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| Class Name | Type | Extends / Implements | Related Classes | Description |
| User | Abstract | - | Admin, Customer, ServiceRep, VerifiedUser | Core abstract class for all users |
| Admin | Concrete | User | - | Elevated user: manages cars, users, reports |
| Customer | Concrete | User | ServiceRep (assigned) | End-user with a driver license |
| ServiceRep | Concrete | User | Customer (via assignment), SupportTicket, Payment | Handles customers, follow-ups |
| VerifiedUser | Concrete | User | - | Basic authenticated user |
| Car | Concrete | - | Used in Reservation | Car data with pricing and status |
| Reservation | Concrete | - | Car, User | Rental or purchase with dates and cost |
| Payment | Concrete | - | Reservation, User | Stores payment info and status |
| SupportTicket | Concrete | - | Handled by ServiceRep | Tracks support issues with comments |
| CustomerRepAssignment | POJO | - | Customer, ServiceRep | Links customer to assigned rep |
| ChatMessage | Concrete | - | fromUserID, toUserID | Represents one message in chat |
| ChatClientEndpoint | WebSocket Client | - | ChatTab | Connects user to WebSocket server |
| ChatTab | Swing JPanel | - | ChatClientEndpoint, User | Chat UI panel in MainFrame |
| ChatServer | WebSocket Host | - | ChatServerEndpoint | Starts and stops WebSocket backend |
| ChatServerEndpoint | WebSocket Server | - | ChatMessageDAO | Handles messages server-side |
| ChatServerConfigurator | Configurator | - | ChatServerEndpoint | Injects userId from handshake |
| ChatMessageDAO | DAO | - | ChatMessage | Persists and retrieves chat messages |
| ChatHandler | Logic Helper | - | CustomerRepAssignmentDAO | Assigns reps and opens chat |
| ReservationDAO | DAO | - | Reservation | Reservation persistence logic |
| PaymentDAO | DAO | - | Payment | Manages DB interaction for payments |
| CustomerRepAssignmentDAO | DAO | - | CustomerRepAssignment | Assignment DB logic |
| PaymentService | Service | - | PaymentDAO, ReservationDAO | Payment logic and reservation status update |
| MainFrame | JFrame | - | Tabs: SignIn, Register, Search, Chat, Admin, etc. | Main application window |
| RegistrationForm | JPanel | - | UserManager | User registration form |
| SignInForm | JPanel | - | UserManager | Handles login |
| UserManagementForm | JPanel | - | User CRUD | Admin form for managing users |
| ManageCarsForm | JPanel | - | CarDAO | Admin form to manage car inventory |
| CarSearchForm | JPanel | - | Car, ReservationForm | Search available cars |
| ReservationForm | JFrame | - | Reservation, Payment | Create a reservation and pay |
| ReservationReportForm | JPanel | - | ReservationDAO | Report view for reservations |
| UserRepAssignmentForm | JPanel | - | CustomerRepAssignmentDAO | Admin tool to assign reps |
| ManualPaymentPanel | JPanel | - | PaymentDAO | Manual payment entry for admin/rep |
| AssignedCustomersForm | JPanel | - | CustomerRepAssignmentDAO | ServiceRep view of assigned customers |

# caRent - Class Relationship Table