SSDC Auto Slot Watcher – Technical Design Document

Objective: Build a Chrome browser extension that automatically monitors SSDC practical lesson slots, handles modal dialogs when fully booked, checks availability at safe intervals, auto-clicks available slots, and sends Telegram alerts to specified users.

Architecture Overview: Chrome Extension - content.js: DOM automation and slot detection - background.js: scheduler and Telegram messaging - popup.html / popup.js: user start/stop interface - manifest.json: extension configuration Flow: 1. Select Practical Lesson 2. Click "Get Earliest Date" 3. If modal shows fully booked → close and retry later 4. If no modal → check availability 5. Scan slot matrix 6. Click first valid slot 7. Send Telegram alert 8. Stop loop

Rate Limiting Strategy: - Check interval: 2 minutes minimum - Random jitter: 120–150 seconds - Human-like delays: 500–1200ms between actions - Stop loop after success

Key DOM Selectors: Dropdown: #BookingType Earliest button: #button-searchDate Modal message: #modalMsgContent Modal close: button[data-dismiss="modal"] Availability button: #btn_checkforava Slots: a.slotBooking

Telegram Integration: Use BotFather to create a Telegram bot. Store bot token securely. Send messages via: https://api.telegram.org/bot/sendMessage Recipients: @vekron @brrr192

Edge Case Handling: - Modal detection and automatic close - Multiple slot detection - Safe retries - Page reload resilience - Duplicate alarm prevention

Future Enhancements: - Time preference filters - Auto login recovery - Desktop notifications - Slot priority logic - Advanced anti-detection behavior