Software Design Document (SDD)
Assignment #2 DIS Disassembler for XE computer
CS530, Fall 2020

Team:
Reymond Pamelar, cssc3703, Red ID: 820154914
Tyler Nguyen, cssc3761, Red ID: 821450728

Overview & Goals:
To develop, test, and deliver a link-editor program for the XE variant of the SIC/XE family of machines

Goals:
1. Input
    a. Open SIC/XE assembler listing files
    b. Disassemble the listing files and object code
    c. Translate the listing files and object code
2. Output
    a. Generate executable object file(s) for the XE Machine
    b. Generate the ESTAB

Project Description:
The program shall open SIC/XE assembler listing files and generate object file(s) for the XE machine and the ESTAB. The user will provide the listing file(s) as arguments on the command-line each separated by spaces. IE: “[cssc0000@edoras ~]$ led first.sl second.sl third.sl”.
The format of the input file is SIC/XE Assembler Listing Format. It will scan this file and run a check on memory mapping: check that all format 3 & 4 instructions are making memory references within the scope of the program’s memory space, if any are out of bounds then print a friendly message stating the issue causing you to stop, then terminate the program.

Plan of Action and Milestones:
Note – tasks, milestone (dates) for each task, dependencies/critical path
Phase 1: Plan out agenda (Mar 15-Mar 19)
- Discuss work time and distributing tasks
- Gather resources and identify possible complications
- Finish SDD

Phase 2: Project foundations (Mar 22 - Mar 26)
- Create a codecollab.io workspace to collaboratively work together in real-time
- Gain further understanding of the project
- Lay down the basic building blocks for the types functions we would need

Phase 3: Prototype (Mar 29 - Apr 2)
- Each team member will focus their efforts on their individual tasks
- Each individual team member should be able to present a functioning prototype
- Make the first attempt at combining the code to provide an output
- Document problems and how the project can be optimized

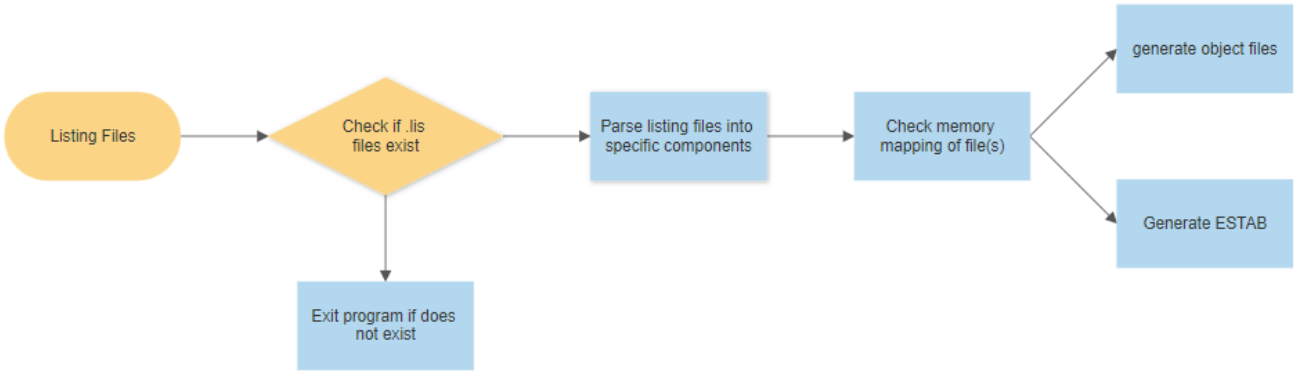
Phase 4: Debugging/finalizing project (Apr 3 -Apr 19)
- Utilize the documentation to fix any errors and optimization issues
- Utilize the rubric to ensure all requirements are met
- Ensure outlying cases are fulfilled
- Ensure all files are ready for submission

SDD Draft - 1700 on Wednesday, 24 Mar 2021
Final Due Date- 1700 on Monday, 19 Apr 2021.

Requirements:

Knowledge of C++
README file
Compiler and make (Makefile)
Test file(s)
Software Design Document

System Design/Specification:



Development Environment:

- replit.com
- Operating System: Windows
- Compiler: g++

Run/Test Environment:

- Edoras servers from SDSU

Our Thoughts:
As a pair we spoke about the project weekly early on to determine how to execute this program.

Our talks started to increase as problems emerged. We first had to figure out how to read the object

file and determine if the file has the correct records. We parsed the files in order to separate each component of

the listing file (location,references,op,operand,object code).