

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