Design Document

## Assignment 1

This program is designed to be a shell. It should perform as would the standard shell fro FreeBSD. To achieve this I used multiple functions:

* executeCommand() executes the built in functions by using execvp()
  + This runs when a single command is entered
  + The command must be valid and not use special symbols
* executeCommandChain() executes multiple commands chained by using “;”
  + This function runs multiple times when the program encounters a chain of “;”
  + The loop labelled ///chained commands is where all the checking happens in case a redirect is needed.
* inputRedirect() redirects the input from a file to a command using “<”
  + This funtion will throw an error if no file exists after the symbol
* outputRedirect() redirects the output of a command to a file using “>”
  + This function will create a new file if the file does not exist
  + If the file does exist it will overwrite it.
* outputRedirectApp() redirects the output of a command to a file using “>>”
  + This function will create a new file if the file does not exits
  + If the file does exist it will append the output to the end.
* outputPiped() pipes the output of one command to be the input of another
  + not working

Within the program there are also many labeled loops and if statements to handle the encounter of special cases such as “;” or “>”.