Tarner Monitor - Project Proposal

Process Monitor & Manager

Project Overview

Application built in Rust with Iced GUI that monitors and manages system processes. Users can view running processes, see resource usage, and control processes with a clean interface.

Core Features

1. **Process List**: Show all running processes with CPU/memory usage
2. **Process Details**: Click a process to see detailed information
3. **System state modification**: Kill processes and change their priority
4. **Search/filter/sort functionality**: Find processes quickly by name or usage
5. **Settings/Logs**: See logs, save user preferences and export data to CSV\

Success Goals

- App starts quick (<3 secs)
- No crashes during normal use
- Can kill processes safely with confirmation
- Search/Sort/Filter works fast
- No UI freeze
- Valid Export
- Settings save between app restarts

OS Requirements

- **Ubuntu 22.04** (primary)
- **macOS 12+** (secondary)

Permissions Needed

- **Read Access**: View all running processes (standard user)
- **Process Control**: Kill/modify only user-owned processes
- **File System**: Read/write config files in user home directory
- **No Admin Required**: App works without sudo/root privileges

Crates, Data Sources:

- **sysinfo** to get process information and cross-platform
- **Iced** for the graphical interface
- **serde** to save/load settings as JSON

Risks

1) UI might freeze during updates
2) Permission errors killing processes
3) Cross-platform differences

Weekly Plan

Week	Main Tasks	Hours
1	Planning, research, wireframes	10
2	Basic app structure, architecture docs	12
3	Get real process data, background updates	14
4	Process table, kill functionality	16
5	Settings, search/filter features	14
6	Testing, error handling, accessibility	12
7	Documentation, beta testing	10
8	Final release, demo preparation	8

Total: 96 hours over 8 weeks

UI Design

- **Top**: Search bar and controls
- **Middle**: Process table (sortable columns)
- **Bottom**: Selected process details and action buttons

Nice-to-Have Features

1. **Data Export**: Save process list to CSV
2. **Dark/Light Theme**: Toggle between themes
3. **Cross-Platform**: Ubuntu, MacOS