## Deign Document: System Structure

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## 1 Goals

This design document is aimed to describe the entire system frame at a high-level view. This design only contains basic and brief descriptions to the system structure in different layers and associated functions.

The entire project will be separated into two parts, client side and server side, even though all these two parts have a really similar structure.

## 2 Design

This is a general structure design for both client side and server side. Though there are several differences between each other, we want to briefly introduce the common structure.

Based on the functional needs designed for this project, we split the entire program into five layers, consisting of sixteen function units. Followed with the development procedure, we adopt a down-top approach, where the base functional layer is upper and abstract functional layer lower. The diagram of the layer distribution is shown below:

| Basic Layer        |   | File I/O              | TCP (socket) Interface     |               |
|--------------------|---|-----------------------|----------------------------|---------------|
| Manager<br>Layer   | Email Data User Info<br>Manager Manager | System Inf<br>Manager | o Email Data<br>Cache SMTP | POP3 HTTP     |
| Function<br>Layer  | Send Email Read Em                      | nail Delete           | Email System Manager       | Search Engine |
| Function<br>Layer  |   | Eve                   | ent Handler                |               |
| Front End<br>Layer |   | Us                    | er Interface               |               |

Down-top approach as the development procedure

Due to simplicity, some units may be replaced by others. For instance, HTTP will be replaced by Pop3 and SMTP.