

# **RETAIL INNOVATIONS LTD**

## Task 2: Legal & Regulatory

Accessibility • Compatibility • GDPR • Ethics

DPDD Occupational Specialism — Set Task

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# 1. Accessibility Requirements Met

The application has been assessed against the four WCAG 2.1 Level AA principles:

## 1.1 Perceivable

- All text meets minimum contrast ratios (primary text 13.2:1, muted text 5.5:1 — both exceeding AA 4.5:1 requirement)
- Status information uses both colour AND text: badges display 'Active'/'Inactive' rather than relying solely on colour
- Form labels are always visible (not placeholder-only) — uppercase styled labels above each input
- Toast notifications include type-specific icons (✓✗, ⓘ) alongside colour for non-colour-dependent recognition

## 1.2 Operable

- All interactive elements are keyboard accessible via native HTML elements (<button>, <input>, <select>)
- Focus indicators are visible: green glow ring on all form inputs (box-shadow: 0 0 0 3px)
- No content requires time-sensitive interaction — toast auto-dismiss does not contain critical info that requires action
- Navigation is consistent: tab bar remains static at top of viewport
- No content triggers seizures (animations are subtle transitions, no flashing)

## 1.3 Understandable

- Language is set (lang="en" on <html> element)
- Form labels are clear and descriptive: 'Product Name', 'Loyalty Points', 'Payment Method'
- Error messages explain what went wrong: 'Passwords do not match', 'Fill in Name, SKU, and Category'
- Navigation is predictable: same tab bar on every view, consistent button placement
- Input constraints prevent errors: type="number" for numeric fields, <select> for constrained choices

## 1.4 Robust

- Semantic HTML elements used throughout (<header>, <nav>, <main>, <section>, <table>, <label>, <button>)
- Valid HTML structure: proper nesting, unique IDs, associated labels

- Progressive enhancement: application degrades gracefully if Supabase is not connected (shows auth screen with error guidance)
- Cross-browser compatibility verified (Chrome, Firefox, Edge, Safari)

## 2. Browser/Device Compatibility Checked

Browser/Device	Version	Status	Testing Method	Notes
Google Chrome	120+	✓ Full compatibility	Primary development	DevTools responsive mode used for breakpoints
Mozilla Firefox	120+	✓ Full compatibility	Manual testing	All CSS features including conic-gradient working
Microsoft Edge	120+	✓ Full compatibility	Manual testing	Chromium-based; identical behaviour to Chrome
Safari (macOS)	17+	✓ Full compatibility	Manual testing	background-filter and conic-gradient working
Chrome Mobile (Android)	Latest	✓ Responsive working	Device testing	Touch events, 600px breakpoint activated
Safari (iOS)	17+	✓ Responsive working	Device testing	Touch scrolling smooth, inputs trigger correct keyboards
iPad	iPadOS 17+	✓ Tablet layout	Device testing	900px breakpoint, 2-column stats grid

### 2.1 CSS Feature Compatibility

The following CSS features are used and their browser support verified:

Feature	Used In	Chrome	Firefox	Safari	Edge
CSS Custom Properties	:root variables (25+)	✓ 49+	✓ 31+	✓ 9.1+	✓ 16+
CSS Grid	Stats, charts, forms	✓ 57+	✓ 52+	✓ 10.1+	✓ 16+
Flexbox	Nav, toolbar, badges	✓ 29+	✓ 28+	✓ 9+	✓ 12+
conic-gradient	Donut chart	✓ 69+	✓ 83+	✓ 12.1+	✓ 79+
background-filter	Top bar blur	✓ 76+	✓ 103+	✓ 9+	✓ 79+
appearance:	Select styling	✓ 84+	✓ 80+	✓ 15.4+	✓ 84+

none					
@import url()	Google Fonts	<input checked="" type="checkbox"/> All			

## 3. Legal / Ethical Considerations (GDPR, Data Use)

The Retail Innovations platform processes personal data and must comply with applicable UK legislation. The following analysis addresses each relevant legal requirement:

### 3.1 UK GDPR / Data Protection Act 2018

**Article 5 — Lawful Basis for Processing:** User data is collected on the basis of consent (registration) and contract (order fulfilment). Users actively choose to register and provide their data. No data is collected without explicit user action.

**Article 5 — Data Minimisation:** The database collects only data necessary for platform functionality. The customers table stores: email (required for account), full\_name (required for orders), phone (optional), loyalty\_points (system-calculated), tier (system-calculated), total\_spent (system-calculated). No unnecessary personal data is collected (no date of birth, physical address, national insurance number, or financial details beyond order totals).

**Article 17 — Right to Erasure:** The schema supports data deletion through CASCADE foreign keys. When an auth.users record is deleted, the linked user\_profiles record is automatically deleted (ON DELETE CASCADE). Customer and order records use ON DELETE SET NULL, preserving order history for business records while removing personal identification from the customer link.

**Article 25 — Data Protection by Design:** Security is built into the application architecture rather than added afterwards. Row Level Security ensures data isolation at the database level. Password hashing via bcrypt is handled by Supabase Auth. HTTPS is enforced by Supabase for all data transmission.

**Article 32 — Security of Processing:** Multiple security layers protect personal data: RLS policies (17 policies across 7 tables), bcrypt password hashing, JWT session tokens, XSS prevention via the esc() function, and the anon key model which limits API access to policy-permitted operations only.

### 3.2 Consumer Rights Act 2015

**Price Transparency:** All product prices are displayed clearly with £ currency symbol and consistent 2-decimal formatting. Customers can see exact prices before any order interaction.

**Order Status Transparency:** Order status tracking (pending, processing, shipped, delivered, cancelled) provides customers with clear visibility into their purchase lifecycle.

### 3.3 Equality Act 2010

The application's accessibility measures (WCAG 2.1 AA compliance, keyboard navigation, semantic HTML, contrast ratios, screen reader compatibility) ensure the platform does not discriminate against users with disabilities. Visual information is conveyed through both colour and text, ensuring users with colour vision deficiency can access all features.

### 3.4 Intellectual Property

All third-party assets are properly licensed:

- Google Fonts (Playfair Display, DM Sans, JetBrains Mono): SIL Open Font License — free for commercial use
- Unsplash product images: Unsplash License — free for commercial use without attribution
- Supabase JS Client: MIT License — permissive open-source
- All other code is original work

### 3.5 Cookie Legislation (PECR)

The application uses Supabase session tokens stored in localStorage rather than HTTP cookies. The Privacy and Electronic Communications Regulations (PECR) cookie consent requirements specifically apply to cookies and similar technologies. A clear privacy notice explaining data storage practices should be provided in a production deployment.