

CS5004, Assignment 9
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Our solution for assignment 9 was designed based on MVC pattern, it includes three major components: command line main, controller, and letter / email generator.

The command line main includes main that accept user's input command, the CommandLineAuthentication, and the ParserResult class. Input will firstly be validated, and then passed to parser to extract useful information. Extracted information from user input is stored in a ParserResult object, which contains the name of template, csv data file, and the output directory. The ParserResult object will be passed to controller for further processing.

The second component of the program, the controller, takes in the ParserResult object, and will:
a) check if the output directory, csv, and template file is valid b) read in template from the template file, and store the template in a String List; c) read the first line of csv file, and parse all column name into a String array. For each line, the parsing results are put in the map with the column names as keys. The template String List, the map, first and last names of contacts, and the output directory will be wrapped into GeneratorRunnable objects and run by threads to generate the letter / email files.

The last component of the program is the letter / email generator where the final output file is generated. The generator creates an empty output file with first and last name as the filename in the output directory, read template line by line, find out what need to be replaced, and replace the corresponding value in the map to the template. The processed template will then be written into the file created. After this step, the program run is complete.