SupplySphere Frontend Development Tasks

📋 SPRINT 1: Foundation & Authentication (Week 1)

TO DO Column Tasks

1. Project Setup & Configuration

Assignee: Artkins
Priority: Critical
Estimated Time: 4-6 hours

- [ ] Set up Next.js 14 project with TypeScript
- [ ] Configure Tailwind CSS with custom theme
- [ ] Install and configure ShadCN/UI components
- [ ] Set up folder structure (app router)
- [ ] Configure ESLint and Prettier
- [ ] Set up environment variables
- [ ] Create initial Git workflow

Acceptance Criteria:

- Project builds without errors
- Tailwind is working with custom colors
- ShadCN components are accessible
- Folder structure matches the planned architecture

2. Authentication Pages

Assignee: Sharon
Priority: Critical
Estimated Time: 8-10 hours

- [ ] Create login page (`/login`)
- [ ] Create signup page (`/signup`)
- [ ] Create forgot password page (`/forgot-password`)
- [ ] Implement form validation with react-hook-form
- [ ] Add loading states and error handling
- [ ] Create reusable form components

Acceptance Criteria:

- All forms have proper validation

- Error messages display correctly

- Loading states work properly

- Forms are responsive on all devices

3. Layout Components

Assignee: Artkins
Priority: High
Estimated Time: 6-8 hours

☐ Create main layout component
☐ Build responsive navigation header
☐ Create sidebar component for dashboard
☐ Implement breadcrumb navigation
☐ Add footer component
☐ Create loading and error boundary components

Acceptance Criteria:

- Navigation works on all screen sizes

- Sidebar collapses on mobile

- All layout components are reusable

📋 SPRINT 2: Role-Based Dashboards (Week 2)

DOING Column Tasks

4. Dashboard Base Structure

Assignee: Artkins
Priority: Critical
Estimated Time: 10-12 hours

☐ Create dashboard layout with sidebar
☐ Implement role-based routing protection
☐ Create dashboard header with user info
☐ Add role-specific navigation menus
☐ Implement responsive dashboard grid

- [ ] Create KPI card components

Acceptance Criteria:

- Dashboard adapts to user role
- Navigation shows role-appropriate options
- Dashboard is fully responsive
- KPI cards display properly

5. Supplier Dashboard

Assignee: Sharon
Priority: High
Estimated Time: 8-10 hours

- [ ] Create supplier-specific dashboard view
- [ ] Build inventory overview section
- [ ] Add "Add Product" quick action
- [ ] Create recent shipments widget
- [ ] Implement stock alerts display
- [ ] Add performance metrics cards

Acceptance Criteria:

- Supplier can view their inventory
- Quick actions work properly
- All widgets display real data
- Dashboard is intuitive for suppliers

6. Vendor Dashboard

Assignee: Artkins
Priority: High
Estimated Time: 8-10 hours

- [ ] Create vendor-specific dashboard view
- [ ] Build product search interface
- [ ] Add order management section
- [ ] Create delivery tracking widget
- [ ] Implement supplier ratings display
- [ ] Add order history section

Acceptance Criteria:

- Vendors can search products effectively

- Order management is functional

- Tracking information is clear

- Interface is vendor-focused

📋 SPRINT 3: Product Management (Week 3)

7. Product Components

Assignee: Sharon
Priority: Critical
Estimated Time: 12-15 hours

- ☐ Create ProductCard component
- ☐ Build ProductList with filtering
- ☐ Create AddProductForm component
- ☐ Implement EditProductForm
- ☐ Add product image upload
- ☐ Create product detail view
- ☐ Add QR code generation component

Acceptance Criteria:

- Products display in cards and lists

- Forms work with validation

- Image upload functions properly

- QR codes generate correctly

8. Inventory Management

Assignee: Artkins
Priority: High
Estimated Time: 10-12 hours

- ☐ Create inventory list view
- ☐ Build stock level indicators
- ☐ Add batch tracking display

☐ Implement inventory filters
☐ Create stock alert system
☐ Add export functionality

Acceptance Criteria:

- Inventory displays accurately

- Stock levels update in real-time

- Filtering works properly

- Export generates correct data

📋 SPRINT 4: Shipment Tracking (Week 4)

9. Shipment Components

Assignee: Sharon
Priority: High
Estimated Time: 10-12 hours

☐ Create ShipmentCard component
☐ Build shipment tracking timeline
☐ Add status update interface
☐ Create shipment details modal
☐ Implement delivery confirmation
☐ Add shipment search/filter

Acceptance Criteria:

- Shipment status displays clearly

- Timeline shows progress accurately

- Status updates work properly

- Search finds correct shipments

10. Analytics Dashboard

Assignee: Artkins
Priority: High
Estimated Time: 12-15 hours

☐ Create analytics layout

- ☐ Build KPI overview section
- ☐ Add charts using Recharts
- ☐ Implement date range filtering
- ☐ Create export functionality
- ☐ Add real-time data updates

Acceptance Criteria:

- Charts display meaningful data

- Filters update charts correctly

- Export works for all formats

- Data refreshes automatically

📋 SPRINT 5: Advanced Features (Week 5)

11. AI Assistant Integration

Assignee: Artkins
Priority: Medium
Estimated Time: 8-10 hours

- ☐ Create chat interface component
- ☐ Implement AI query processing
- ☐ Add predefined query buttons
- ☐ Create response formatting
- ☐ Add chat history
- ☐ Implement voice input (optional)

Acceptance Criteria:

- Chat interface is user-friendly

- AI responses are formatted well

- History persists across sessions

- Queries return relevant data

12. QR Code Verification

Assignee: Sharon
Priority: Medium
Estimated Time: 6-8 hours

- [ ] Create QR scanner component
- [ ] Build verification result display
- [ ] Add product authenticity check
- [ ] Implement blockchain verification
- [ ] Create public verification page
- [ ] Add mobile camera integration

Acceptance Criteria:

- QR scanner works on mobile

- Verification shows clear results

- Blockchain data displays correctly

- Public page is accessible

📋 SPRINT 6: Polish & Testing (Week 6)

DONE Column Tasks

13. Mobile Optimization

Assignee: Both
Priority: High
Estimated Time: 8-10 hours

- [ ] Test all pages on mobile devices
- [ ] Fix responsive design issues
- [ ] Optimize touch interactions
- [ ] Add mobile-specific navigation
- [ ] Test performance on mobile
- [ ] Add PWA features (optional)

14. Testing & Bug Fixes

Assignee: Both
Priority: Critical
Estimated Time: 10-12 hours

- [ ] Write unit tests for components
- [ ] Test all user flows
- [ ] Fix discovered bugs

☐ Performance optimization
☐ Security review
☐ Accessibility testing

◉ Task Assignment Strategy

Artkins Focus Areas:

- Project setup and configuration

- Dashboard architecture

- Analytics and data visualization

- AI assistant integration

- Complex state management

Sharon Focus Areas:

- Authentication and forms

- Product management components

- Shipment tracking interface

- QR code functionality

- UI/UX polish

🏢 Component Priority Matrix

Critical (Must Have)

1. Authentication system

2. Role-based dashboards

3. Product management

4. Basic shipment tracking

High Priority (Should Have)

1. Analytics dashboard

2. QR code generation

3. Inventory management

4. Advanced filters

Medium Priority (Nice to Have)

1. AI assistant

2. Real-time notifications

3. Advanced analytics

4. Mobile PWA features

🛠 Technical Requirements Checklist

Dependencies to Install:

```bash
# Core dependencies
npm install next@14 react@18 typescript
npm install @tailwindcss/forms @tailwindcss/typography
npm install lucide-react recharts
npm install react-hook-form zod
npm install axios swr
npm install qrcode qr-scanner
npm install framer-motion

# Development dependencies
npm install -D eslint prettier
```

Environment Variables Needed:

```
NEXT_PUBLIC_API_URL=
NEXT_PUBLIC_BLOCKCHAIN_ENDPOINT=
NEXT_PUBLIC_AI_ENDPOINT=
```

📅 Weekly Milestones

- **Week 1**: Authentication + Setup ✔
- **Week 2**: Role-based dashboards ✔
- **Week 3**: Product management ✔
- **Week 4**: Shipment tracking ✔

- **Week 5**: Advanced features ✅
- **Week 6**: Testing + deployment ✅

🚨 Daily Standup Questions

1. What did you complete yesterday?

2. What will you work on today?

3. Any blockers or help needed?

4. Any dependencies on the other developer?

🔀 Git Workflow

1. Create feature branches: `feature/login-page`

2. Make small, focused commits

3. Create PR for review

4. Merge after review

5. Deploy to staging for testing

This task breakdown should give you and Sharon a clear roadmap for building SupplySphere frontend over the next 6 weeks!