Barry’s Secret Sauce

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1. Ingredients

Americans sometimes refer to a ‘Secret Sauce’ by which they mean a secret combination of ingredients that make a product special and unique. A simple example is Coca-Cola.

I have defined my own ‘Secret Sauce’, based on a unique combination of technical features that I have found useful over the years. The foundation is the Model-View-Controller (M-V-C) which is the most commonly used framework for Internet Applications.

I have designed a Data Model for M-V-C:


Our Secret Sauce combine these fourteen powerful ingredient that provides us with a unique competitive edge:

1. CRUD Services (Create, Read, Update, Delete)
2. Design Patterns
3. Event-Driven Approach
4. Generic Solutions
5. Industry-specific Service Delivery Platforms (Banking, etc)
6. Inheritance
7. Layered Data Architectures
8. Mapping (eg Passengers to Customers)
9. Model-View-Controller (MVC)
10. Platform Concept (eg Banking, Customer-Services, Logistics)
11. Reporting Toolkit (Patterns of Generic Reports and KPIs)
12. SOA Facilities
13. Triggers (for KPIs)
14. User-Defined Hierarchies

Validation will be achieved by building a Proof-of-Concept (PoC).

The PoC will include two User Scenarios:

1. Enter one record to generate an Alert for a KPI on a Smartphone.
2. Drill-down from the KPI to the Data Marts and Data Warehouse.
2. Building the Secret Sauce Platform

2.1 Layered Data Architecture
There are three layers in the Secret Sauce Platform:

- **User-Specifications Layer**
- **Data Management Layer**
- **Model-View-Controller Layer**

2.2 Components in the Architecture
Here we show details of the three layers:

- **User-Specifications Layer**
  - Industry-specific Platforms (3.1)
  - Entity-Attribute Value (3.3)
  - User-defined Hierarchies
  - Pub-Sub

- **Data Management Layer**
  - Inheritance (2.4)
  - Mapping (2.5)
  - Events (2.1)
  - Messages
  - Passengers
  - Reports Toolkit (2.3)
  - Triggers (Alerts) (2.2)

- **Model-View-Controller Layer**
  - User View (1.3)
  - Controller (1.1)
  - SOA
  - Customers (1.5)
  - Model (1.2)
  - Services (1.4)
  - KPIs + Dashboards
3. Additional Components

3.1 Financial Reporting Platform
This Component is included in the Reports Toolkit.

Here is the URL :-

- [http://www.databaseanswers.org/data_models/financial_reporting_platform/index.htm](http://www.databaseanswers.org/data_models/financial_reporting_platform/index.htm)

And the Conceptual Model :-

![Conceptual Model](image1)

And the Logical Model :-

![Logical Model](image2)
3.2 Financial Statement Generator

This Component is also included in the Reports Toolkit.

Here is the URL :-


And the Conceptual Model :-

![Conceptual Model Diagram]

And the Logical Model :-

![Logical Model Diagram]

Design Note
Transaction data would support drill-down but it might not be available or required.
3.3 User-Defined Hierarchy

Here is the URL:

- [http://www.databaseanswers.org/data_models/user_defined_hierarchies/index.htm](http://www.databaseanswers.org/data_models/user_defined_hierarchies/index.htm)

And the Logical Model:

![Hierarchy Levels](image1)

**Example of an Employee Hierarchy**

<table>
<thead>
<tr>
<th>Level Number</th>
<th>Level Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chairman</td>
</tr>
<tr>
<td>2</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>3</td>
<td>Executive Vice-President</td>
</tr>
<tr>
<td>4</td>
<td>Vice-President</td>
</tr>
<tr>
<td>5</td>
<td>Manager</td>
</tr>
<tr>
<td>6</td>
<td>Staff Member</td>
</tr>
</tbody>
</table>

**Example of Levels in a Product Hierarchy**

<table>
<thead>
<tr>
<th>Level Number</th>
<th>Level Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Category</td>
</tr>
<tr>
<td>2</td>
<td>Sub-Category</td>
</tr>
<tr>
<td>3</td>
<td>Sub-Sub-Category</td>
</tr>
<tr>
<td>4</td>
<td>Sub-Sub-Sub-Category</td>
</tr>
<tr>
<td>5</td>
<td>Etc</td>
</tr>
</tbody>
</table>

**Example of Levels in an Organization Hierarchy**

<table>
<thead>
<tr>
<th>Level Number</th>
<th>Level Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enterprise</td>
</tr>
<tr>
<td>2</td>
<td>Company</td>
</tr>
<tr>
<td>3</td>
<td>Business Unit</td>
</tr>
<tr>
<td>4</td>
<td>Division</td>
</tr>
<tr>
<td>5</td>
<td>Department</td>
</tr>
</tbody>
</table>

3.4 Financial Reporting Platform

Here is the URL:

- [http://www.databaseanswers.org/data_models/financial_reporting_platform/index.htm](http://www/databaseanswers.org/data_models/financial_reporting_platform/index.htm)

And the Conceptual Model:

![Financial Products](image2)

**Deals**

**Report Generator**

**Publish and Subscribe**

**Subscribers**

**Financial Products**

**Entities**

**Attributes**