

# PWA Platform Development for Designers and Customers

## Project Overview

This document outlines the development of a Progressive Web Application (PWA) designed to connect designers with customers. The platform will enable designers to showcase, sell, and manage their products while offering customers a seamless and secure shopping experience.

### Key Features:

- ✅ **Designer Marketplace:** Designers can upload, manage, and sell their products.
- ✅ **Bilingual Support:** The platform will be fully available in Arabic & English with RTL (Right-to-Left) support for Arabic.
- ✅ **Social Media Integration:** Easy product uploads from Instagram, Facebook, and other platforms.
- ✅ **API Integration with Delivery Company**
- ✅ **Secure Transactions:** single or Multi-payment gateway integration (Upayments, K-Net).
- ✅ **Admin Dashboard:** Full control for monitoring sales, approving designer listings, and tracking analytics.
- ✅ **Scalability & Security:** Modular architecture for future expansion and strict security measures.
- ✅ **Future-Proofing:** Well-documented code for easy handover to new developers.

## Scope of Work

### 1. UI/UX Design

- User Research & Analysis to create an intuitive shopping experience.
- Wireframing & Prototyping of all key screens.
- Visually Appealing, Mobile-Friendly UI Design for all devices.
- Bilingual User Interface: The UI will be fully translated into Arabic & English, with seamless switching.
- Approval & Feedback Process before development.

### Deliverables:

- ✓ High-fidelity wireframes & prototypes.
- ✓ Final UI design for all platform components.

## 2. Front-End Development

- Mobile-first, responsive design using modern frameworks.
- Intuitive interfaces for designers, customers, and admins.
- Animations & Interactive Elements for better user engagement.
- Cross-browser & cross-device compatibility testing.
- Bilingual Interface: Implementing language switching with RTL support for Arabic.

### Deliverables:

- ✓ Fully functional front-end for all user roles.
- ✓ Cross-platform compatibility testing reports.
- ✓ Bilingual Arabic & English support with RTL functionality.

## 3. Back-End Development & Integration

- User Authentication & Role-Based Access Control (RBAC): Secure login system.
- Social Media Integration: Enable designers to upload products directly.
- E-Commerce System:
  - Product listing and categorization.
  - Shopping cart & wishlist.
  - Order management.
- Payment Processing:
  - Integration with Upayments, K-Net, etc.
  - PCI-DSS compliance for secure transactions.
- Shipping API Integration: Real-time order tracking.
- Push Notifications: Order updates, promotions, and announcements.
- Advanced Admin Dashboard:
  - Designer approvals, transaction monitoring, and analytics tracking.
  - Generate sales reports and customer behavior insights.
- Automated Backups & Recovery System.
- Final Testing & Security Hardening.
- Bilingual Database: Ensure that all content supports Arabic & English.

### Deliverables:

- ✓ Secure, scalable back-end with all integrated services.
- ✓ Encrypted and optimized bilingual database.
- ✓ Deployment-ready PWA platform with Arabic & English support.

## Technical Stack

## Component Technology

Front-End React.js / Vue.js (PWA framework)

Back-End Node.js with Express.js

Database MongoDB / PostgreSQL

Authentication OAuth (social login), JWT-based authentication

Hosting & Deployment AWS / Firebase / DigitalOcean

Payment Gateways Upayments, K-Net, etc.

Language Support i18n for bilingual Arabic & English functionality

## Post-Development & Long-Term Support

### 1. Deployment & Hosting

- Deployment on GoDaddy, Hostinger, AWS, DigitalOcean, or other preferred cloud services.
- or Guidance on self-hosting options .

### 2. Security Measures

- SSL encryption for secure communication.
- OAuth & JWT authentication for account security.
- Role-Based Access Control (RBAC) for different admin levels.
- Data encryption at rest and in transit to prevent breaches.
- Regular security audits & penetration testing.
- Payment transactions are handled via the payment gateway's hosted page for maximum security.

### 3. Long-Term Maintenance & Updates

- Minimum 6 months of post-launch support for:
  - ✓ Bug fixes and security patches.
  - ✓ Performance optimizations.
  - ✓ Minor feature updates (as per agreement).
- After 6 months, ongoing maintenance can be covered under a support contract.

### 4. Mobile App Conversion

- The PWA will be designed to be easily converted into native iOS, Android, and Huawei apps using frameworks like Capacitor or Cordova.
- The architecture will support a smooth transition to mobile apps in the future.

### 5. Testing & Quality Assurance

- Unit Testing: Ensuring each feature works independently.
- Security Testing: Identifying vulnerabilities.
- User Acceptance Testing (UAT): Ensuring the platform meets business needs.
- Load Testing: Simulating high user traffic to test performance.
- Bilingual Testing: Ensuring seamless Arabic & English support.

## 6. Ownership & Developer Handover

To protect your rights and ensure a smooth transition to future developers, the following will be delivered:

- ✓ Full access to the source code and database.
- ✓ Well-documented, clean, and organized code for easy handover.
- ✓ Comprehensive documentation, including:
  - System architecture overview.
  - API documentation.
  - Developer guide for easy onboarding.
  - Deployment and setup instructions.
- ✓ Non-reliance on paid third-party services (except essential ones like payment gateways).
- ✓ Bilingual Code Documentation: Ensuring all text and UI components support Arabic & English.

## Final Deliverables

- ✓ Fully developed PWA platform, ready for deployment.
- ✓ Secure, scalable, and future-proofed system.
- ✓ Bilingual Arabic & English support with RTL compatibility.
- ✓ Mobile-friendly UI/UX design with social media integration.
- ✓ Well-documented, clean, and structured code for easy handover.
- ✓ Detailed developer handover documentation (API guides, system architecture, deployment process).
- ✓ Minimum 6 months of updates & maintenance.