

CraftCircle – Requirements Document

1. Introduction and Rationale

CraftsCircle is an e-commerce platform for buying and selling handmade crafts. It supports two roles: **Admin** (who manages the listings) and **Buyer** (who browses, purchases, and manages items in a cart). The project highlights full-stack skills using **React (or HTML, CSS and JS)**, **Node.js/Express**, and **MongoDB**, with a clean and responsive design. The aim is to offer a marketplace that values creativity, simplicity, and usability.

2. Content Evaluation

Navigation

- Home
- Browse Crafts
- Cart
- Checkout
- Admin Dashboard
- Login / Logout

3. Wireframes

Figma Link: <https://www.figma.com/design/7ZPXHwc5F6gF1mTfdaHjTp/CraftsCircle?node-id=0-1&t=qMTex0M99e5NpGSU-1>

Content Descriptions and Sources

- Text: Authored manually (titles, descriptions, categories)
- Images: Sourced from royalty-free platforms (Unsplash, Pixels)
- Icons/UI: Font Awesome

4. Functionality (User Stories)

Must Have User Stories (25)

CRUD Operations (Admin)

Title: Admin - Create Craft Listing

User Story: As an Admin, I want to create a new handmade craft listing so that it appears in the shop.

Tasks:

- Build create form (title, description, price, image)
- Validate form inputs
- Send POST request to backend

- Store data in MongoDB

Time: 4.5 hrs

Title: Admin - View Craft Listings

User Story: As an Admin, I want to view all craft listings so I can manage them from a single place.

Tasks:

- Fetch listings from DB
- Display in admin table view
- Add edit/delete buttons

Time: 3.5 hrs

Title: Admin - Update Craft Listing

User Story: As an Admin, I want to update an existing listing to fix content.

Tasks:

- Load data into form
- Validate & update listing
- Show confirmation

Time: 4.5 hrs

Title: Admin - Delete Craft Listing

User Story: As an Admin, I want to delete a listing to remove it from the shop.

Tasks:

- Add delete button
- Confirm action
- Remove from DB and UI

Time: 3.5 hrs

User Authentication

Title: Admin Login/Logout

User Story: As an Admin, I want to log in and out securely.

Tasks:

- Build login form
- Connect to backend auth
- Handle token/session
- Add logout logic

Time: 5 hrs

Buyer Shopping Flow

Title: Browse Crafts

User Story: As a Buyer, I want to view available crafts.

Tasks:

- Fetch all listings
- Render in card layout
- Display image, price, title

Time: 4 hrs

Title: View Product Details

User Story: As a Buyer, I want to see details about each craft.

Tasks:

- Route to detail page
- Fetch and display info
- Add back button or breadcrumb

Time: 4 hrs

Title: Add to Cart

User Story: As a Buyer, I want to add a product to my cart.

Tasks:

- Add button on card/detail
- Save to local Storage/state
- Show cart count

Time: 4 hrs

Title: View Cart

User Story: As a Buyer, I want to view items in my cart.

Tasks:

- Show items (title, price, quantity)
- Update total dynamically

Time: 4 hrs

Title: Update Cart Item Quantity

User Story: As a Buyer, I want to change the quantity of items.

Tasks:

- Add +/- buttons or dropdown
- Update total price
- Save changes

Time: 4 hrs

Title: Remove Item from Cart

User Story: As a Buyer, I want to remove items I don't want.

Tasks:

- Add remove button
- Update UI and total
- Sync with backend/local Storage

Time: 3 hrs

Should Have User Stories (5)

Title: Sort Listings

User Story: As a Buyer, I want to sort crafts by price or date.

Tasks:

- Add dropdown
- Implement sort logic
- Update product display

Time: 3.5 hrs

Title: Mobile Responsive Design

User Story: As a user, I want the site to work well on phones and tablets.

Tasks:

- Add media queries
- Test key pages on all devices

Time: 4 hrs

Title: 404 Error Page

User Story: As a user, I want a message when a page doesn't exist.

Tasks:

- Route undefined pages to 404
- Show message + return link

Time: 2 hrs

Title: Craft Categories

User Story: As a Buyer, I want to filter by category.

Tasks:

- Add dropdown or buttons
- Filter listing by category field

Time: 3 hrs

Title: Show Stock Status

User Story: As a Buyer, I want to know if an item is in stock.

Tasks:

- Add stock field in DB
- Display badge on card/detail

Time: 3 hrs

Title: Checkout

User Story: As a Buyer, I want to checkout securely.

Tasks:

- Build form for name, email, address
- Validate form
- Store in DB or mock
- Show thank-you message

Time: 5 hrs

Nice to Have User Stories (3)

Title: Wishlist

User Story: As a Buyer, I want to save favourite crafts for later.

Tasks:

- Add "heart" icon
- Store in local Storage
- Create Wishlist page

Time: 4 hrs

Title: Search Bar

User Story: As a Buyer, I want to search by keywords.

Tasks:

- Add input field
- Filter data on change
- Handle empty results

Time: 4 hrs

5. Technical Specifications

- **Frontend:** React, HTML5, CSS3, JavaScript ES6
- **Backend:** Node.js with Express
- **Database:** MongoDB Atlas
- **Hosting:** Vercel (frontend), Render (backend)
- **Other Tools:** Cloudinary (images), GitHub, Font Awesome

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6. Development Specifications

- **Folder Structure:**
 - Client (React frontend)
 - server (Node backend)
- **File Naming:** camelCase for JS, kebab-case for files
- **Accessibility:** Follows WCAG 2.1 AA (ARIA labels, keyboard nav)
- **Responsiveness:** Tested at 320px, 768px, 1024px breakpoints
- **GitHub:** <https://github.com/Isha003-hub/CraftsCircle>

7. Database Schema and ERD

Admin Table:

Field	Type	Description
_id	INT PRIMARY KEY AUTO_INCREMENT	Unique identifier for the admin
first_name	VARCHAR (50)	Admin's First name
last_name	VARCHAR (50)	Admin's last name
email	VARCHAR (100)	Admin's email address
password	VARCHAR (255)	Hashed password for login

User Table:

Field	Type	Description
_id	INT PRIMARY KEY AUTO_INCREMENT	Unique Identifier for the user
first_name	VARCHAR (50)	User's First name
last_name	VARCHAR (50)	User's Last name
email	VARCHAR (100)	User's email address
address	Text	User's address
contact_no	VARCHAR (15)	User's contact phone number

Product Table:

Field	Type	Description
_id	INT PRIMARY KEY AUTO_INCREMENT	Unique identifier for the product
name	VARCHAR (100)	Product name
description	Text	Product description
created_at	TIMESTAMP DEFAULT CURRENT_TIMESTAMP	When the product was added
stock	INT	Number of items in stock
price	Decimal (10.2)	Price per unit
materials	Text	Materials used in the product

Cart Table:

Field	Type	Description
_id	INT PRIMARY KEY AUTO_INCREMENT	Unique cart ID
U_id	INT	FK
updated_at	TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP	Last Updated Date

cart_items Table:

Field	Type	Description
_id	INT PRIMARY KEY AUTO_INCREMENT	Unique ID for cart item
c_id	INT	FK
p_id	INT	FK
qty	INT	Quantity of this product in the cart

Order Table:

Field	Type	Description
_id	INT PRIMARY KEY AUTO_INCREMENT	Unique order Id
u_id	INT	FK
shipped_address	TEXT	Shipping address for the order
total_amount	DECIMAL (10.2)	Total amount for the order

order_item Table:

Field	Type	Description
_id	INT PRIMARY KEY AUTO_INCREMENT	Unique ID for order item
o_id	INT	FK
p_id	INT	FK
qty	INT	Quantity of the product ordered
price	Decimal (10.2)	Price per unit at time of order

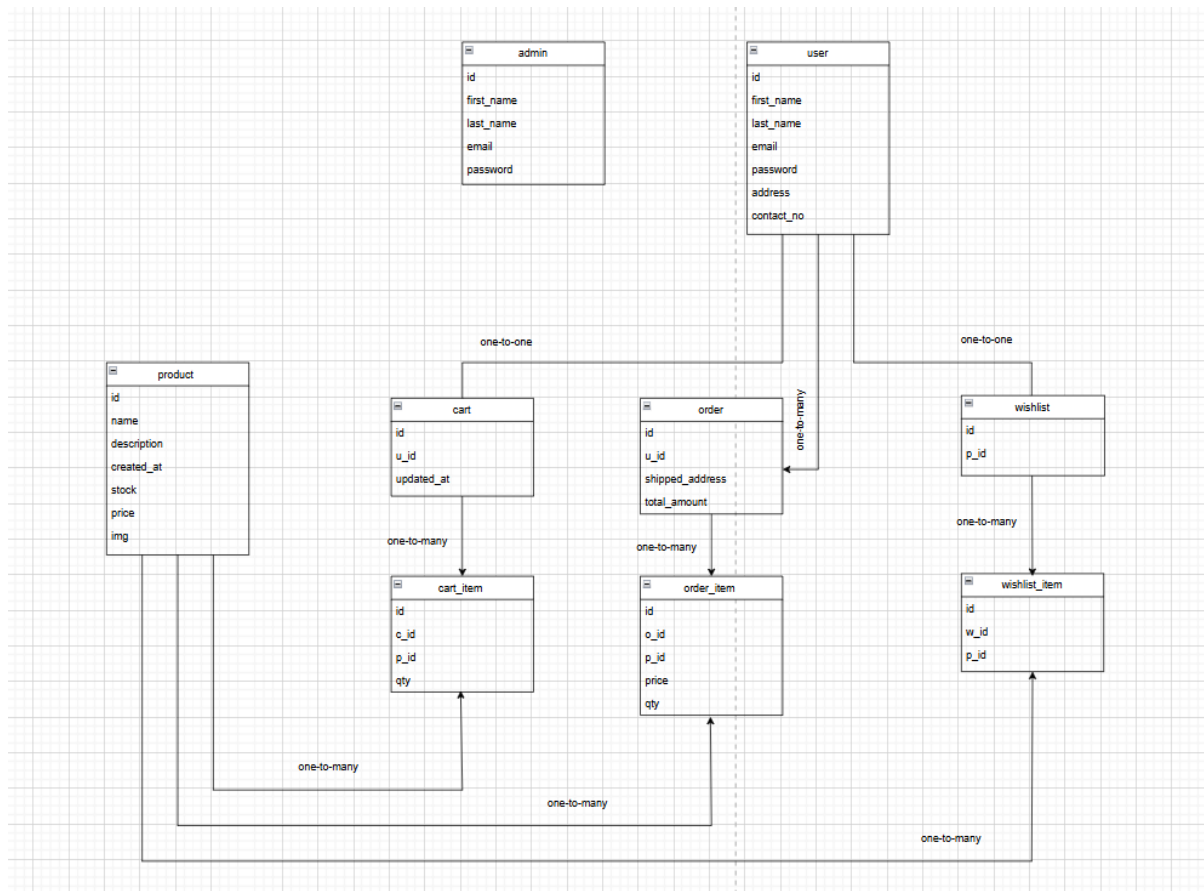
Wishlist Table:

Field	Type	Description
_id	INT PRIMARY KEY AUTO_INCREMENT	Unique wishlist ID
p_id	INT	FK

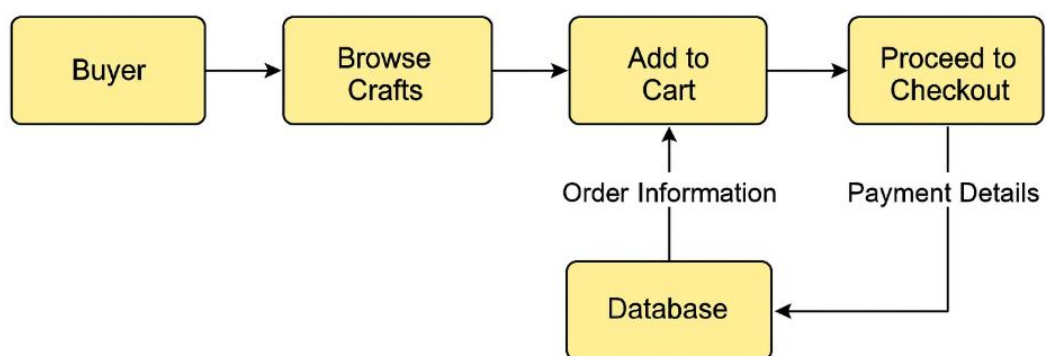
wishlist_item Table:

Field	Type	Description
_id	INT PRIMARY KEY AUTO_INCREMENT	Unique ID for wishlist item
w_id	INT	FK
p_id	INT	FK

8. ERD:



9. Database Flow Diagram – Purchase



10. Schedule

Week 1: Requirements & Wireframes

Week 2: Setup Project + Auth System

Week 3: Admin CRUD (Crafts)

Week 4: User's CRUD + Buyer Cart

Week 5: Sort, Search, Wishlist

Week 6: Testing + Accessibility Review

Week 7: Final Polish + Deployment

11. Conclusion

CraftsCircle is a focused and well-scoped e-commerce platform that showcases real-world development and UX practices. Through clearly defined roles and intuitive features, it delivers a smooth experience for both administrators and customers. The project aligns with HTTP5310 goals and highlights professional design, accessibility, and full-stack development.