Software Presentation

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Quick Stats

Project source code totals, excluding third_party/ and tests/ folder. Generated with 'CLOC'

github.com/AlDanial/cloc v 1.84 T=0.04 s

Language	files	blank	comment	code
C++	18	468	240	2413
C/C++ Header	30	606	399	1177
Markdown	2	175	0	402
Bourne Shell	1	42	14	125
Lua	1	36	8	97
YAML	2	4	0	95
make	1	14	1	80
SQL	1	0	0	66
JSON	2	0	0	56
SUM:	58	1345	662	4511

Functionality

The ChocAn software fulfills the expectations outlined in the requirements document

- User authentication based on unique ID and permissions level
- Providers can view and update records of their own
- Managers can create, view, and edit all records (member and provider)
- Name and contact information can be edited by those with permissions, IDs and transactions are non-modifiable
- System creates and records transactions at time of service and sto
- Transactions can be amended by provider until finalized (member and provider need provide authorization to finalize)
- EFT transaction data is stored in the SQLite database
- Managers have on-demand access to reporting

Some Application Screens

```
====================== Login Service ======================
Welcome,

Please enter your ChocAn Provider or Manager ID.

( Entering 'exit' will close the application )

> █
```

```
====================== View Account ======================
ChocAn ID: 987654321 | Provider | Valid

Name: Sanchez, Rick

Address: 137 Smith st.
         Meeseeks NJ, 87654

Press 'Enter' to continue: █
```

```
==================== Confirm Transaction ====================
Date of Service:  12-2-2019
Current Datetime: 12-5-2019 7:8:57 (UTC)

Provider: 987654321 | Rick Sanchez
Member:   123412345 | Morty Smith

Cost:    $39.99
Service: Back Rub | 123456

Comments:
Wubba lubba dub dub.

Is this correct? (Y/N): █
```

```
================= ChocAn Summary Report: 1/1/1970 - 12/5/2019 =================
+-----------------+-----------------+-----------------+-----------------+
|   Provider ID   |      Name       |   # Services    |    Total Fee    |
+-----------------+-----------------+-----------------+-----------------+
|   123451234     |   Feelgood, V   |        1        |     $39.99      |
|   177607040     |   Simpson, H    |        1        |     $79.99      |
|   987654321     |   Sanchez, R    |        2        |    $128.87      |
+-----------------+-----------------+-----------------+-----------------+

+-----------------+-----------------+-----------------+
|   # Providers   |  Total # Services |   Total Cost   |
+-----------------+-----------------+-----------------+
|        3        |        4        |    $248.85      |
+-----------------+-----------------+-----------------+

Press 'Enter' to continue: █
```

```
====================== Create Account ======================
( Entering 'exit' will close the application )
( Entering 'cancel' will abort the account build )

Account Type    [Member]

Name on Account:
        First [Alexander]       Last [DuPree]
Address for Account:
        Street [1234 Cool St.]
        City [_____]   State [__]     Zip [_____]

Enter City:
█
```

Testing

Software testing was conducted on multiple levels and automated when possible.

- **Unit Tests:** 214 assertions in 56 test cases which produced a code coverage of 95.83%
- **Smoke Tests:** Automated and ran continuously after every commit on the CircleCI service. 401 builds were made, with a 95.0% success rate.
- **System Tests:** Each build on CircleCI also went through a suite of system tests where the executable was ran and guided through each activity in the application. Each build logs the results of these system tests.

Known Defects & Issues

- *Application must be run in the root repository directory:* The current directory must be the ChocAn/ folder, and the executable must be ran from that location. This is because the application currently does not use absolute file paths.
- *SQLite3 connector may be vulnerable to injection:* Strings read in from the user are sanitized with quotes before they are used. We tried to perform SQL injection on multiple prompts, but and was unsuccessful. However, it may still be possible to cause an injection because the application was never refactored to use prepared sqlite3 statements.