

Term Project: ChocAn

Group 8

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Overview

- Purpose
 - Simulate the ChocAn Data Processing System
- Users
 - Healthcare providers
 - ChocAn administrators
- Capabilities
 - Member credential validation
 - Service billing and record logging
 - Weekly report generation (member, provider)
 - Electronic Funds Transfer (ETF) simulation
 - Interactive terminal-based management

Completed Functionality

- Terminal Simulation - Keyboard driven input/output for providers and managers
- Member and Provider Validation - Real time check for valid/suspended members
- Service Logging - inputs service date, code, optional comments and logs complete record
- EFT File Creation - Payment data generated weekly
- Record Management - Add, update, delete members and providers
- Reports
 - Member report (sorted by date)
 - Provider Report (with consultation summary)
 - Manager Summary Report (with totals)
 - Provider Directory (with codes and fees)

Testing

- Unit Testing
 - Focused on core functions like validateMember(), file loading, and data parsing
 - Each unit tested with valid and invalid inputs using the GoogleTest C++ framework
 - Covered membership status validation, provider record updates, and service record creation
- Smoke Testing
 - Confirmed system startup, member verification, service logging, and report generation
 - Ensured all menus, inputs, and outputs function correctly via console based input
- System Testing
 - End-to-end testing across modules using three test cases:
 - ST-001 - Successful Provider Service Entry
 - ST-002 - Weekly Report Generation Process
 - ST-003 - Successful Member Status Validation

Conclusion

- Lessons Learned
 - Early clarity on functional and non-functional requirements is essential
 - Designating a team lead and assigning tasks would have helped distribute work
 - The waterfall model fit well due to scope and defined milestones, especially with a small team
 - Communication is essential when coordinating tasks and working toward milestones
 - Value of modular design and testable components
 - Breaking into subsystems (service logging, report generator, manager interface) improved efficiency
 - Writing and verifying detailed test cases requires significant time and effort
- Improves
 - CSV for simplicity for database. Would have wanted to do a SQL for database.
 - Simulating many functions