

1. Load Prolog file

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Command Prompt - swipl
C:\Users\malin\OneDrive\Desktop>swipl
Welcome to SWI-Prolog (threated, 64 bits, version 9.2.9)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
Please run ?- license. for legal details.

For online help and background, visit https://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

1 ?- [financial_advisor].

=====
FINANCIAL ADVISOR SYSTEM v5.5 - MAIN MENU
=====

Available Commands:

1. start.                - Interactive financial assessment
2. server(8080).          - Start HTTP API server on port 8080
3. stop_server(8080).     - Stop server on specific port
4. stop_all_servers.      - Stop all running servers
5. restart_server(8080).  - Restart server on port
6. kill_server_thread(8080). - Force kill server thread
7. test_json_response.    - Test JSON generation
8. test_api_call.         - Test API call simulation
9. test_compact_json.     - Test compact JSON output
10. menu.                - Show this menu
11. halt.                - Exit the system

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FIXED ISSUES IN v5.5:
- Removed custom alias generation that caused race conditions
- Simplified server startup using standard http@Port alias
- Improved cleanup to find ALL threads related to a port
- Better error messages and recovery steps

=====

true.

2 ?- |

```

2. Run the interactive financial assessment

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2 ?- start.

=====
ADVANCED FINANCIAL FREEDOM CALCULATOR - SRI LANKA
=====

This system will analyze your finances and create a personalized
roadmap to financial independence.

(All amounts in Sri Lankan Rupees - LKR)
(Press Enter to use default value in brackets)

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Your age? [25]: 25
Monthly income (after tax)? [100000]: 20000
Monthly expenses? [60000]: 5000
Total debt (all loans)? [200000]: 0
Is your debt critical right now? (yes/no) [no]: no
Emergency fund balance? [150000]: 0
Regular savings balance? [200000]: 0
Current investments value? [500000]: 0

```

3. Results

<pre> Generating your personalized financial freedom report... ===== COMPREHENSIVE FINANCIAL FREEDOM REPORT (Sri Lanka - LKR) ===== STEP 1: YOUR FINANCIAL HEALTH SCORE ===== OVERALL SCORE: 50/100 Savings Rate: 75.0% (25/25 points) - Excellent savings discipline Emergency Fund: 0.0 months coverage (0/25 points) - CRITICAL: Build to 3 months minimum Debt Level: Rs. 0 (0.0% of annual income, 25/25 points) - Low debt, excellent position Total Assets: Rs. 0 (0/25 points) - Building foundation ASSESSMENT: FAIR - Building foundation, keep improving ===== STEP 2: YOUR INCOME-BASED FINANCIAL PLAN ===== Income Category: Low (Rs. 20,000 per month) Debt Status: MANAGEABLE MONTHLY BREAKDOWN (from Rs. 15,000 savings): - For Investments: Rs. 4,500 (30%) - For Debt Payment: Rs. 1,500 (10%) - For Emergency Fund: Rs. 1,500 - Flexible/Personal Dev: Rs. 7,500 RECOMMENDED INVESTMENT OPTIONS: Money market funds, Unit trusts, Personal development, Treasury bills, Fixed deposits Note: Diversify across multiple options. Never put all money in one investment. Start with lower-risk options and gradually move to higher-risk investments as you gain experience. ===== STEP 3: YOUR CURRENT FINANCIAL STATE </pre>	<pre> ===== Age: 25 years Monthly Income: Rs. 20,000 Monthly Expenses: Rs. 5,000 Monthly Savings: Rs. 15,000 (75.0% savings rate) Current Assets: - Emergency Fund: Rs. 0 - Savings: Rs. 0 - Investments: Rs. 0 - TOTAL ASSETS: Rs. 0 Debt: Rs. 0 (Manageable) ===== STEP 4: PATH TO FINANCIAL INDEPENDENCE ===== Financial Independence Target: Your investments generate Rs. 5,000 per month (Rs. 60,000 per year) to cover your expenses. TIMELINE TO FINANCIAL INDEPENDENCE: (Based on monthly investment of Rs. 4,500) 8% ROI: 9.4 years (Age 34.4) 12% ROI: 6.3 years (Age 31.3) 16% ROI: 4.7 years (Age 29.7) 20% ROI: 3.8 years (Age 28.8) 24% ROI: 3.1 years (Age 28.1) RECOMMENDATION: - Conservative approach (8-12% ROI): Focus on FDs, bonds, funds - Balanced approach (12-16% ROI): Mix of stocks, funds, property - Aggressive approach (16-24% ROI): Stocks, business, real estate (Higher risk, requires knowledge and active management) Choose a strategy that matches your risk tolerance and financial knowledge. Most people achieve 10-15% average annual returns with balanced diversified portfolios. ===== Important Notes: 1. Review and adjust this plan every 6 months </pre>
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4. Test JSON report generation

<pre> true . 3 ?- test_json_response. === Testing JSON Response Generation === Generated JSON Response: { "age":25, "debt":200000, "debt_critical":"no", "emergency_balance":150000, "fi_timelines": [{"age_at_fi":40.7,"roi":8,"years_to_fi":15.7}, {"age_at_fi":34.5,"roi":12,"years_to_fi":9.5}, {"age_at_fi":31.4,"roi":16,"years_to_fi":6.4}, {"age_at_fi":29.7,"roi":20,"years_to_fi":4.7}, {"age_at_fi":28.5,"roi":24,"years_to_fi":3.5}], "financial_health_score":65, "investments":500000, "meta": {"currency":"LKR","generated_at":"2025-10-27T11:19:16Z","version":"5.5"}, "monthly_breakdown": [{"amount":16000,"category":"Investments","percent":40}, {"amount":4000,"category":"Debt Payment","percent":10}, {"amount":8000,"category":"Emergency Fund","percent":20}, {"amount":12000,"category":"Flexible/Personal Dev","percent":30}], "monthly_expenses":60000, "monthly_income":100000, "monthly_savings":40000, "recommendations": [{ "detail":"Build emergency fund to 6 months of expenses before aggressive investing. This protects you from unexpected events.", "priority":"high", "title":"Emergency Fund Priority" }, { "detail":"Renewable energy, Agriculture, Unit trusts, Personal development, Gold, Silver, Treasury bonds, Fixed deposits", "priority":"medium", "title":"Investment Diversification" }], } </pre>

5. Start HTTP API server

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4 ?- server(8080).
No existing server threads found for port 8080.

=====
Financial Advisor HTTP Server Starting...
=====
Port: 8080
Endpoint: http://localhost:8080/financial_advisor
=====

Example API call:
curl "http://localhost:8080/financial_advisor?age=25&income=100000&expenses=60000&debt=20000&debt_critical=no&emergency=150000&savings=200000&investments=500000"

Server is running. Press Ctrl+C to stop.

% Started server at http://localhost:8080/
true.

$ ?- |
```