

# Assignment 3 – Airline Company Email Automation

Shuwan Huang

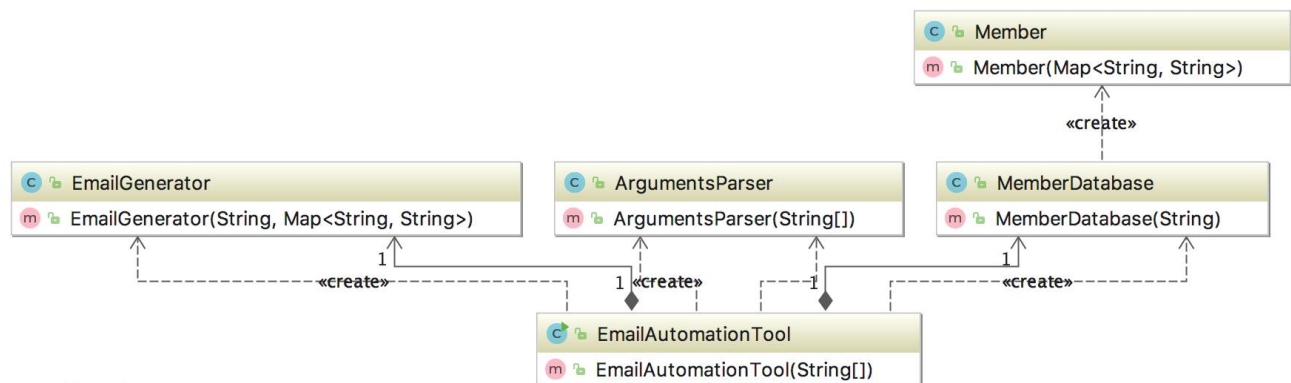
The goal of this project is to automate the process of email generation. This program captures user input through the command-line arguments. The arguments should contain information of email template file, csv file, output directory, and event detail. Besides these required input, user can also provide optional information – an email address and the corresponding password. If the program captures the optional input from user, the emails will be sent immediately after generation from the user email address, in addition to be saved to the output directory.

An example of command-line arguments is shown here:

```
--email-template email-template.txt --output-dir emails --csv-file Flight363FromSeattleToBoston.csv  
--event arrival --from-email jbutt@gmail.com --password jbuttPassword
```

Notes that the last two arguments (email and password) are optional.

After user provides the above command-line arguments to the main method, it will create a new EmailAutomationTool object and starts email automation. Inside the EmailAutomationTool, an ArgumentsParser object is used to check the input format and parse the information from the arguments. If the user input is in a wrong format, the program will exit with an error message. A MemberDatabase object is initialized with the csv file. The MemberDatabase parses the member information from the csv file and stores them as individual Member objects in a list. An EmailGenerator object is also initialized in EmailAutomationTool constructor. The EmailGenerator takes the email template filename (string) and the flight information (map) as parameters. The job of EmailGenerator is to replace the placeholders in template with the flight information and the member information, and return the new email.



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Fig 1. UML diagram

For each Member in MemberDatabase, the EmailAutomationTool calls the EmailGenerator to generate an email. The email is then saved to the output directory. If the user email address and password are provided, the email will be sent to the member.

During the email generation process, if the placeholder information cannot be determined, an InvalidPlaceholderException will be thrown. If the csv file is empty, an EmptyCsvFileException will be thrown.

The UML diagram with API is shown below.

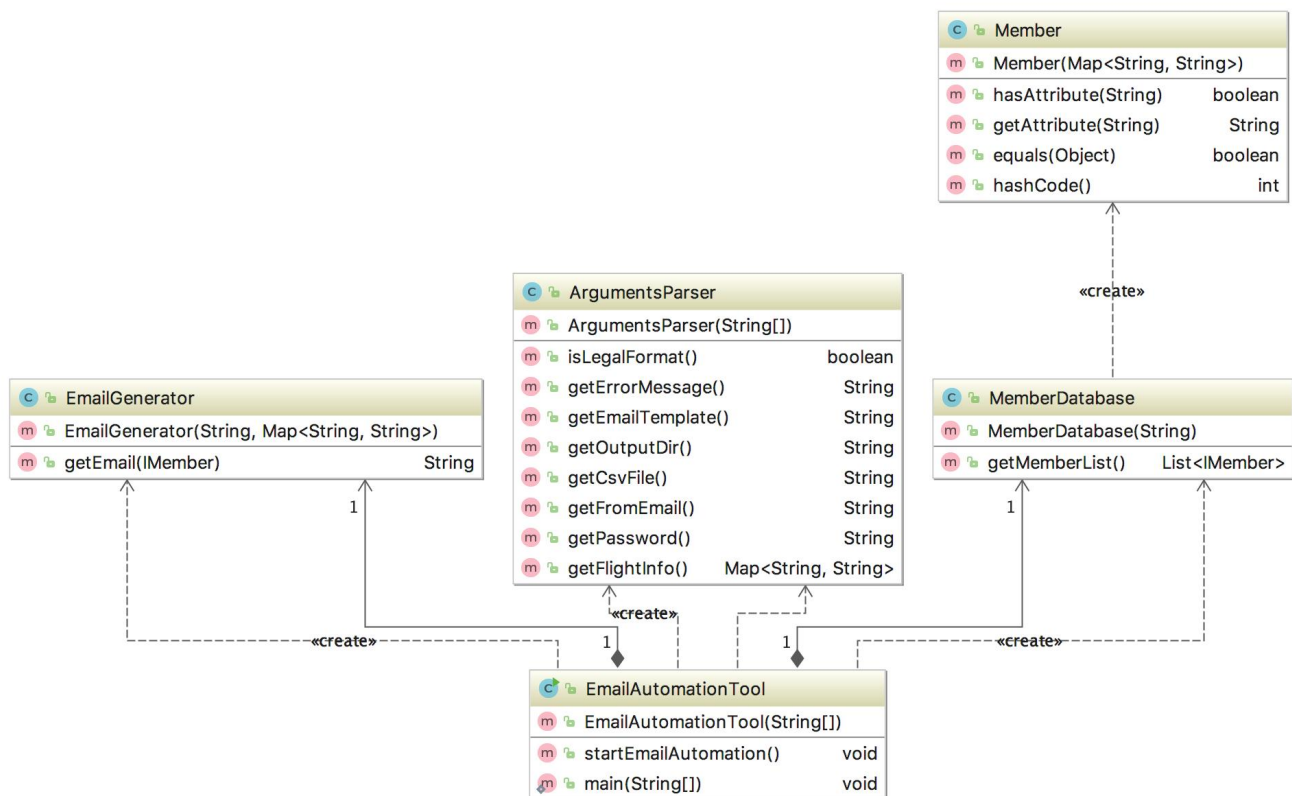


Fig 2. UML diagram with API