KARO TAKHLEEQ 2026
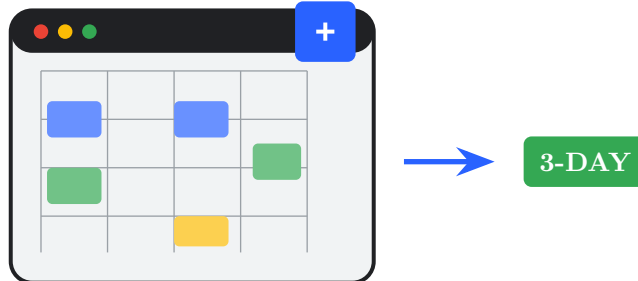
Smart Course Registration
Chrome Extension

Optimizing Timetables. Minimizing Hassle. Maximizing Time.

3-DAY

Team Members

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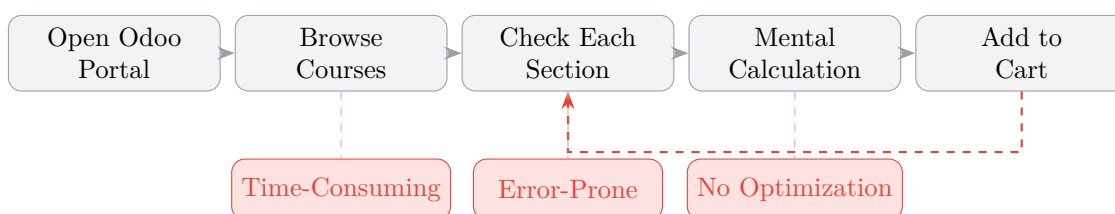# 1. Problem Identification

❓ What specific campus-life problem are you solving?

The UCP Odoo-based course registration system requires students to **manually browse** through course sections, checking timings and availability **one-by-one** using an add-to-cart system. Students must mentally calculate:

- ✖ Schedule conflicts between sections
- ✖ Gaps between consecutive classes
- ✖ Optimal distribution across campus days

This tedious **trial-and-error** process consumes **30 to 60+ minutes** each semester.

Current Registration Flow

Open Odoo Portal	Browse Courses	Check Each Section	Mental Calculation	Add to Cart

Time-Consuming   Error-Prone   No Optimization

❓ Who is most affected by this problem?

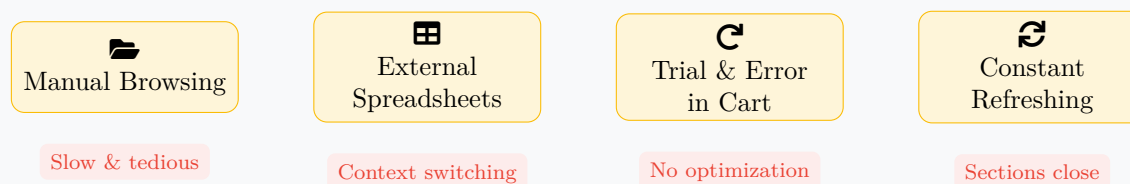| 👥 **16,000+** Students	🚌 **Commuters** (Majority)	🕐 **Peak Hour** Registrants

❓ How often does this problem occur?

2× per year (each semester)   **32,000** registration sessions annually

Additional stress during **add/drop weeks** when sections rapidly open and close.

❓ How is this problem currently addressed, and why is it inadequate?

📂 Manual Browsing	⊞ External Spreadsheets	↻ Trial & Error in Cart	⟲ Constant Refreshing
Slow & tedious	Context switching	No optimization	Sections close

2. Impact & Relevance

❓ **What negative impact does this problem have on students?**

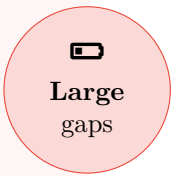|				
⧗ **30–60 min** wasted	📅 **5-day** schedules	⚠ **Anxiety** & stress	🚗 **Extra** commute	🔋 **Large** gaps
Time Waste	Poor Schedules	Reg. Anxiety	Physical Toll	Wasted Time

❓ **How many students are likely affected?**

Registration Sessions Per Year

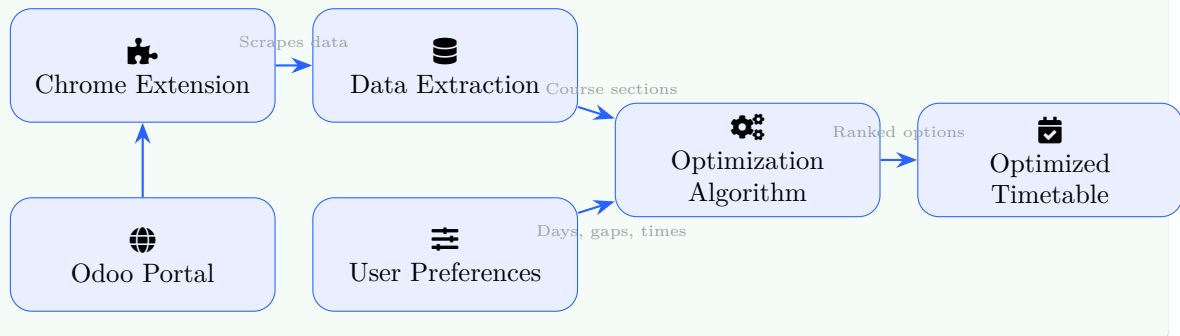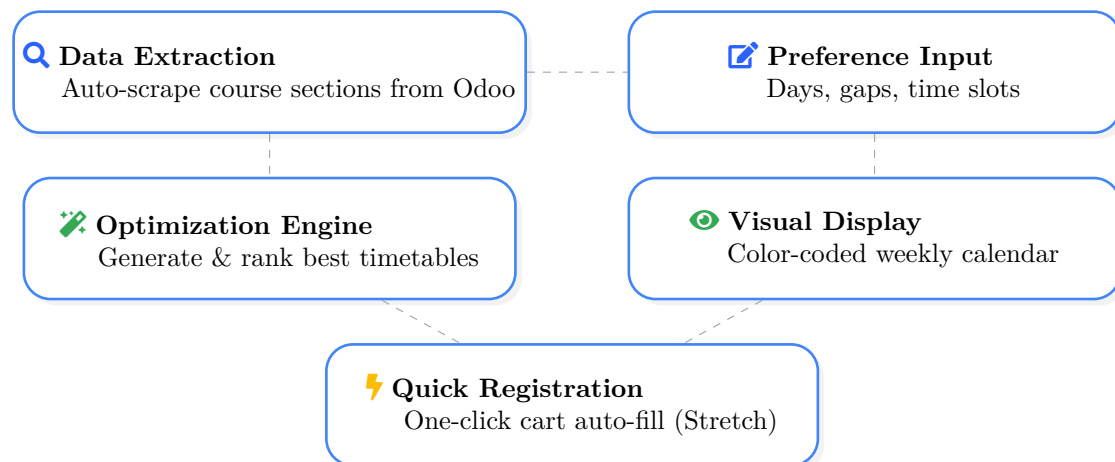| Fall Semester	Spring Semester	Total/Year
16,000	16,000	32,000

3. Solution Concept

> **❓ Briefly describe your proposed solution**
>
> A **Chrome Extension** that integrates directly with the UCP Odoo portal to automatically extract course data, generate optimized timetables, and enable one-click registration.

Solution Architecture

3.1 Core MVP Features

🔍 Data Extraction
Auto-scrape course sections from Odoo

✏️ Preference Input
Days, gaps, time slots

✨ Optimization Engine
Generate & rank best timetables

👁 Visual Display
Color-coded weekly calendar

⚡ Quick Registration
One-click cart auto-fill (Stretch)

3.2 How does your solution improve the daily campus experience?

❌ **BEFORE**   ✅ **AFTER**

45+ minutes	$\longrightarrow$	**Under 5 min**
5-day schedule	$\longrightarrow$	**3-day schedule**
Large gaps	$\longrightarrow$	**Minimal gaps**
High stress	$\longrightarrow$	**Zero stress**
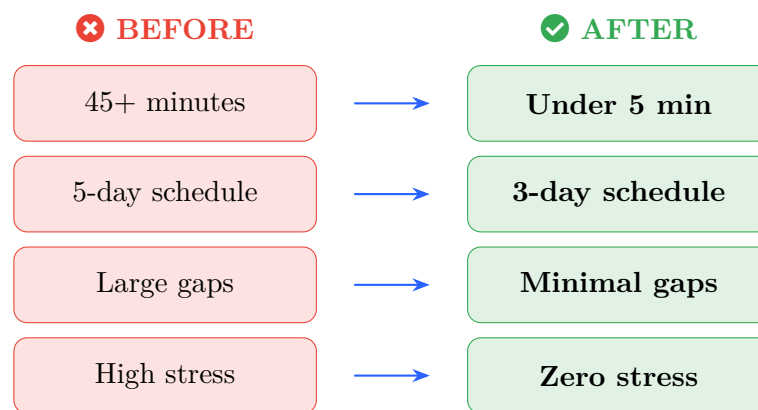
4. Users & Validation

❓ Who is your primary user?

HIGH PRIORITY	PRIORITY	ALL USERS
👤	👥🕐	🎓
Commuter Students	**Time-Conscious**	**All UCP Students**
Want fewer campus days	Need efficient schedules	Frustrated with current system

❓ How will you validate that they need your solution?

4.1 Phase 1 Validation (Today)

💬
Quick Hallway Surveys
"How long does registration take?"

👥
Student Interviews
8–10 students about experiences

📊
Preference Poll
3 packed days vs 5 spread days?

4.2 Phase 2 Validation (Planned)

Method	Description
🎨	Show mockups/wireframes of extension UI
💻	Demonstrate working prototype to 15–20 students
📋	Observe reactions and gather feature requests
📊	Validate optimization preferences

4.3 Validation Questions

❓ "How long does course registration typically take you?"

❓ "What's the most frustrating part of registration?"

❓ "Do you prefer fewer days with packed schedule OR more days with gaps?"

❓ "Have you ever ended up with a schedule you weren't happy with?"

❷ "Would you use a Chrome extension that auto-generates optimal timetables?"

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5. Technical Approach

5.1 Technology Stack

HTML/CSS/JS Chrome APIs	→	Content Script DOM Scraping	→	Background Script	→	Local Storage
Frontend		Data Layer		Logic Layer		Persistence
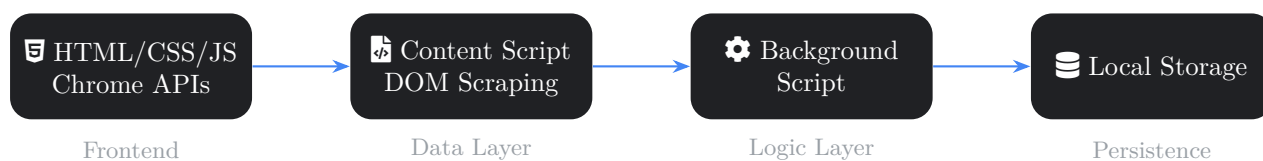
5.2 Development Timeline

Day 1 AM Extension skeleton Popup UI design	**Day 1 PM** Odoo scraping Basic algorithm	**Day 2 AM** Full optimization Conflict detection	**Day 2 PM** UI polish Demo prep

Phase 2	Phase 2	Phase 3	Phase 4

6. Expected Output Summary

✅ **Clear Problem Interpretation**: Students waste time manually building schedules in Odoo

✅ **Identified Target Users**: All 16,000+ UCP students, especially daily commuters

✅ **Solution Approach**: Chrome extension integrated directly with Odoo portal

✅ **High-Level MVP**: Auto-generate and rank optimized timetables based on preferences

🚀 **Ready for Phase 2: User Research & Validation**

Building a solution that saves 40+ minutes per student, per semester