

# Sanbot Android App - Module Requirements

**Project:** TripAndEvent Sanbot Interactive Assistant**Platform:** Android (Compatible with Sanbot robot devices)**Document Version:** 1.0**Date:** November 26, 2025

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## 1. Project Overview

The Sanbot Android application serves as an interactive customer assistant for TripAndEvent offices and retail locations. The app runs on Sanbot robot hardware and provides voice interaction, package display, and lead capture capabilities.

### Core Functionality:

- Voice-based customer interaction
  - Display tour packages and media content
  - Capture customer information
  - Create leads in CRM system
  - Send communications (SMS, WhatsApp, Email)
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## 2. Module Breakdown

### Module 1: Voice Interaction

**Purpose:** Enable voice-based realtime conversation with customers.

### Requirements:

- Capture audio input from Sanbot microphone
- Send audio to voice agent API endpoint
- Receive and play audio responses
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- Handle voice activity detection

### Technical Specifications:

- Audio format: WAV or MP3, 16kHz sample rate
- Maximum audio chunk size: 5MB
- Response timeout: 30 seconds

- Fallback: Display error message if API fails

### API Endpoints Used:

- POST /voice.transcribe - Convert speech to text
- POST /voice.generateSpeech - Convert text to speech
- POST /voice.conversation - Complete voice flow (recommended)

### User Flow:

1. Customer speaks to Sanbot
  2. App captures audio
  3. App sends audio to /voice.conversation endpoint
  4. API returns response (audio URL + text transcript)
  5. App plays audio response from URL
  6. App displays text transcript
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## Module 2: Package Display

**Purpose:** Show tour packages with images, videos descriptions, and pricing.

### Requirements:

- Fetch package list from API
- Display packages as scrollable cards
- Show package details (name, price, duration, highlights)
- Display package images and videos
- Allow customer to select packages
- Show "Book Now" and "Get Quote" buttons

### Data Structure (JSON):

JSON

```
{
  "packages": [
    {
      "id": "PKG001",
      "name": "Dubai Desert Safari",
      "price": 299,
      "currency": "INR",
      "duration": "6 hours",
      "image_url": "https://example.com/image.jpg",
```

```
    "highlights": [
      "Dune bashing",
      "Camel ride",
      "BBQ dinner"
    ],
    "description": "Experience the thrill of desert adventure"
  }
]
```

### UI Components:

- Package card with image
- Price display
- Highlights list
- Action buttons (Book Now, Get Quote, Send Details )

## Module 3: CRM Integration (Lead Capture)

**Purpose:** Capture customer information and create leads in CRM.

### Requirements:

- Collect customer name and phone number, DESTINATION, HOW MANY PAX, EXPECTED DATE OF TRAVEL
- Capture customer interest (which packages)
- Add notes/remarks
- Send lead data to CRM API
- Display confirmation message

### Data to Capture:

- Name (text input)
- Phone number (numeric input with country code)
- Email (optional, text input)
- Interested packages (multi-select), DESTINATION, HOW MANY PAX, EXPECTED DATE OF TRAVEL
- Source: "Sanbot"
- Notes (text area)

### API Payload Example:

JSON

```
{
  "name": "Ahmed Ali",
  "phone": "+971501234567",
  "email": "ahmed@example.com",
  "source": "Sanbot",
  "interested_packages": ["PKG001", "PKG003"],
  "notes": "Interested in family packages for December",
  "location": "Dubai Office"
}
```

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## Module 4: Media Player

**Purpose:** Play promotional videos and display images.

**Requirements:**

- Play video files from URL
- Support MP4 format
- Full-screen video playback
- Play/pause controls
- Display images in gallery view
- Support JPEG, PNG formats

**Features:**

- Video player with controls
- Image slideshow
- Swipe navigation for images
- Auto-play option for videos
- Mute/unmute button

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## Module 5: Customer Actions

**Purpose:** Enable customers to request information via SMS, WhatsApp, or Email.

ALSO ROBOT CAN DO THIS AUTOMATICALLY WITH THE CUSTOMER CONVERSION

**Requirements:**

- "Send SMS" button - Send package details via SMS
- "Send WhatsApp" button - Send details via WhatsApp

- "Email Quote" button - Send quote via email
- "Book Now" button - Create booking request
- "Display Package" button- Package Display

**API Calls:** Each action calls a specific endpoint with customer phone/email and package ID.

**Example Request:**

JSON

```
{
  "action": "send_sms",
  "phone": "+971501234567",
  "package_id": "PKG001",
  "message_template": "package_details"
}
```

**Response:**

JSON

```
{
  "success": true,
  "message": "SMS sent successfully",
  "delivery_status": "pending"
}
```

## Module 6: Welcome Screen & Idle Mode

**Purpose:** Attract customers and provide initial greeting.

**Requirements:**

- Animated welcome screen when idle
- Display company logo and tagline
- Show "Tap to Start" button
- Auto-reset to welcome screen after 2 minutes of inactivity
- Play background video loop (optional)

**UI Elements:**

- Company logo (centered)
- Welcome message: "Welcome to TripAndEvent"

- Subtitle: "Your trusted travel partner"
  - Large "Start" button
  - Background: Gradient or video loop
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## Module 7: Settings & Configuration

**Purpose:** Allow staff to configure the app.

**Requirements:**

- Admin password protection
- Configure API endpoint URLs
- Set location/branch name
- Test API connectivity
- View app version and logs
- Clear cache option

**Settings Screen:**

- API Base URL (text input)
  - Branch Location (dropdown)
  - Test Connection (button)
  - View Logs (button)
  - App Version (read-only)
  - Logout (button)
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## 3. Non-Functional Requirements

### Performance

- App must launch within 3 seconds
- API responses must be handled within 5 seconds
- Smooth scrolling (60 FPS)
- No memory leaks
- Efficient image caching

### Security

- API keys stored in secure storage (not in APK)
- HTTPS only for all API calls
- Input validation for all forms
- No sensitive data logged

## Compatibility

- Android 8.0 (API level 26) or higher
- Optimized for Sanbot hardware specifications
- Portrait orientation only
- Screen resolution: 1920x1080 or higher

## Error Handling

- Display user-friendly error messages
  - Retry mechanism for failed API calls
  - Offline mode with cached data
  - Log errors for debugging
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## 4. Technology Stack (Recommended)

**Language:** Kotlin **UI Framework:** Jetpack Compose **Networking:** Retrofit or Ktor **Image Loading:** Coil **Video Player:** ExoPlayer **Local Storage:** DataStore or SharedPreferences **Dependency Injection:** Hilt (optional)

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## 5. Development Phases (Must Complete within 2 weeks)

### Phase 1: Core Setup (Week 1)

- Project setup with Jetpack Compose
- API client configuration
- Basic navigation structure
- Welcome screen implementation

### Phase 2: Voice & CRM (Week 2)

- Voice interaction module

- Lead capture form
- CRM API integration
- Testing with dummy data

### **Phase 3: Package Display (Week 2)**

- Package list screen
- Package detail screen
- Media player integration
- Image gallery

### **Phase 4: Actions & Polish (Week 2)**

- Customer action buttons (SMS, WhatsApp, Email)
- Settings screen
- Error handling
- UI polish and animations

### **Phase 5: Testing & Delivery (Week 2)**

- End-to-end testing
  - Bug fixes
  - Documentation
  - APK delivery
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## **6. Deliverables**

### **1. Source Code**

- Full Android project (Kotlin + Jetpack Compose)
- Clean, documented code
- Modular architecture

### **1. APK File**

- Signed release APK
- Debug APK for testing

### **1. Documentation**









- Setup instructions
- Build guide
- Module explanations
- API usage notes

#### 1. **GitHub Repository**

- Complete source code
  - README with setup instructions
  - .gitignore configured properly
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## 7. Success Criteria

The app is considered complete when:

-  All modules are implemented and functional
  -  Voice interaction works smoothly
  -  CRM integration creates leads successfully
  -  Package display shows data correctly
  -  Customer actions (SMS, WhatsApp, Email) work
  -  App runs without crashes on Sanbot hardware
  -  Code is clean and documented
  -  APK is delivered and tested
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## 8. Support & Communication

### Communication Channels:

- WhatsApp group for quick queries
- Weekly progress calls
- Email for detailed discussions

### Support Provided:

- API endpoint access
- Test environment
- Sample data

- ChatGPT Business access for development help
  - Technical guidance from TripAndEvent team
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## 9. Confidentiality

This project is proprietary to TripAndEvent. All code, designs, and documentation are confidential and must not be:

- Shared publicly
- Reused in other projects
- Added to personal portfolio
- Uploaded to third-party platforms without permission

A separate NDA will be provided for signature.

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**Next Document:** API Contract Specification