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Epics & User Stories

ChargeHub

Teste e Qualidade de Software

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EPIC 1: Station Discovery

User Stories:

- **As an EV Driver**, I want to search for charging stations near my location so that I can access stations within a short distance from me.
 - **Priority/Estimate:** Medium, 2
 - **Acceptance Criteria:**
 - Given I have opened the charging station app,
 - When I allow location access
 - Then I see a list of charging stations ordered by proximity to my current location
- **As an EV Driver**, I want to filter stations by charger type, availability, and cost so that I can find stations that match my technical needs and budget.
 - **Priority/Estimate:** Medium, 2
 - **Acceptance Criteria:**
 - Given I am viewing the list of charging stations,
 - When I apply filters for charger type, availability or cost,
 - Then only the charging stations that meet the selected criteria are displayed
- **As an EV Driver**, I want to see charging stations on a map so I can easily locate them.
 - **Priority/Estimate:** Low, 3
 - **Acceptance Criteria:**
 - Given I have granted location access,
 - When I open the map view,
 - Then I see markers for all nearby charging stations
- **As an EV Driver**, I want to trace a route to a nearby charging station so that I can visualize the path to it.
 - **Priority/Estimate:** Optional, 4
 - **Acceptance Criteria:**
 - Given I select a charging station,
 - When I select "Get Directions",
 - Then a route from my current location to the station is shown on the map
- **As an EV Driver**, I want to see the closest charging stations when planning a trip, so that I can see where I should stop to charge my vehicle.
 - **Priority/Estimate:** Optional, 5
 - **Acceptance Criteria:**
 - Given I input my trip's start and end points,
 - When I begin trip planning,
 - Then I see a list of charging stations closest to the path between those two points,

- And each station includes the distance from the departure and estimated time deviation from the route.
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EPIC 2: Slot Booking & Scheduling

User Stories:

- **As an EV Driver**, I want to book a charging slot in advance so that I can ensure availability.
 - **Priority/Estimate:** High, 3
 - **Acceptance Criteria:**
 - Given I have selected a charging station and charger type,
 - When I choose a time slot and confirm the booking,
 - Then the system reserves that slot for me and prevents other users from booking it.
 - And I receive confirmation with the booking details, including the charger type, time and a token.
- **As a Station Operator**, I want to set custom schedules for my charging stations, so that I can control when each station is available for use.
 - **Priority/Estimate:** Optional, 4
 - **Acceptance Criteria:**
 - **Given** I am logged in as a station operator,
 - **When** I open the schedule management interface for a station,
 - **Then** I can define available and unavailable time slots for each charger.
- **As an EV Driver**, I want to receive notifications 15 minutes before my booked time starts and when it starts, so that I am reminded to arrive at the charging station on time.
 - **Priority/Estimate:** Low, 2
 - **Acceptance Criteria:**
 - Given I have an active charging slot booking,
 - When my scheduled time is approaching,
 - Then I receive a notification 10 minutes before the booking starts.
 - And I receive another notification at the exact start time of the booking.

- **As an EV Driver**, I want to receive a notification if a charger I booked becomes disabled before my scheduled time, so that I can make alternative arrangements in advance.
 - **Priority/Estimate:** Low, 2
 - **Acceptance Criteria:**
 - Given I have an active charging slot booking,
 - When the assigned charger becomes unavailable before my scheduled time,
 - Then I receive an immediate notification informing me of the issue,
 - And I am prompted to either rebook at another station or cancel the booking.
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EPIC 3: Charging Management

User Stories:

- **As an EV Driver**, I want to use my reservation token in the app to unlock the charger when I arrive, so that I can start my charging session securely and only during my reserved slot.
 - **Priority/Estimate:** High, 3
 - **Acceptance Criteria:**
 - Given I have an active reservation and have arrived at the charging station,
 - When I open the app and input my reservation token,
 - Then the corresponding charger is remotely unlocked,
 - And my charging session begins.
- **As an EV Driver**, I want to see real-time charging status including battery percentage, current cost, and energy consumed, so that I can monitor and manage my charging session according to my needs and budget.
 - **Priority/Estimate:** Optional, 4
 - **Acceptance Criteria:**
 - Given I have an active charging session,
 - When I open the session details in the app,
 - Then I see live updates of the battery level, cost so far, and energy (kWh) delivered.
- **As a Station Operator**, I want to monitor all active and historical charging sessions, so that I can ensure operational visibility, detect issues, and analyze usage patterns
 - **Priority/Estimate:** Optional, 4
 - **Acceptance Criteria:**

- Given I am logged as station operator,
 - When I open the charging session panel,
 - Then I see a list of all current sessions with user info, charger status, duration, and energy consumed.
 - And I can also access a history of past sessions with filtering options.
 - **As an EV Driver**, I want to stop the charging session from the app at any time, so that I can charge only the amount I need and control the cost.
 - **Priority/Estimate:** High, 2
 - **Acceptance Criteria:**
 - Given I am in an active charging session,
 - When I select "Stop Charging" in the app,
 - Then the charger stops delivering power and the session ends,
 - And I see a summary of total cost, time, and energy charged.
 - **As an EV Driver**, I want to restart the charging session from the app if I stop it accidentally, so that I can continue charging without needing to make a new reservation.
 - **Priority/Estimate:** Optional, 2
 - **Acceptance Criteria:**
 - Given I have recently stopped a charging session,
 - When I select "Restart Charging" in the app,
 - Then the charger resumes delivering power using the same reservation
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EPIC 4: Payment Integration

User Stories:

- **As an EV Driver**, I want to receive the payment summary in the app when my charging session ends, so that I can easily review and pay for the charging cost directly through the app.
 - **Priority/Estimate:** High, 4
 - **Acceptance Criteria:**
 - Given my charging session has ended,
 - When I open the app,
 - Then I see a payment summary with the total amount due, energy consumed, and charging duration,
 - And I can choose a payment method and complete the transaction within the app.

- **As a Station Operator**, I want to access financial reports per charging session and verify their payment status, so that I can monitor revenue and ensure that all sessions have been correctly billed and paid.
 - **Priority/Estimate:** Medium, 4
 - **Acceptance Criteria:**
 - Given I am logged as station operator,
 - When I open the financial reporting section,
 - Then I can view individual charging sessions along with payment status, amounts charged, and payment timestamps
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EPIC 5: User Profiles & Charging History

User Stories:

- **As an EV Driver**, I want to view my charging history and total energy consumption over time, so that I can track my usage patterns and manage my charging behavior more efficiently.
 - **Priority/Estimate:** Medium, 4
 - **Acceptance Criteria:**
 - Given I am logged into my account,
 - When I open the "Charging History" section,
 - Then I see a list of past charging sessions with dates, locations, energy consumed (kWh), duration, and cost.
- **As an EV Driver**, I want to track my estimated CO₂ savings based on my charging activity, so that I can understand the environmental impact of using electric vehicles instead of fuel-based alternatives.
 - **Priority/Estimate:** Low, 4
 - **Acceptance Criteria:**
 - **Given** I have completed one or more charging sessions,
 - **When** I visit the sustainability section in my profile,
 - **Then** I see an estimate of CO₂ emissions avoided (in kg or tons) based on energy charged and average EV efficiency.
- **As an Admin**, I want to view aggregated user statistics and charging behavior trends, so that I can analyze platform usage and optimize the service for users.
 - **Priority/Estimate:** Optional, 5
 - **Acceptance Criteria:**
 - Given I am logged into the admin dashboard,
 - When I open the analytics or reporting section,
 - Then I see data such as total users, active users, average energy per session, peak usage times, and CO₂ saved across the platform.

EPIC 6: Backoffice Operations

User Stories:

- **As a Station Operator**, I want to update my station's information such as availability and pricing, so that users always see accurate data when booking a charging slot.
 - **Priority/Estimate:** Medium, 3
 - **Acceptance Criteria:**
 - Given I'm logged into the operator dashboard,
 - When I access a station's details and make changes to availability, pricing, or charger info,
 - Then the updated information is saved and reflected in the user-facing app immediately.
- **As an Admin**, I want to create station operator accounts, so that new employees can manage charging stations assigned to them.
 - **Priority/Estimate:** High, 3
 - **Acceptance Criteria:**
 - Given I am logged into the admin dashboard,
 - When I fill in the required details to create a new operator account,
 - Then the operator receives credentials and can log into the platform with their permissions.
- **As an Admin**, I want to assign or remove stations from specific station operators, so that I can manage responsibilities across the network effectively.
 - **Priority/Estimate:** High, 3
 - **Acceptance Criteria:**
 - Given I am on an operator's profile in the admin dashboard,
 - When I select stations to assign or remove,
 - Then the operator's access is updated accordingly.
- **As an Admin**, I want to manage all user accounts, including EV drivers and station operators, so that I can enforce platform rules and support operations effectively.
 - **Priority/Estimate:** Low, 4
 - **Acceptance Criteria:**
 - Given I am in the admin dashboard,
 - When I view the list of users (EV Drivers and Operators),
 - Then I can search, edit, deactivate, or delete any account as needed.
- **As an Admin**, I want to view system-wide reports and statistics, so that I can monitor platform performance and usage trends.
 - **Priority/Estimate:** Optional, 4
 - **Acceptance Criteria:**

- Given I am logged into the admin dashboard,
 - When I access the analytics section,
 - Then I see KPIs like total sessions, revenue, energy delivered, user growth, etc.
 - **As a Station Operator**, I want to report users for misconduct such as not paying or damaging equipment, so that the platform can take appropriate action.
 - **Priority/Estimate:** Medium, 3
 - **Acceptance Criteria:**
 - Given I'm on the operator dashboard and have identified a problematic session,
 - When I click "Report User" and provide a reason,
 - Then the report is submitted to the admin team for review.
 - **As an EV Driver**, I want to report chargers I use, so that other drivers can benefit from my feedback.
 - **Priority/Estimate:** Optional, 2
 - **Acceptance Criteria:**
 - Given I've completed a charging session,
 - When I visit the charger's detail page,
 - Then I can submit a report (comment)
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EPIC 7: Authentication & Account Management

User Stories:

- **As an EV Driver**, I want to register on the platform with my personal details, so that I can access EV charging services
 - **Priority/Estimate:** High, 3
 - **Acceptance Criteria:**
 - Given I open the app or website,
 - When I choose "Sign Up" and enter my details,
 - Then my account is created and I can log in.
- **As an EV Driver**, I want to update my account information, so that my profile stays accurate and secure.

- **Priority/Estimate:** Medium, 3
- **Acceptance Criteria:**
 - Given I am logged into my account,
 - When I navigate to the profile settings,
 - Then I can edit and save my personal details.
- **As an EV Driver,** I want to permanently delete my account, so that I can stop using the service and remove my personal data from the platform.
 - **Priority/Estimate:** Low, 2
 - **Acceptance Criteria:**
 - Given I am logged into my account,
 - When I choose to delete my account and confirm the action,
 - Then my account and associated data are removed and I am logged out.