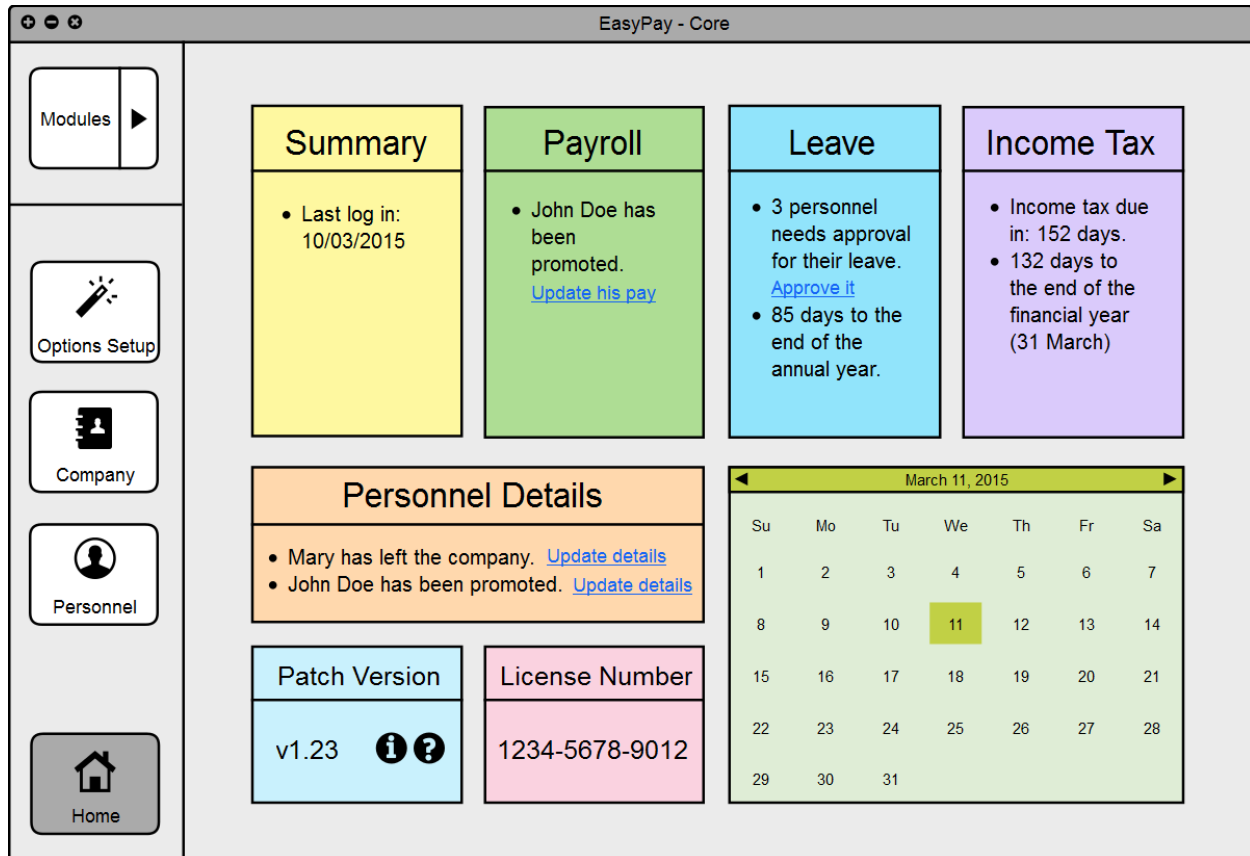


# Contents

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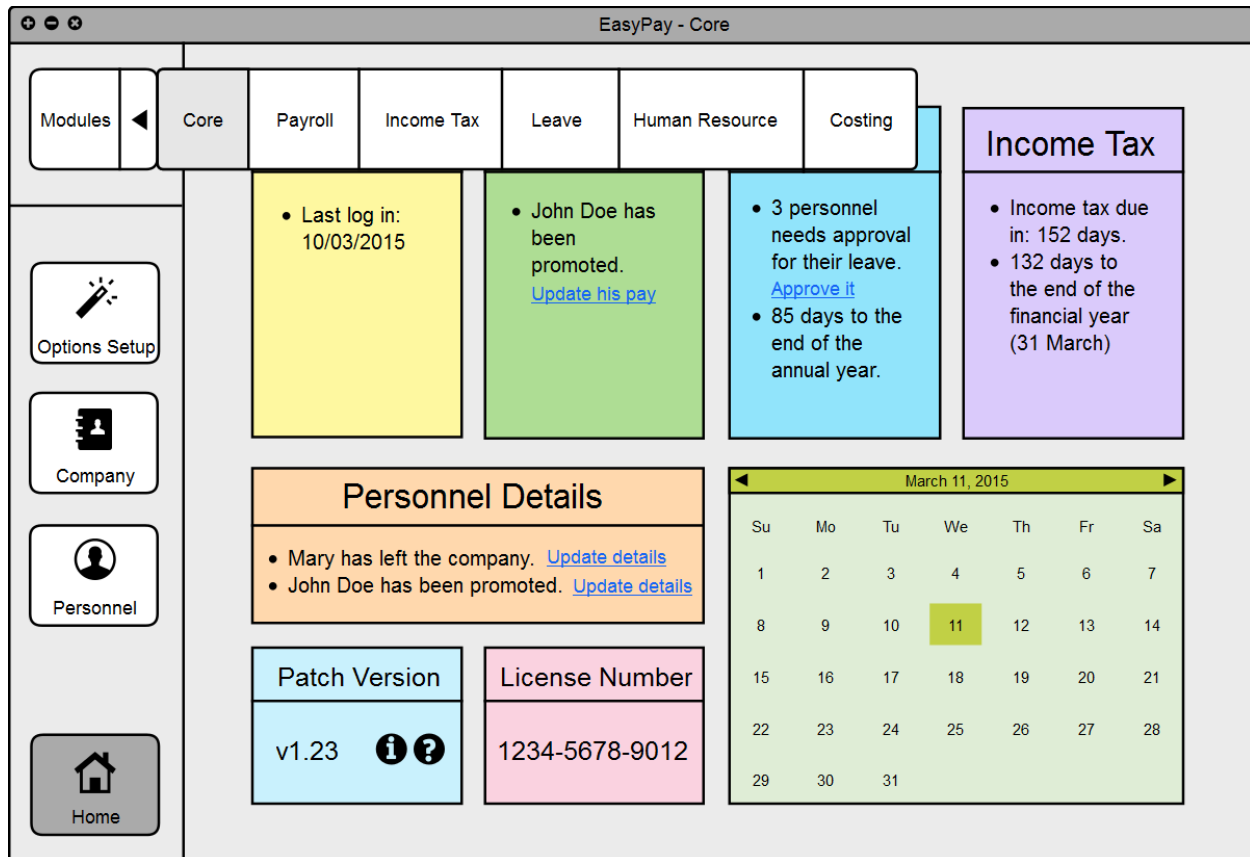
## 1.0. Core

As noted during the discussion with EasyPay, the users would like a updates to the system reflected to them in a central place. Hence, the central area of the Core module has been redesigned to look like a dashboard. Within the dashboard, there are updates for the user since his last login which will serve as helpful reminders. The updates are collected automatically from each module whenever they have been modified. There will also be a digital calendar that includes important dates highlighted.



The information from the dashboard should be retrievable from the E-portal that EasyPay has. This E-portal is accessed by employees of the company, so any changes that occur will be reflected on the dashboard, which can be seen by the HR clerk when he or she accesses the EasyPay application.

From the main page, the user will be able to access other modules, such as Payroll, Leave and Income Tax. The modules icons have been consolidated into a slide out menu on the top left. The image below demonstrates our intention.



The buttons in the left column change dynamically according to the state of the system. For Core module, there are 3 buttons - “Options Setup”, “Company” and “Personnel”.

## 1.1. Code Setup

The code setup page has been renamed to “options setup” which is more intuitive, and it is reorganized from a tree organization structure to two dropdown menus.

Code setup is a one-time process done by the consultants at EasyPay. The code that is setup is eventually used on the other modules of the application. For example, if I were to add "Japan" as a country in code setup, then it will appear as a possible selection when choosing the country in other modules. The codes available for setup is rather rigid and cannot be changed, or else there will be missing options when

choosing the details and parameters in the other modules.

The screenshot shows the 'EasyPay - Core - Options Setup' window. On the left is a sidebar with icons for 'Modules', 'Options Setup', 'Company', 'Personnel', and 'Home'. The main area has two dropdown menus at the top: 'Main Category: Select...' and 'Sub-Category: Select...'. Below these is a large, empty table with three columns and multiple rows.

The screenshot shows the 'EasyPay - Core - Options Setup' window after selections. The 'Main Category' dropdown is set to 'General' and the 'Sub-Category' dropdown is set to 'Country'. A list of options is displayed in the table area, organized into two columns. The options are:

Main Category	Sub-Category
General	Bank
General	Bank Account Type
General	Bank Branch
General	Bank Payment Group
General	Career Code
General	Cessation Code
General	City
General	Country
General	Education
General	Education Major / Minor
General	Language
General	Position
General	Position Group
General	State

After the user has chosen the main and sub-categories, the table appears as seen

below.

The screenshot shows a software window titled "EasyPay - Core - Options Setup". On the left is a sidebar with navigation buttons: "Modules" (with a right arrow), "Options Setup" (with a pencil icon), "Company" (with a person icon), "Personnel" (with a person icon), and "Home" (with a house icon). The main area has two dropdown menus at the top: "Main Category:" set to "General" and "Sub-Category:" set to "Country". Below these is a table with three columns: "Country", "Country Name", and "Nationality". The table contains 14 rows of data. At the bottom right of the table area are three buttons: a red minus button, a yellow pencil button, and a green plus button.

▼ Country	▼ Country Name	▼ Nationality
Europe	Europe	Europe
Australia	Australia	Australian
Brunei	Brunei	Bruneian
China	China	Chinese
Germany	Germany	German
New Zealand	New Zealand	New Zealander
None	None	None
Others	Others	Others
Philippines	Philippines	Filipino
Singapore	Singapore	Singapore Citizen
Taiwan	Taiwan	Taiwanese
Thailand	Thailand	Thai
UK	United Kingdom	British
USA	United States of America	American
Vietnam	Vietnam	Vietnamese

The user can then click on the green “+” button to add an entry. This is demonstrated in the image below. To edit or remove an entry, click on the entry to select it before choosing the yellow or red button.

EasyPay - Core - Options Setup

Main Category:  Sub-Category:

▼ Country	▼ Country Name	▼ Nationality
Europe	Europe	Europe
Australia	Australia	Australian
Brunei	Brunei	Bruneian
China	China	Chinese
Germany	Germany	German
New Zealand	New Zealand	New Zealander
None	None	None
Others	Others	Others
Philippines	Philippines	Filipino
Singapore	Singapore	Singapore Citizen
Taiwan	Taiwan	Taiwanese
Thailand	Thailand	Thai
UK	United Kingdom	British
USA	United States of America	American
Vietnam	Vietnam	Vietnamese
<input type="text" value="Country"/>	<input type="text" value="Country Name"/>	<input type="text" value="Nationality"/>

Options Setup

Company

Personnel

Home

[-] [Pencil] [+]

The user can proceed to enter the details in the boxes as seen above.

## 1.2. Company

No change has been made to the design of the company section of the core.

## 1.3. Personnel Details

Users can find personal details and employment details under personnel details. For the initial step, users can choose to search for an existing person by identity number or by name. They can also choose to create a new profile for a new person.



After searching, users can edit the profile for the person. The following designs feature a lot of dropdown menus as these fields must follow the specific format. While it may look less appealing, the dropdown menus immediately tell the user what they can input, which will be far more efficient and less error prone compared to a free field with no restrictions. Such a design will benefit the target user (HR clerk) more.

The screenshot shows a web application window titled "EasyPay -Personnel". On the left is a sidebar with a "Modules" button and four icons: "Options Setup", "Company", "Personnel" (which is highlighted), and "Home". The main content area has a search bar at the top with "S750001D" entered and buttons for "Search", "New", and "Delete". Below the search bar, the profile for "Andrew Ang" (Identity No.: S7500001D) is displayed. The profile is divided into four tabs: "Personal Details", "Residence Status", "Employment Details", and "Contacts". The "Personal Details" tab is active, showing a list of fields with dropdown menus: "Current Employee ID" (E01), "Personnel Type" (Staff), "Name" (Andrew Ang), "Alias" (empty), "Identity No." (S7500001D), "Identity Type" (SNRIC(PINK)), "Other ID" (empty), "Title" (Mr.), "Marital Status" (Married), "Gender" (Male), "Religion" (None), "Nationality" (Singapore), "Date of Birth" (08-02-1968), "Age" (42), "Country of Birth" (USA), and "Race" (Chinese). To the right of these fields is a photo upload area with a placeholder image and the text "Upload Photo 130 x 150 pixels". Below the photo area are a red "X" icon and a yellow folder icon. At the bottom of the main area are "Cancel" and "Save" buttons.

Field	Value
Current Employee ID	E01
Personnel Type	Staff
Name	Andrew Ang
Alias	
Identity No.	S7500001D
Identity Type	SNRIC(PINK)
Other ID	
Title	Mr.
Marital Status	Married
Gender	Male
Religion	None
Nationality	Singapore
Date of Birth	08-02-1968
Age	42
Country of Birth	USA
Race	Chinese



If new button is pressed, an empty profile will be shown for filling in data.

EasyPay - Personnel

Name/Identity No. :

**Mary Cha** Identity No. : Please fill in the Identity No. below

Personal Details | Residence Status | Employment Details | Contacts

Current Employee ID **E02**

Personnel Type

Name

Alias

Identity No.

Identity Type

Other ID

Title

Marital Status

Gender

Religion

Nationality

Date of Birth

Age

Country of Birth

Race

Upload Photo  
130 x 150 pixels

For residence status and contacts tab, the information is in table form. Users are free to delete and add rows. They can also directly edit the data in the table.

EasyPay - Personnel

Name/Identity No. :

**Andrew Ang** Identity No. : S7500001D

Personal Details | Residence Status | Employment Details | Contacts


	Effective Date	Residence Status	Career Code	Remarks	Current
<input type="button" value="-"/>	<input type="text" value="19-03-1985"/>	<input type="text" value="FW"/>	<input type="text" value="FirstRecord"/>	<input type="text" value="Work permit"/>	<input type="checkbox"/>
<input type="button" value="-"/>	<input type="text" value="19-03-1989"/>	<input type="text" value="EP"/>	<input type="text" value="Transfer"/>	<input type="text" value="Employment Pass"/>	<input checked="" type="checkbox"/>
<input type="button" value="-"/>	<input type="text" value="19-03-1994"/>	<input type="text" value="PR1"/>	<input type="text" value="Transfer"/>	<input type="text" value="Permanent Resident"/>	<input type="checkbox"/>
<input type="button" value="-"/>	<input type="text" value="01-04-1995"/>	<input type="text" value="PR2"/>	<input type="text" value="Transfer"/>	<input type="text"/>	<input type="checkbox"/>
<input type="button" value="-"/>	<input type="text" value="DD-MM-YYYY"/>	<input type="text" value="-Status-"/>	<input type="text" value="-Code-"/>	<input type="text"/>	<input type="checkbox"/>


EasyPay -Personnel


Name/Identity No. : S750001D Search New Delete


**Andrew Ang** Identity No. : S7500001D


Personal Details **Residence Status** Employment Details **Contacts**


**Address** 

Contact Location	Address Line 1	Address Line 2	Address Line 3	Country	State	City	Postal Code	Mail Address
								<input type="checkbox"/>

**Phone** 

Contact Location	Contact Number	Extension
 Home	61234567	

**Email** 

Contact Location	Email
 ePortal	calvintan@creative.com.sg

Cancel Save

For the employment details, the three parts that were present originally is now combined into one page.

EasyPay -Personnel

Name/Identity No. : S750001D Search New Delete

**Andrew Ang** Identity No. : S7500001D

Personal Details **Residence Status** **Employment Details** **Contacts**

**Salary Type** Monthly Rated ▼


**Exchange Rate ID**


**Basic Wage**

**MVC**

**NWC**

**Total Wage** 4,896.00

**Bank Allocation** 

Bank Payment Group	Bank	Branch	Payment Type	Value	Bank Account Type	Account No.	Beneficiary Name	Remarks
 Local	Citibank	Paragon branch	Percentage	50	Saving	12341111111	Andrew Ang	

**Supervisor ID**

**Branch**

**Department**

**Section**

**Category**

**Salary Grade**

Cancel Save

## 2.0. Leave

In the Leave module, we were particularly concerned in providing data clarity to the user. Hence for our design, the status of the user is displayed at the top, including the year, entitlement of leave and balance left. The user will be able to look at the data for easy reference in comparison to the records below. The records are sorted out by type in each tabs for efficient lookups and can be further sorted by date, time, etc.

To search for an employee's leave records, the user only needs to type the employee's ID into the textbox and click on the "Search" button.

The screenshot shows a web application titled "EasyPay -Leave". On the left is a sidebar with a "Leave" button and a "Home" button with a house icon. The main content area has a search bar for "Employee ID" with a "Search" button. Below the search bar, it displays fields for "Employee Name", "Position", "Department", and "Branch". A summary table shows "Year", "Entitlement", "Adjustment", "Balance", and "Actual Balance". Below this are tabs for "Annual", "Medical", "Common", and "Festive". The "Common" tab is selected, showing a table with columns: "Start Date", "Start Time", "End Date", "End Time", "No. of Days", and "No. of Hours". The table has 6 rows of data.

Year	Entitlement	Adjustment	Balance	Actual Balance

▼ Start Date	▼ Start Time	▼ End Date	▼ End Time	▼ No. of Days	▼ No. of Hours

EasyPay -Leave

Leave ▶

Employee ID : T0001731B

Employee Name: Andrew Yap

Position: Senior Consultant

Department: Finance

Branch: Orchard

Year	Entitlement	Adjustment	Balance	Actual Balance
2014	10	5	15	8.5

Annual Medical Common Festive

▼ Start Date	▼ Start Time	▼ End Date	▼ End Time	▼ No. of Days	▼ No. of Hours
01-02-2013	9:00	04-02-2013	17:00	4	32
12-04-2013	13:00	12-04-2013	17:00	1	4
25-07-2013	9:00	25-07-2013	17:00	1	8
24-12-2013	9:00	26-12-2013	17:00	3	24
02-03-2014	11:00	03-03-2014	17:00	2	14

Home

Cancel

Save

To modify a leave record, the user can directly select the cell on the table, and enter the new information. Spreadsheet users will be familiar with such usage.

Leave ▶

Home

EasyPay -Leave

Employee ID :

Employee Name: Andrew Yap  
Position: Senior Consultant  
Department: Finance  
Branch: Orchard

Year	Entitlement	Adjustment	Balance	Actual Balance
2014	10	5	15	8.5

Annual

Medical

Common

Festive

▼ Start Date	▼ Start Time	▼ End Date	▼ End Time	▼ No. of Days	▼ No. of Hours
01-02-2013	9:00	04-02-2013	13:00	4	32
12-04-2013	13:00	12-04-2013	17:00	1	4
25-07-2013	9:00	25-07-2013	17:00	1	8
24-12-2013	9:00	26-12-2013	17:00	3	24
02-03-2014	11:00	03-03-2014	17:00	2	14

EasyPay -Leave

Leave ▶

---

Employee ID :

Employee Name: Andrew Yap  
 Position: Senior Consultant  
 Department: Finance  
 Branch: Orchard

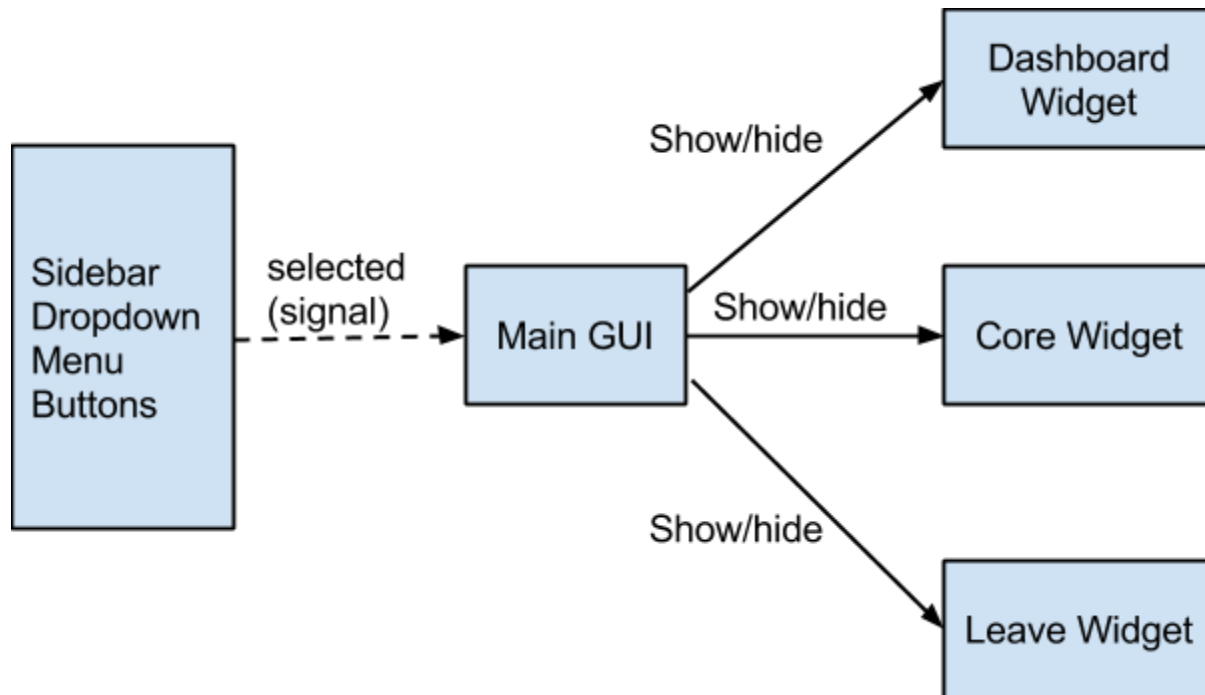
Year	Entitlement	Adjustment	Balance	Actual Balance
2014	10	5	15	8.5

Modify the changes to leave records?  
 Changes will be updated immediately

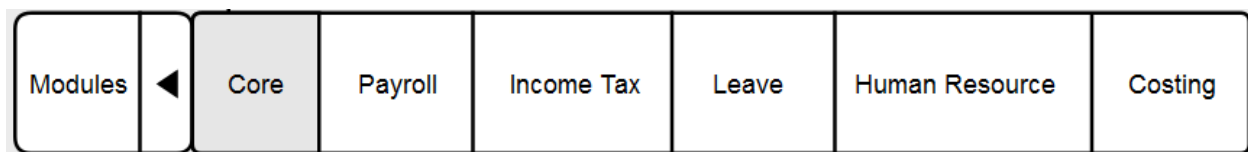
▼ Start Date	▼ Sta	Days	▼ No. of Hours
01-02-2013	9:00		32
12-04-2013	13:00	12-04-2013 17:00	4
25-07-2013	9:00	25-07-2013 17:00	8
24-12-2013	9:00	26-12-2013 17:00	24
02-03-2014	11:00	03-03-2014 17:00	14

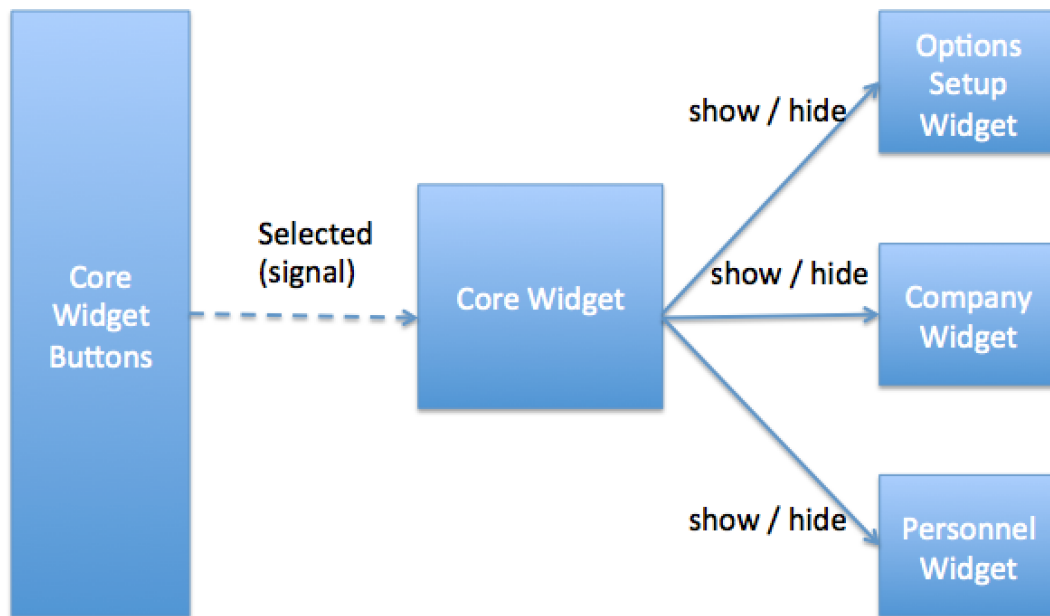
Home

### 3.0. Architecture

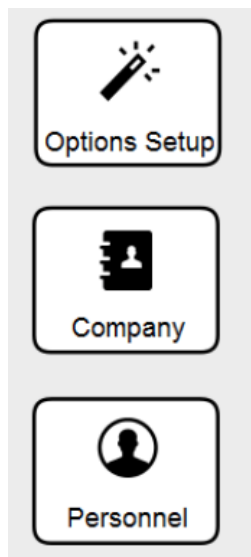


The above diagram illustrates the way our application will display the main modules - Dashboard Widget, Core Widget and Leave Widget. When a button in the sidebar dropdown menu is selected (seen in the image below), a signal is sent to the main GUI. The main GUI will show or hide the corresponding widget depending on the signal sent.

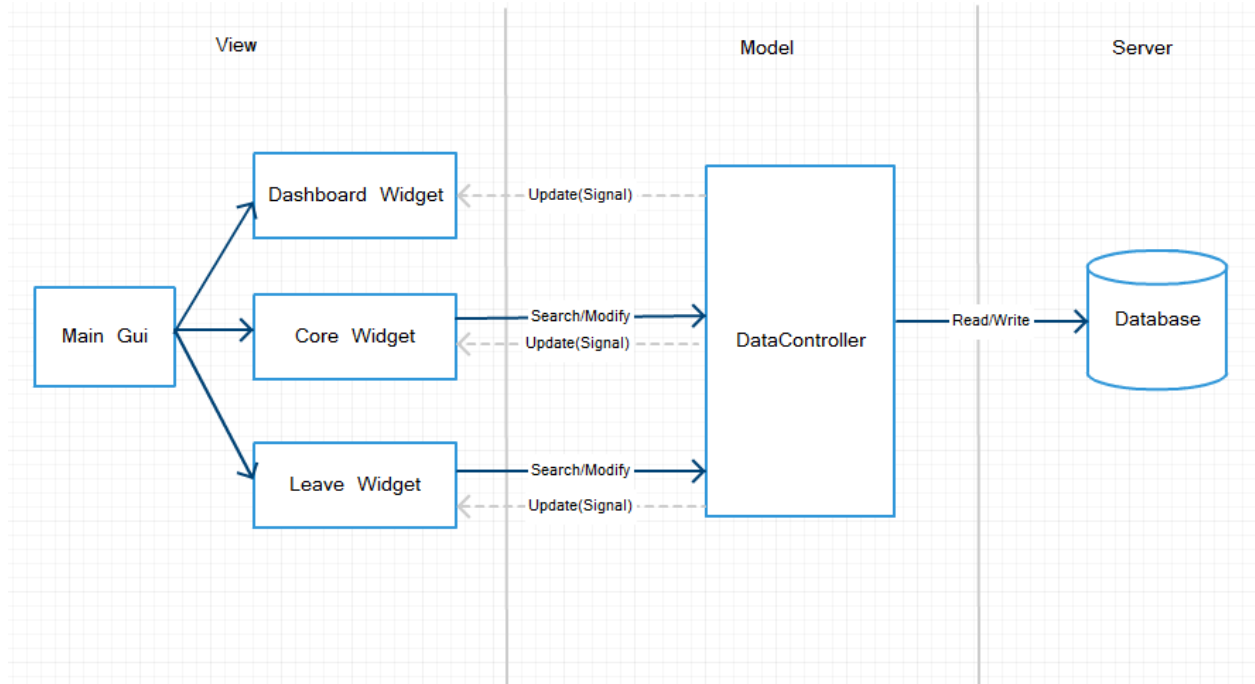




This diagram illustrates how the core widget buttons work with the core widget. The three buttons below on the side bar are in the core widget to control the content of the core widget. If one button is pressed, a signal will be sent to the core widget to hide the existing subwidget and to show the corresponding subwidget.







The above diagram represents the entire system architecture from a high level. When the user requests for data by using the search functions in the Core or Leave Widget, DataController retrieves the appropriate information from the Database. After the data has been retrieved, DataController sends a signal which informs the corresponding widgets to update the view presented to the user with the information he wishes to see.

Similarly, when the information in the Core or Leave Widget has been modified and must be written to the database, it is sent to DataController to ensure they are of correct values first, before being written.

Dashboard Widget behaves slightly differently from the others as it only receives updates (as a signal) from DataController whenever information has been modified.