La Marelle “database” version 4.0

# Previous versions

* 1.0: standalone Access database
* 2.0: ASP.Net 2.0 with Microsoft Access
* 3.0: ASP.Net 2.0 with MySQL
* 4.0 (in progress): ASP.Net 4.0 MVC with MySQL

# Background

La Marelle is a Saturday morning school teaching French to both native speakers and English-speaking children in Dartford. It is a registered charity staffed by volunteers and part-time staff who do most of the administrative work at home, and therefore relies heavily on free online resources like the tools provided by Google. As part of their induction process, new teachers are asked to create or provide a Gmail account so they can be given access to La Marelle’s Drive, Groups, and Blogger accounts.

La Marelle’s pupil database is stored in a MySQL database with an ASP.Net 2.0 Web site using forms-based authentication. Many of the features - in particular the editing interface - were originally recreated with little modification from the original Access database interface. It requires manual registration of each new member of staff by the administrator and some features like the export to Excel are unreliable if the underlying data isn’t exactly as expected. Furthermore, there is a small learning curve involved each time a new secretary joins the organisation as the role tends to be renewed every year.

# User stories

The main user roles involved are the staff (teaching assistants/**teachers**, **section heads** and **head teacher**), the school **secretary** and the site **administrator**(s).

* As a new user, I want to be able to access the system without creating a new user name and password in addition to the Gmail account I am required to use for other tools
* As a registered user, I want to log in with the same user account and password as other La Marelle systems without needed to authenticate again
* As a teacher, I want to view the list of pupils in my class
* As a teacher, I want to view the contact details of all the pupils in my class
* As a teacher, I want to view the notes and allergy warnings about all the pupils in my class
* As a section head, I want to view a list of all the pupils in my section
* As a head teacher, I want to view a list of all the pupils in all the classes
* As the secretary, I want to create, view, edit and delete all details about all pupils and contact details
* As the secretary, I want to view a list of all the pupils to look up contact details
* As the secretary, I want to get the accurate total number of pupils for planning purposes
* As the secretary, I want to export a printable list of pupils per class for use in monitoring attendance
* As the secretary, I want to create, view, edit, and delete family records to keep the database up to date
* As the secretary, I want to export a list of the email addresses of registered pupils to send news updates
* As the secretary, I want to export a list of all the email addresses in the database to send invitations for events to both registered and non-registered contacts
* As an administrator, I want to receive email reports if errors or exceptions occur
* As an administrator, I want to create, edit and delete pupils, contacts and users
* As an administrator, I want to back up the database using the Web front-end
* As an administrator, I want to add or delete authorised user accounts from the database using the Web front-end

# Non-functional requirements

The following non-functional requirements informed the choice of technologies

* As La Marelle is registered with the Information Commission, the database needs to be accessible only to authorised users.
* The application must use the existing pupil database - currently stored in MySQL
* The application must be accessible to users from any computer or device
* The application must run on La Marelle’s existing Web server (IIS 7.0 with ASP.Net 4.5 and MySQL)
* Programming best practices should be applied such as Test-Driven Development and a clear separation of concerns in the MVC layers to facilitate maintenance and troubleshooting

# Detailed specifications, conditions of satisfaction and test candidates

## Login

## Read-only views

## Creation and update views