

TimeTrack Pro

Technical & Functional Reference

Professional Time Tracking Application

Built with Microsoft Access & VBA

Automated Development via MCP VBA Server

Project Highlights

â€¢ 915 Lines of Professional VBA Code

â€¢ 7 Modular Components

â€¢ 45% Development Time Reduction via Automation

â€¢ Production-Ready Business Application

Alexis TrouvÃ©

alexistrouve.pro@gmail.com

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1. Executive Summary

TimeTrack Pro is a professional time tracking application built on Microsoft Access, showcasing advanced database design, VBA automation, and modern development practices. This project demonstrates the capability to deliver production-ready business applications through automated development workflows using the VBA MCP Server.

Key Achievement: Complete application development (database structure, business logic, queries, and VBA modules) automated via MCP (Model Context Protocol) integration, demonstrating cutting-edge AI-assisted development capabilities.

Project Statistics

Metric	Value
Total VBA Lines	915
VBA Modules	7
Database Tables	3
Functions	45+
Development Time Saved	45%
Comment Ratio	25%

2. Project Overview

2.1 Purpose

TimeTrack Pro is a time management tool designed for freelancers, consultants, and small teams to:

- Track billable hours across multiple clients and projects
- Calculate revenue automatically based on hourly rates
- Generate professional reports for invoicing and analysis
- Maintain a complete audit trail of time entries

2.2 Target Audience

- Freelancers:** Independent consultants tracking multiple client projects
- Small Teams:** Agencies managing client work and resource allocation
- Consultants:** Professional services requiring detailed time records

3. Database Architecture

The application uses a normalized relational database structure with three core tables:

3.1 Table: tbl_Clients

Stores client information and contact details.

Field	Type	Size	Description
ClientID	AutoNumber	Long	Primary Key
Nom	Text	100	Client name (required)
Email	Text	100	Email address
Telephone	Text	20	Phone number
Notes	Memo	-	Additional notes
DateCreation	DateTime	-	Record creation timestamp

4. VBA Architecture

The application uses a modular VBA architecture with 7 core modules totaling 915 lines of code:

Module	Purpose	LOC
mod_Config	Application configuration and constants	80
mod_Navigation	Form navigation and UI flow control	120
mod_DataAccess	CRUD operations and database layer	200
mod_Calculs	Business logic and calculations	150
mod_Export	Report generation and export	120
mod_Utils	Helper functions and validation	100
mod_FormBuilder	Automated form creation (dev only)	145

5. MCP VBA Server Automation

This project showcases advanced automation using the VBA MCP Server (Model Context Protocol), enabling AI-assisted development of Access applications.

5.1 Development Efficiency

Phase	Estimated	Actual	Method
Database Design	1h	0.5h	MCP Automated
Test Data	30min	15min	MCP Automated
VBA Modules	3h	1h	MCP Automated
SQL Queries	30min	20min	MCP Automated
Forms	2h	1h	Script + Manual
Testing & Docs	2h	2h	Manual

Development Efficiency: 45% time reduction through automation

Total estimated: 9 hours | Actual: ~5 hours

6. Professional Services Available

This project demonstrates expertise in the following areas:

â€¢ **Microsoft Access Development**

Forms, reports, VBA automation, and SQL optimization

â€¢ **Database Design & Architecture**

Normalization, indexing, referential integrity, and performance tuning

â€¢ **Business Application Development**

Requirements analysis, UX design, testing, and deployment

â€¢ **Process Automation**

VBA macros, AI-assisted development (MCP), workflow optimization

â€¢ Legacy System Modernization

Access to SQL Server migration, web application conversion

