sd Create Booking

Driver

Mobile Application
- View Renderer
- Communication Handler

eMSP Application Server
- Requests Handler
- Authentication Middleware
- Manage Booking
- eMSP Model
- External Operation Controller
- Station Updates

CPMS
- Remote Operation Receiver
- Booking
- Station Updates
- CPMS Model

Driver → View Renderer: click(BookCharge)
View Renderer ⤏ Driver: showView(BookingView)
Driver → View Renderer: insert(BookingTime)
Driver → View Renderer: click(submitBooking)
View Renderer ⤏ Driver: loadingMessage
View Renderer → View Renderer: getClickedStation
View Renderer → View Renderer: getFilteredChargingType
View Renderer → Communication Handler: makeRequest(bookingRequest, success(data), error())
Communication Handler → Requests Handler: handleRequest(bookingRequest)
Requests Handler → Authentication Middleware: filterRequest(bookingRequest)
Authentication Middleware → Authentication Middleware: isLogged(session)
Authentication Middleware → Manage Booking: bookCharge(station, chargingType)
Manage Booking → eMSP Model: getCPMS(station)
eMSP Model ⤏ Manage Booking: CPMSconnection
Manage Booking → External Operation Controller: makeRequest(CPMSconnection, bookingRequest)
External Operation Controller → Remote Operation Receiver: handleRequest(bookingRequest)
Remote Operation Receiver → Booking: bookCharge(station, chargingType, eMSP)
Booking → CPMS Model: getAvailable(station, chargingType)
CPMS Model ⤏ Booking: socketID

alt [socketID != null]

Booking → CPMS Model: addBooking(station, socketID, eMSP)
CPMS Model ⤏ Booking: bookingID
Booking ⤏ Remote Operation Receiver: socketID, bookingID
Remote Operation Receiver ⤏ External Operation Controller: socketID, bookingID
External Operation Controller ⤏ Manage Booking: socketID, bookingID
Manage Booking ⤏ Authentication Middleware: socketID, bookingID
Authentication Middleware ⤏ Requests Handler: socketID, bookingID
Requests Handler ⤏ Communication Handler: socketID, bookingID
Manage Booking → eMSP Model: addBooking(bookingID, userID, station, socketID)
eMSP Model ⤏ Manage Booking: success
Booking → Station Updates: updateAvailability(station, socketID, null)
Station Updates → Station Updates: getChargingType(station, socketID)
Station Updates → Station Updates: getAssociatedEMSPs()

loop [foreach eMSP]

Station Updates → Remote Operation Receiver: updateAvailability(eMSP, station, chargingType, null)
Remote Operation Receiver → Station Updates: updateAvailability(station, chargingType, null)
Station Updates → Station Updates: updateAvailability(station, chargingType, null)

Communication Handler → View Renderer: success(bookingID, socketID)
View Renderer → Driver: show(successMessage, socketID)

[socketID == null]

Booking ⤏ Remote Operation Receiver: error
Remote Operation Receiver ⤏ External Operation Controller: error
External Operation Controller ⤏ Manage Booking: error
Manage Booking ⤏ Authentication Middleware: error
Authentication Middleware ⤏ Requests Handler: error
Requests Handler ⤏ Communication Handler: error
Communication Handler → View Renderer: error()
View Renderer → Driver: show(errorMessage)