

Class: **MainWindowClass**

Responsibility:

1. Send message to **ReportGeneratorClass** to open..
2. Send message to **ContactManagerClass** to open.
3. Generate a (unique)instanceUUID value.
4. Encapsulates all other classes.
5. Encapsulates all application level information.

Collaboration:

1. **ReportGeneratorClass**(Dependency)
2. **ContactManagerClass**(Dependency)

Class: **ReportGeneratorClass**

Responsibility:

1. Send message to **DatabaseConnectorClass** to start connection.
2. Send request for report definitions to **DatabaseConnectorClass**.
3. Receive report definitions from **DatabaseConnectorClass**.
4. Make a new **ReportClass** for each possible report definition.
5. Send message to **AnalyticsConnectorClass** class requesting for data.
6. Send message to **ContactManagerClass** to request data.
7. Send message to **MailManagerClass** to start.
8. Send message to **MailManagerClass** containing all info. for emails.
9. Process received data into a series of ready reports.
10. Binds received contacts to ready-made report(s).
11. Sends a request for contents of a department to **ContactManagerClass**.
12. Responsible for all report related functionality.
13. Save new **ReportClass** instances into database.
14. Respond to changes in related **ReportClass** Instances.

Collaboration:

1. **AnalyticsConnectorClass**(Dependency)
2. **DatabaseConnectorClass**(Dependency)
3. **MailerManagerClass**
4. **ReportClass**
5. **ContactManagerClass**

Class: **ContactManagerClass**

Responsibility:

1. Send message to **DatabaseConnectorClass** to open (if not opened).
2. Send queries to **DatabaseConnectorClass**.
3. Receive data from **DatabaseConnectorClass**.
4. Make a new **ContactClass** for each entry received from **DatabaseConnectorClass**.
5. Serialize all **ContactClass** instances and send to **DatabaseConnectorClass**.
6. Make a new **DepartmentClass** for each entry received from **DatabaseConnectorClass**.
7. Serialize all **DepartmentClass** instances and send to **DatabaseConnectorClass**.

Collaboration:

1. **DatabaseConnectorClass**(Dependency)
2. **ContactClass**
3. **DepartmentClass**

Class: **MailerManagerClass**

Responsibility:

1. Prepare all inbound information from **ReportGeneratorClass** into a series of **EmailMessageClass** instances.
2. Send message to **MailSenderClass** to start.
3. Push **EmailMessageClass** instances to **MailSenderClass**.

Collaboration:

1. **MailSenderClass**
2. **EmailMessageClass**
3. **ReportGeneratorClass**

Class: **DatabaseConnectorClass**

Responsibility:

1. Load **DatabaseSettingsClass**.
2. Connect to database management system.
3. Handles all database related traffic.
4. Translate queries from **ReportGeneratorClass** into database queries.
5. Translate queries from **ContactManagerClass** into database queries.

Collaboration:

1. **DatabaseSettingsClass**(Dependency)
2. **ReportGeneratorClass**
3. **ContactManagerClass**

Class: **DepartmentClass**

Responsibility:

1. Hold data for department-related information.
2. Respond to requests to various pieces of itself from **ContactManagerClass**.
3. Respond to changes to itself as requested by **ContactManagerClass**.
4. Notify **ContactManagerClass** when changes are successful and can be written to database.
5. Interacts with **DepartmentAssociationClass** to determine contact-department associations.

Collaboration:

1. **DepartmentAssociationClass**(Associative Class)
2. **ContactManagerClass**

Class: **EmailMessageClass**

Responsibility:

1. Encapsulate all data related to each email message.
2. Receive change requests from **MailManagerClass**.
3. Send message to **MailManagerClass** when it is ready to be sent.

Collaboration:

1. **MailManagerClass**

Class: **AnalyticsConnectorClass**

Responsibility:

1. Send requests for data to **Google Analytics**.
2. Process incoming data from **Google Analytics**.
3. Receive requests from **ReportGeneratorClass** and translate into requests ready to be sent to **Google Analytics**.
4. Send received to **ReportGeneratorClass**.
5. Notify **ReportGeneratorClass** when data is ready to be retrieved.

Collaboration:

1. **ReportGeneratorClass**
2. **Google Analytics** (external)

Class: **MailSenderClass**

Responsibility:

1. Receive ready **EmailMessageClass** instances from **MailManagerClass**.
2. Load settings from **MailSenderSettingsClass**.
3. Send emails by reading each **EmailMessageClass** instance.

Collaboration:

1. **EmailMessageClass**
2. **MailSenderSettingsClass**
3. **MailManagerClass**

Class: **ContactClass**

Responsibility:

1. Respond to requests for information from **ContactManagerClass**.
2. Process inbound changes as requested by **ContactManagerClass**.
3. Notify **ContactManagerClass** when it is safe to write changes to database.
4. Notify **ContactManagerClass** when data for the requested information does not exist.
5. References **DepartmentAssociationClass** to determine contact-department associations.

Collaboration:

1. **DepartmentAssociationClass**
2. **ContactManagerClass**

Class: **ReportClass**

Responsibility:

1. Respond to changes in the report definition from **ReportGeneratorClass**.
2. Notify **ReportGeneratorClass** when it is safe to write changes back to database.
3. Return necessary parameters for a given report as request by **ReportGeneratorClass**.

Collaboration:

1. **ReportGeneratorClass**

Class: **DepartmentAssociationClass**

Responsibility:

1. Associate relationships between **DepartmentClass** and **ContactClass**
2. Respond to change requests from either **DepartmentClass** or **ContactClass**.
3. Return employeeId/departmentId to either **ContactClass** or **DepartmentClass**.

Collaboration:

1. **DepartmentClass**
2. **ContactClass**

Class: **MailSenderSettingsClass**

Responsibility:

1. Respond to inbound changes from **MailSenderClass** to email related settings.
2. Return email related settings to **MailSenderClass**.

Collaboration:

1. **MailSenderClass**