 - **Backend Developer:**
 - Set up a custom admin dashboard.
 - Create views and URLs for managing products, reviews, and users.
 - **Frontend Developer:**
 - Create and style templates for the admin dashboard.
 - **Integration:**
 - Integrate admin functionalities.
 - Test admin actions and ensure proper access controls.

Day 10: Final Integration and Bug Fixes

1. **Integration:**
 - Ensure all apps are integrated smoothly.
 - Fix any bugs or issues that arise during integration.
 - Ensure all features work together without conflicts.

Day 11-12: Testing and Refinement

1. **Testing:**
 - Write and run unit tests for each feature.
 - Perform integration testing to ensure smooth interactions between apps.
 - Conduct user testing to gather feedback and make improvements.
 - Both team members should focus on testing their respective parts of the application and work together to fix any issues.

Day 13: Documentation and Final Touches

1. **Documentation:**
 - Document each app's functionality and integration points.
 - Write a README file with setup instructions and project details.
 - Ensure all code is well-documented with comments and docstrings.
2. **Final Touches:**
 - Polish the UI and ensure a consistent design.
 - Optimize performance and load times.
 - Ensure the website is responsive and mobile-friendly.

Day 14: Deployment and Presentation Preparation

1. **Deployment:**
 - Deploy the project to a hosting service like PythonAnywhere or Heroku.
 - Ensure all static files are collected and the database is migrated on the server.
 - Test the live version of the application to ensure it works as expected.
2. **Presentation Preparation:**
 - Prepare a presentation to showcase the project.
 - Highlight key features, functionalities, and the development process.
 - Be ready to demonstrate the live application and answer questions.

Summary

- **Initial Setup:** 1 day
- **User Management:** 1 day
- **Product Listings:** 2 days
- **Product Reviews:** 2 days
- **Shopping Cart:** 1 day
- **Admin Panel and Final Features:** 2 days
- **Integration and Bug Fixes:** 1 day
- **Testing and Refinement:** 2 days
- **Documentation and Final Touches:** 1 day
- **Deployment and Presentation Preparation:** 1 day