

# Hands4Hire - platform for connecting handymen with customers

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## 1 Introduction

## 2 Requirements

### 2.1 Use cases

#### 2.1.1 Create Profile

**Actor:** Unregistered User

**Preconditions:** User is not yet registered or logged in

**Basic steps:**

1. User opens registration page
2. Authenticates Google account
3. Picks role
  - *Handyman* - service provider
  - *Customer* - service recipient
4. Provides detailed data necessary for the role
5. Pays registration fee
6. System creates profile and redirects to dashboard

**Postconditions:** Customer profile is stored in the system

### 2.1.2 Edit Profile

**Actor:** Registered Customer or Handyman

**Preconditions:** User is logged in

**Basic steps:**

1. User navigates to “Edit Profile” from the home page
2. Updates fields (e.g. skills, address, contact info)
3. Submits changes
4. System syncs data and confirms updates

**Postconditions:** Profile gets updated and reflects latest data

### 2.1.3 Update Calendar

**Actor:** Registered Handyman

**Preconditions:** Handyman is logged in

**Basic steps:**

1. Handyman opens calendar from profile page
2. Adds/deletes available slots
3. Can change status of a previously *accepted* booking to *canceled*
4. Submits changes
5. System syncs data and confirms updates

**Postconditions:**

- *Canceled* booking removed from the calendar, still visible in history
- Updated calendar is reflected in searches and Handyman profile
- Customer gets notification about Booking’s status change

### 2.1.4 Search for Handyman

**Actor:** Registered Customer

**Preconditions:** Customer is logged in

**Basic steps:**

1. Customer opens search page
2. Selects filters (e.g. type of service, geographical range, availability, customer rating)
3. Submits search
4. System displays matching Handymen profiles

**Postconditions:** Filtered list is shown

### 2.1.5 View Handyman Profile

**Actor:** Registered Customer or Handyman

**Preconditions:**

1. User is logged in
2. Handyman Search/Filtering results available
3. **Or For Customer:** Handyman already in Customer’s Booking History

**Basic steps:**

1. Select Handyman from Search List or Booking History
2. View Full Profile
  - Contact Info
  - Skills & Experience

- Calendar availability
- User rating and comments from previous jobs

**Postconditions:** System displays public Handyman's Profile

### 2.1.6 Book Handyman

**Actor:** Registered Customer

**Preconditions:**

1. Customer is logged in
2. Selected Handyman's Profile open

**Basic steps:**

1. Select time slot from Handyman's Calendar
2. Leave optional service note
3. Submit request

**Postconditions:**

- Booking request stored in the system with *pending* status
- Request added to Customer's booking history, visible in Customer's dashboard
- Notification sent to Handyman, request visible in Handyman's dashboard

### 2.1.7 View Customer Profile

**Actor:** Registered Handyman or Customer

**Preconditions:**

1. User is logged in
2. Handyman received Booking from a Customer
3. OR User views comments left by other Customers on Handyman's Profile

**Basic steps:**

1. Select Customer from Booking request, or Comments List
2. View Full Profile
  - Contact Info
  - Booking History
  - Comments and ratings for previous jobs

**Postconditions:** System displays public Customer Profile

### 2.1.8 Accept or Decline Booking

**Actor:** Registered Handyman

**Preconditions:**

1. Handyman received Booking from a Customer
2. Booking status is *pending*

**Basic steps:**

1. Handyman received a Booking Request notification (in-app/e-mail)
2. Notification redirection to Booking Request, with eventual authentication step
3. OR Open Booking request directly from dashboard
4. Booking Request shows:
  - Customer who placed the request
  - Date, Time & Duration
  - Service note from the Customer
  - Current status *pending*, *canceled*

5. If not *canceled* Handyman can Accept or Decline with designated buttons
6. System confirms the status update

**Postconditions:**

- Booking status changes to *accepted* or *declined*
- If *accepted*, is now visible in the Handyman availability Calendar and will be reflected in the Handyman Searches
- Customer gets a notification about the Booking status change

### 2.1.9 View & Cancel Booking Status

**Actor:** Registered Customer

**Preconditions:**

1. Customer placed at least one Booking

**Basic steps:**

1. Customer goes to Booking History on home page
2. Selects an entry to open a Booking page
3. OR Notification about Booking status update redirection to Booking Request, with eventual authentication step
4. Booking entry shows:
  - Booked Handyman
  - Date, Time & Duration
  - Service note from the Customer
  - Current status *accepted*, *declined*, *pending*, *canceled*
5. If *accepted* or *pending*, Customer can cancel the request
6. System confirms eventual status update

**Postconditions:**

- Booking status changes to *canceled*
- If previously *accepted* by Handyman, it is now removed from the Handyman availability Calendar and will be reflected in the Handyman Searches
- Handyman gets a notification about the Booking status change

### 2.1.10 Contact Between Customer & Handyman

**Actor:** Registered Customer or Handyman

**Preconditions:**

1. Booking request placed by Customer
2. OR User Profile viewed
3. OR Previously registered in the chat history

**Basic steps:**

1. User selects “Message” for a new chat from Recipient’s Profile
2. OR an active chat from chats list on the dashboard
3. Enters message in chat interface
4. Sends message
5. Recipient receives notification

**Postconditions:**

- Notification about a new message sent to the Recipient
- System stores new message and updates the chat history
- If no previous chat history with the Recipient, System adds new chat to the chat history, available from User dashboard

## **2.2 Functional requirements**

### **2.2.1 User Profile Management**

#### **Registration**

- Through Google account
- Requires a one time registration fee

#### **User Profile**

- Each user owns a profile with editable personal data
- Additionally:
  - *Handymen* profiles contain:
    - \* skills and specialization areas
    - \* User ratings and comments from previous jobs
    - \* Calendar with availability
  - *Customers* profiles contain:
    - \* Booking history
    - \* Ratings for previous bookings

#### **Ratings and Comments**

- Customers can leave feedback for the jobs from the Booking History
- Feedback in a form of a star range rating (scale up to 5 or 10) and an optional comment

### **2.2.2 Calendar**

- Handymen manage their availability in a personal calendar, which is visible on their profile
- Customers view Handymen's calendar on their profile and can make booking requests within the free slots

### **2.2.3 Bookings Management**

**Handyman Search** System for searching and filtering Handyman profiles according to:

- skills
- price
- location or geographical range
- availability
- customer rating

**Booking placement** Through calendars available at Handyman profiles, Customers can place bookings:

- Bookings can be accepted or declined by Handymen
- Bookings can be canceled by both Handymen and Customers, regardless of their status
- Status change of a Booking results in a notification to the second party

**Report generation** Automatic statistical report generation per Handyman profile. Includes:

- bookings count
- work hours
- earnings

- types of services

#### **2.2.4 Communicator**

- User Chat for communication between Handymen and Customers
- Code for Booking confirmation and identity authentication sent via chat

### **2.3 Non-functional requirements**

## **3 System Architecture**

### **3.1 Visti Scheduler Module**

### **3.2 Visit Manager Module**

### **3.3 User Chat**

### **3.4 Web Server**

## **4 Security threat model**