RunRoute - User Flows & Wireframes

1. Overview

This document defines the complete user experience flow for RunRoute, including detailed user journeys, wireframes for key screens, and interaction patterns. The flows are designed to provide an intuitive and frictionless experience for route planning, run tracking, and social engagement.

2. User Journey Map

2.1 New User Journey

```
First Launch → Onboarding → Registration → Profile Setup → First Route → First Run → Social Discovery
    ↓           ↓          ↓          ↓           ↓          ↓          ↓
  App Store   Tutorial   Account    Preferences  Plan Route  Track GPS   Find Friends
  Download    Screens    Creation   & Location   Generation  & Complete  & Follow
```

2.2 Returning User Journey

```
App Launch → Home Dashboard → Choose Action → Complete Activity → Social Sharing
    ↓           ↓            ↓            ↓              ↓
  Quick Auth  Recent Runs   Plan/Track    Save Results    Optional Post
              History       or Social     & Analytics     & Engagement
```

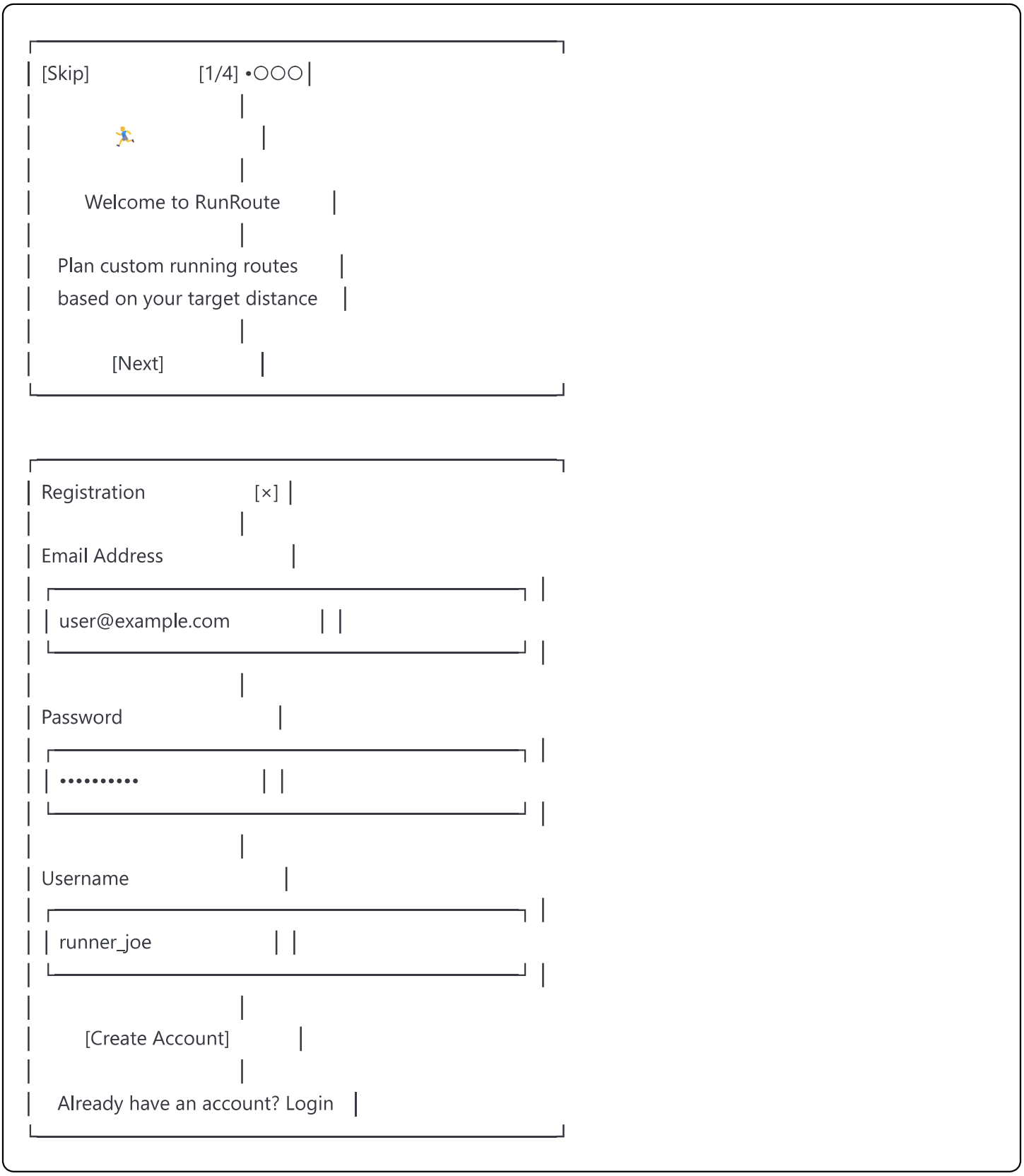
3. Core User Flows

3.1 User Onboarding & Registration Flow

```
mermaid
```

```
flowchart TD
    A[App Launch] --> B{First Time User?}
    B -->|Yes| C[Onboarding Screen 1:<br/>Welcome & Benefits]
    B -->|No| D[Login Screen]

    C --> E[Onboarding Screen 2:<br/>Route Planning Demo]
    E --> F[Onboarding Screen 3:<br/>GPS Tracking Demo]
    F --> G[Onboarding Screen 4:<br/>Social Features Demo]
    G --> H[Registration Screen]

    H --> I[Email/Password Input]
    I --> J[Username Selection]
    J --> K[Profile Setup:<br/>Name, Avatar, Units]
    K --> L[Location Permission Request]
    L --> M[Notification Permission Request]
    M --> N[Welcome Dashboard]

    D --> O[Email/Password Login]
    O --> P{Login Success?}
    P -->|Yes| N
    P -->|No| Q[Error Message]
    Q --> D
```

Wireframe: Onboarding Screens

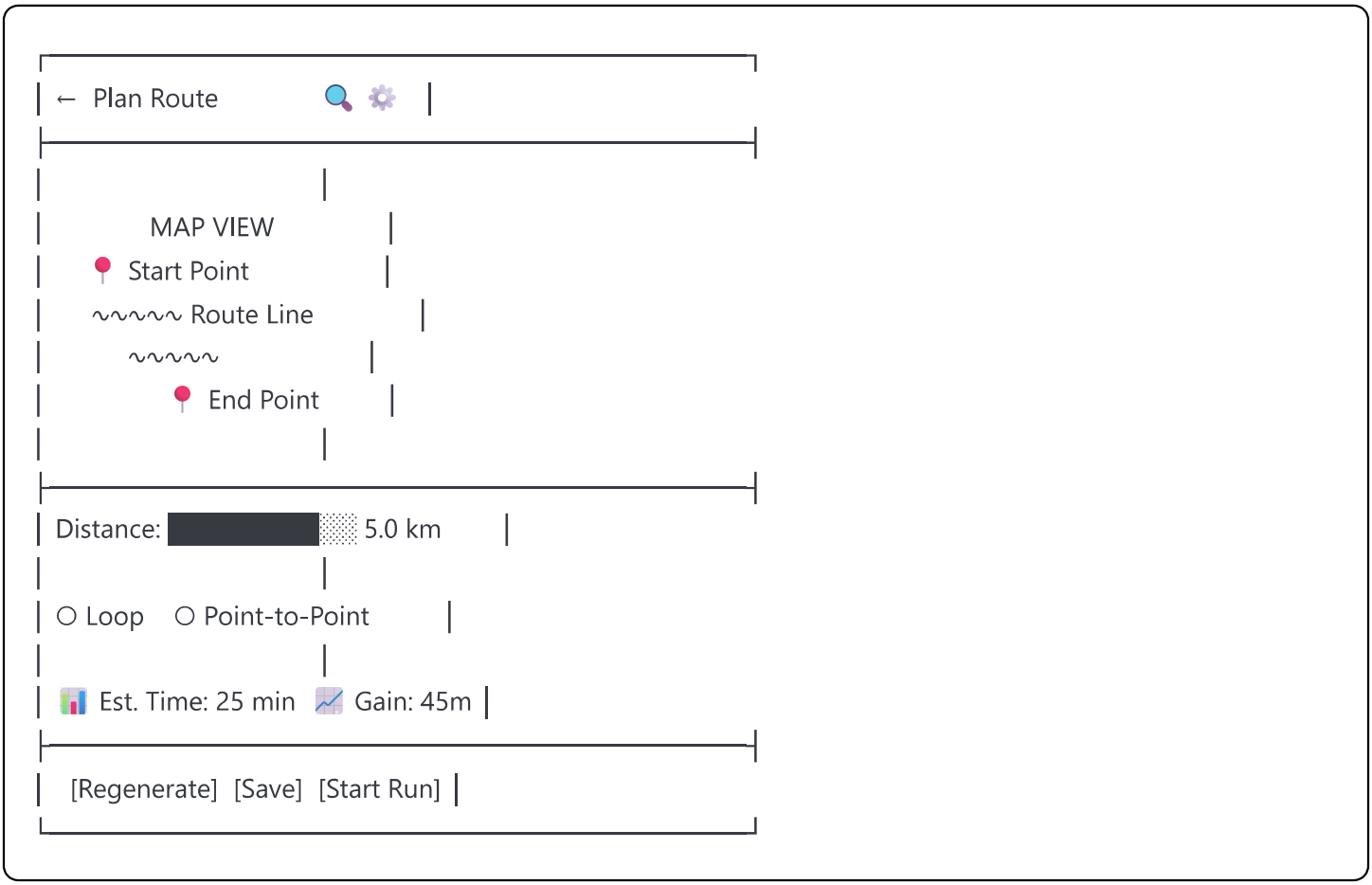


3.2 Route Planning Flow

mermaid

```
flowchart TD
    A[Home Dashboard] --> B[Tap 'Plan Route']
    B --> C[Map View with Current Location]

    C --> D[Set Start Point:<br/>Tap map or search]
    D --> E[Set Distance:<br/>Slider or input]
    E --> F[Choose Loop/Point-to-Point]
    F --> G[Optional: Set End Point<br/>if not loop]

    G --> H[Generate Route Button]
    H --> I[Loading: API Call]
    I --> J{Route Generated?}

    J -->|Yes| K[Display Route on Map]
    J -->|No| L[Error: Try Different Parameters]
    L --> D

    K --> M[Review Route Details:<br/>Distance, Elevation, Duration]
    M --> N{Satisfied with Route?}

    N -->|No| O[Modify Route:<br/>Drag waypoints]
    O --> P[Recalculate Route]
    P --> M

    N -->|Yes| Q{Save Route?}
    Q -->|Yes| R[Save with Name]
    Q -->|No| S[Start Run Now]

    R --> T{Start Run Now?}
    T -->|Yes| S
    T -->|No| U[Return to Dashboard]

    S --> V[Begin GPS Tracking]
```

Wireframe: Route Planning Screen

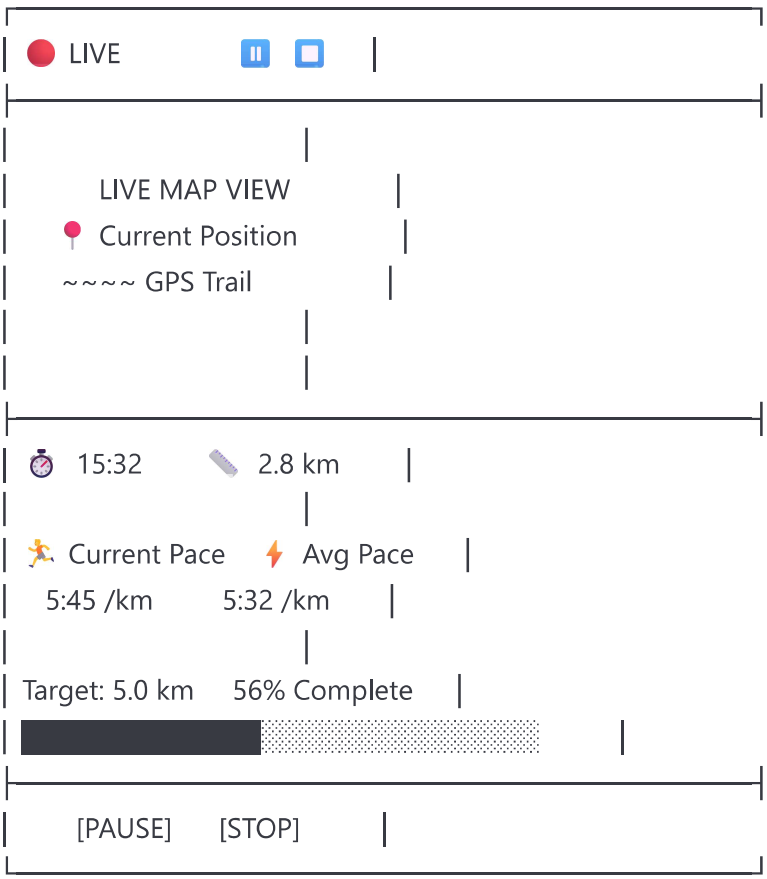


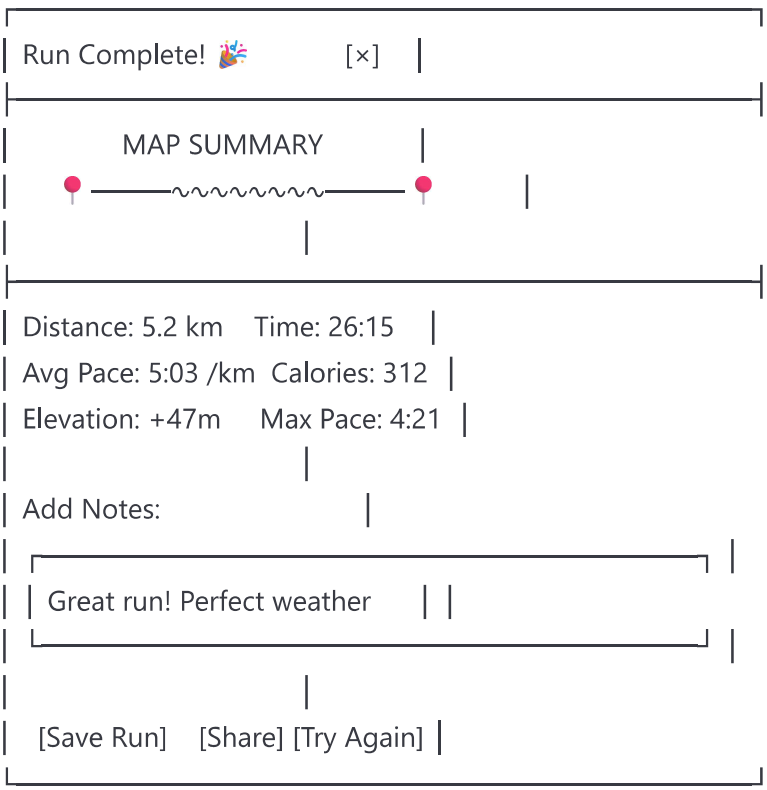
3.3 Live Run Tracking Flow

mermaid

```
flowchart TD
    A[Start Run] --> B[GPS Permission Check]
    B --> C[Initialize GPS Tracking]
    C --> D[Display Live Map]

    D --> E[Real-time Updates:<br/>Distance, Time, Pace]
    E --> F{User Action}

    F -->|Continue| G[Update GPS Position]
    G --> H[Draw Route Line]
    H --> I[Calculate Metrics]
    I --> E

    F -->|Pause| J[Pause GPS Tracking]
    J --> K[Show Pause Screen]
    K --> L{Resume or Stop?}
    L -->|Resume| M[Resume GPS]
    M --> E
    L -->|Stop| N[End Run Confirmation]

    F -->|Stop| N
    N --> O{Confirm Stop?}
    O -->|No| E
    O -->|Yes| P[Save Run Data]
    P --> Q[Run Summary Screen]
    Q --> R{Share Run?}
    R -->|Yes| S[Create Social Post]
    R -->|No| T[Return to Dashboard]
    S --> T
```

Wireframe: Live Run Tracking Screen





3.4 Social Feed & Interaction Flow

mermaid

```
flowchart TD
    A[Social Tab] --> B[Load Feed Posts]
    B --> C[Display Posts List]

    C --> D{User Action}

    D -->|Scroll| E[Load More Posts]
    E --> C

    D -->|Like Post| F[Toggle Like]
    F --> G[Update Like Count]
    G --> C

    D -->|Comment| H[Open Comment Modal]
    H --> I[Type Comment]
    I --> J[Submit Comment]
    J --> K[Update Comment Count]
    K --> C

    D -->|View Profile| L[Open User Profile]
    L --> M[Show User Stats & Recent Runs]

    D -->|Share Post| N[Native Share Dialog]
    N --> O[Share to External App]

    D -->|Create Post| P[Post Creation Flow]
    P --> Q[Select Recent Run]
    Q --> R[Add Caption & Photo]
    R --> S[Publish Post]
    S --> T[Return to Feed]
    T --> C
```

Wireframe: Social Feed Screen

3.5 Profile & Settings Flow

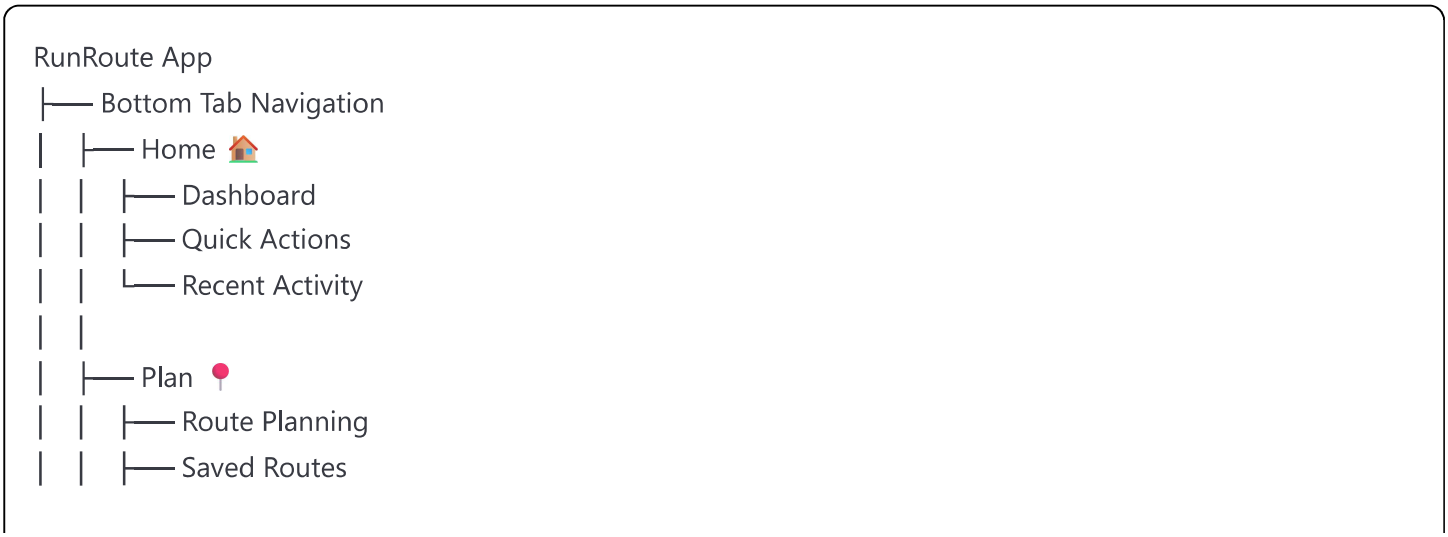
mermaid

```
flowchart TD
    A[Profile Tab] --> B[Load User Profile]
    B --> C[Display Profile Info]

    C --> D{User Action}

    D -->|Edit Profile| E[Profile Edit Screen]
    E --> F[Update Name/Bio/Avatar]
    F --> G[Save Changes]
    G --> C

    D -->|View Stats| H[Detailed Stats Screen]
    H --> I[Charts & Analytics]

    D -->|Privacy Settings| J[Privacy Screen]
    J --> K[Location/Social Settings]
    K --> L[Update Preferences]
    L --> C

    D -->|Run History| M[History List]
    M --> N[Filter/Search Runs]
    N --> O[View Run Details]

    D -->|Following/Followers| P[Social Connections]
    P --> Q[Manage Follows]

    D -->|Settings| R[App Settings]
    R --> S[Units/Notifications/Sync]
    S --> T[Update Settings]
    T --> C
```

Wireframe: Profile Screen

4. Navigation Structure

4.1 App Information Architecture



```
│   │   └── Route History
│   │
│   ├── Track 🎯
│   │   ├── Live Tracking
│   │   ├── Current Session
│   │   └── Quick Start
│   │
│   ├── Feed 📱
│   │   ├── Social Feed
│   │   ├── Following Posts
│   │   └── Discover Users
│   │
│   └── Profile 👤
│       ├── User Profile
│       ├── Run History
│       ├── Statistics
│       └── Settings
│
└── Modal/Overlay Screens
    ├── Authentication
    ├── Run Details
    ├── Post Creation
    ├── Settings
    ├── Search
    └── Notifications
```

4.2 Screen Hierarchy & Navigation Patterns

```
Stack Navigator (Root)
├── Auth Stack (Conditional)
│   ├── Login Screen
│   ├── Register Screen
│   └── Forgot Password Screen
│
└── Main Tab Navigator
    ├── Home Stack
    │   ├── Dashboard Screen
    │   ├── Route Details Screen
    │   └── Run Details Screen
    │
    ├── Planning Stack
    │   ├── Route Planning Screen
    │   ├── Route Preview Screen
```

```
    ├── Saved Routes Screen
    └── Route Editor Screen
    |
├── Tracking Stack
    ├── Pre-Run Screen
    ├── Live Tracking Screen
    ├── Pause Screen
    └── Run Summary Screen
    |
├── Social Stack
    ├── Feed Screen
    ├── Post Details Screen
    ├── User Profile Screen (Other)
    └── Create Post Screen
    |
└── Profile Stack
    ├── Own Profile Screen
    ├── Edit Profile Screen
    ├── Run History Screen
    ├── Statistics Screen
    └── Settings Screen
```

5. Interaction Patterns & UI Behaviors

5.1 Map Interactions

- **Single Tap**: Set start/end point or add waypoint
- **Long Press**: Open context menu or add custom waypoint
- **Drag**: Move existing waypoints to modify route
- **Pinch to Zoom**: Standard map zoom behavior
- **Pan**: Navigate around the map
- **Double Tap**: Zoom in on location

5.2 Route Modification

- **Drag Waypoint**: Real-time route recalculation
- **Add Waypoint**: Tap on route line to insert new point
- **Remove Waypoint**: Long press waypoint → delete option
- **Route Alternatives**: Swipe between generated options
- **Distance Adjustment**: Slider with haptic feedback

5.3 Live Tracking Controls

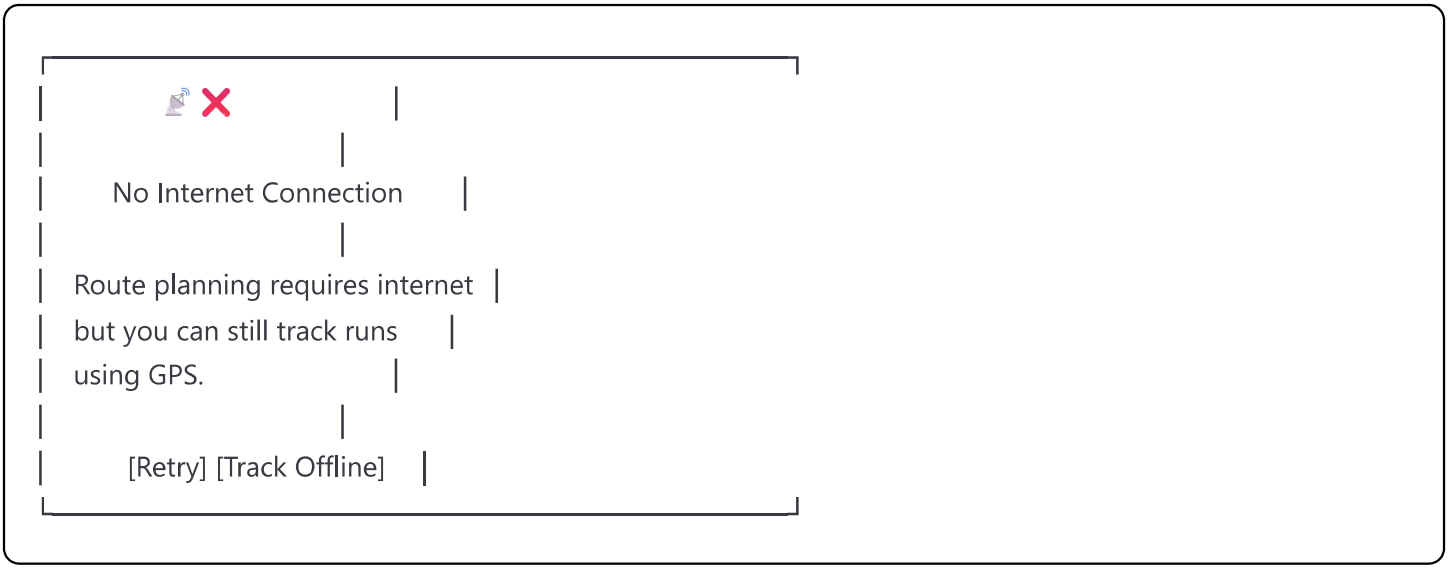
- **Pause/Resume**: Large, accessible buttons
- **Emergency Stop**: Long press stop button
- **Lock Screen**: Prevent accidental taps during run
- **Voice Updates**: Audio cues for distance/pace milestones
- **Background Mode**: Minimize battery drain

5.4 Social Interactions

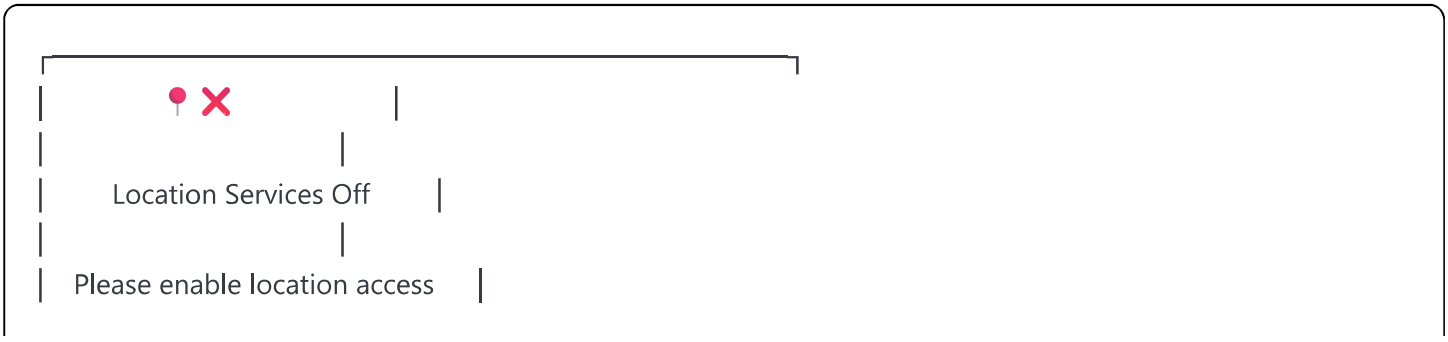
- **Double Tap to Like**: Instagram-style heart animation
- **Swipe Actions**: Swipe left for quick like, right for share
- **Pull to Refresh**: Update feed content
- **Infinite Scroll**: Load more posts automatically
- **Haptic Feedback**: Confirm actions with subtle vibrations

6. Error States & Edge Cases

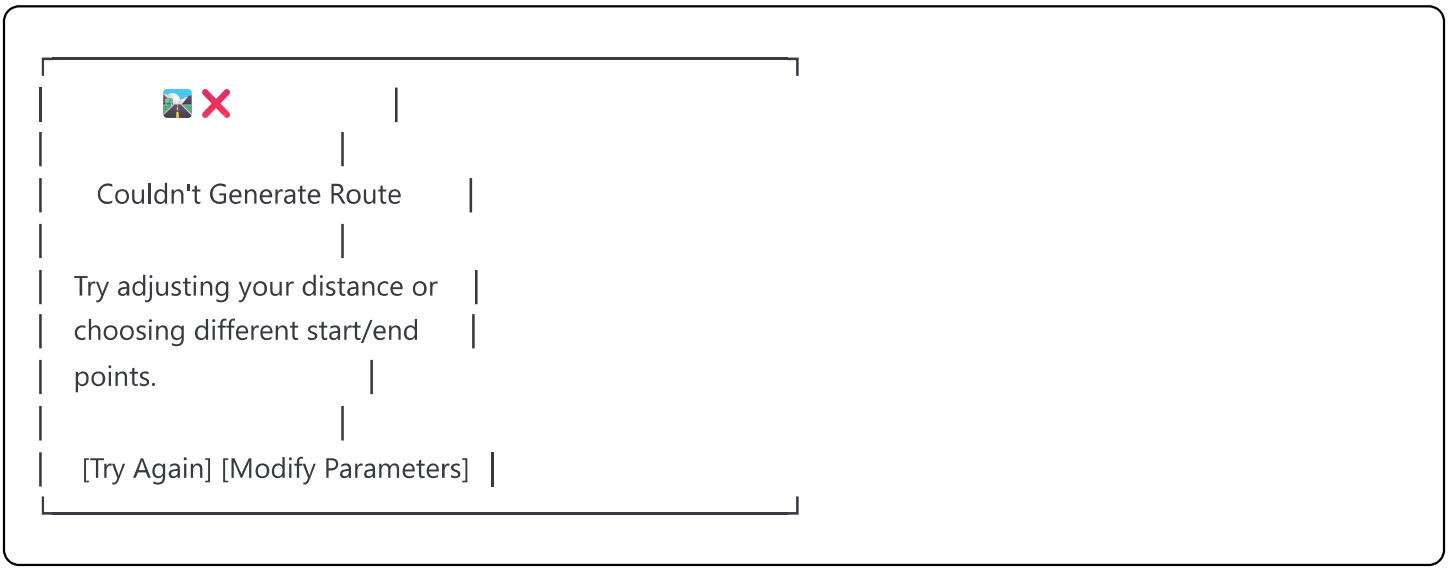
6.1 Network Connectivity Issues



6.2 GPS/Location Issues



6.3 Route Generation Failures



7. Accessibility Considerations

7.1 Screen Reader Support

- All buttons and interactive elements have descriptive labels
- Map annotations include spoken descriptions
- Run metrics announced during live tracking
- Navigation structure clear for voice navigation

7.2 Visual Accessibility

- High contrast mode support
- Scalable text (supports Dynamic Type on iOS)
- Color-blind friendly color schemes
- Clear visual hierarchy and spacing

7.3 Motor Accessibility

- Large touch targets (minimum 44pt)
- Voice commands for run control

- Simplified gestures option
- Alternative input methods

8. Performance Considerations

8.1 Map Rendering

- Progressive loading of map tiles
- Efficient polyline rendering
- Clustering for multiple routes/runs
- Memory management for long sessions

8.2 Real-time Updates

- Debounced GPS updates
- Efficient WebSocket connection management
- Battery optimization during tracking
- Background task limitations handling

8.3 Social Feed

- Image lazy loading
- Virtual scrolling for large feeds
- Optimistic UI updates
- Intelligent caching strategies

9. Onboarding & Tutorial Flows

9.1 Progressive Disclosure

1. **Welcome Screen**: Core value proposition
2. **Route Demo**: Interactive route planning tutorial
3. **Tracking Demo**: Simulated GPS tracking experience
4. **Social Demo**: Example social feed interaction
5. **Setup**: Minimal required information

9.2 Feature Discovery

- **Tooltips**: First-time feature highlights
- **Empty States**: Guidance for new users

- **Progressive Hints**: Contextual tips during use
- **Help System**: In-app help and tutorials

This comprehensive user flow and wireframe specification provides a complete blueprint for developing RunRoute's user experience, ensuring intuitive navigation and engaging interactions throughout the app.