

Design Considerations

“Simplifying the creation and controlling the use of SQL against a Progress database”

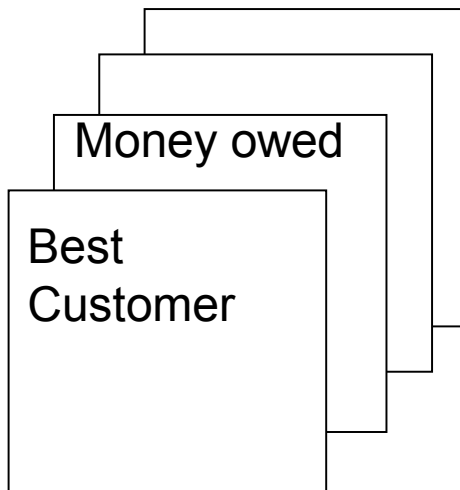
Restricting what users can see

Account Summary	Account No	Business	Function	Address1	Address2	Address3	Post Code	Telephone 1	Ext	Country	Company	Total Revenue	Total Expense	Profit
	82922	Quilmes	Suzana Ercola	Calle 453	Buenos Aires	1423	0414824447			Argentina	U.I.	57.44	57.44	100
	3001			de Urquiza	Biblioteca	Montevideo	11000	5147601		Argentina	UED	57.44	57.44	100
	47474	Malvinas	Ricardo	Financiera	Buenos Aires		04114779877			Argentina	U.I.	75.4	75.4	100
	11822	Juan Jose	Adolfo	Avda	Buenos Aires		04114779877			Argentina	G.P.	25	25	100
	05177	Elizaveta	Elizaveta	Santa Fe	Buenos Aires	1475	04114779877			Argentina	G.P.	177.73	177.73	100
	11822	Valentin	Jorge	Juan B. Justo	Buenos Aires		04114779877			Argentina	G.P.	725.56	725.56	100
	13722	Elizaveta	Katia	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	101.15	101.15	100
	13722	Elizaveta	Ricardo	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	43.42	43.42	100
	13722	Elizaveta	Lucy	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	47.7	47.7	100
	00522	Elizaveta	Eugenio	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	6023.75	6023.75	100
	13722	Elizaveta	Lucy	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	47.7	47.7	100
	10042	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	U.I.	187.25	187.25	100
	1201	Elizaveta	Christophe	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	41.1	41.1	100
	010	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	U.I.	877.5	877.5	100
	12122	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	56.56	56.56	100
	11577	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	477.47	477.47	100
	24744	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	438.03	438.03	100
	10174	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	101.15	101.15	100
	46057	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	91.3	91.3	100
	100	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	201.1	201.1	100
	4982	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	225.65	225.65	100
	1101	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	621.1	621.1	100
	11074	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	U.I.	91.3	91.3	100
	05922	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	725.56	725.56	100
	2477	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	70	70	100
	17822	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	101.15	101.15	100
	1171	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	701.15	701.15	100
	18722	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	288	288	100
	777	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	1.1	1.1	100
	18222	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	101.15	101.15	100
	11007	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	G.P.	1.1	1.1	100
	20007	Elizaveta	Elizaveta	Elizaveta	Buenos Aires		04114779877			Argentina	U.I.	2.55	2.55	100

Some users cannot see the financial info others may be restricted by country

There is a lot more SQL associated with this data

DAL | BLL



Combo select currency

ID	Name	Balance	...
1	Account 1	1000	...
2	Account 2	2000	...
3	Account 3	3000	...
4	Account 4	4000	...
5	Account 5	5000	...
6	Account 6	6000	...
7	Account 7	7000	...
8	Account 8	8000	...
9	Account 9	9000	...
10	Account 10	10000	...

Insert an Account

Update an Account

Delete an Account

Total all or some accounts

Business rules cannot delete if any financial



A quick look at the number of queries in an application

- Embedded in code 'AHSSQL=' 7760 queries
- Forms 376 x 5 (SELECT, UPDATE, DELETE, APPEND, RECORD COUNT) = 1880 Queries
- Saved = 1691 Queries
- Reports 795 Queries
- Combos 400 Queries (estimated)
- TOTAL 12526
- Though most queries are simple some are not. Using a query designer I would be happy to produce 16 Queries/day so without the business logic etc we are talking 783 man days. That is the best part of 4 years work on SQL alone!

Elements common to pretty much all database applications

- **Security model.** Controlling user access to data.
- **Navigation.** Finding specific data within a database and displaying it.
- **Editing.** Having found data providing the tools alongside for editing, adding to other lists etc.
- **Import and export of data in a range of formats.**
- **Document management.** The ability to associate external files with records within the database.
- **Reporting.** Ad hoc reports, documents such as invoices and manifests, Management reporting.
- **Scheduled and event triggered actions** against the database.
- **Diary/Notice board**
- **License Management**
- **Data Baskets**

Aims

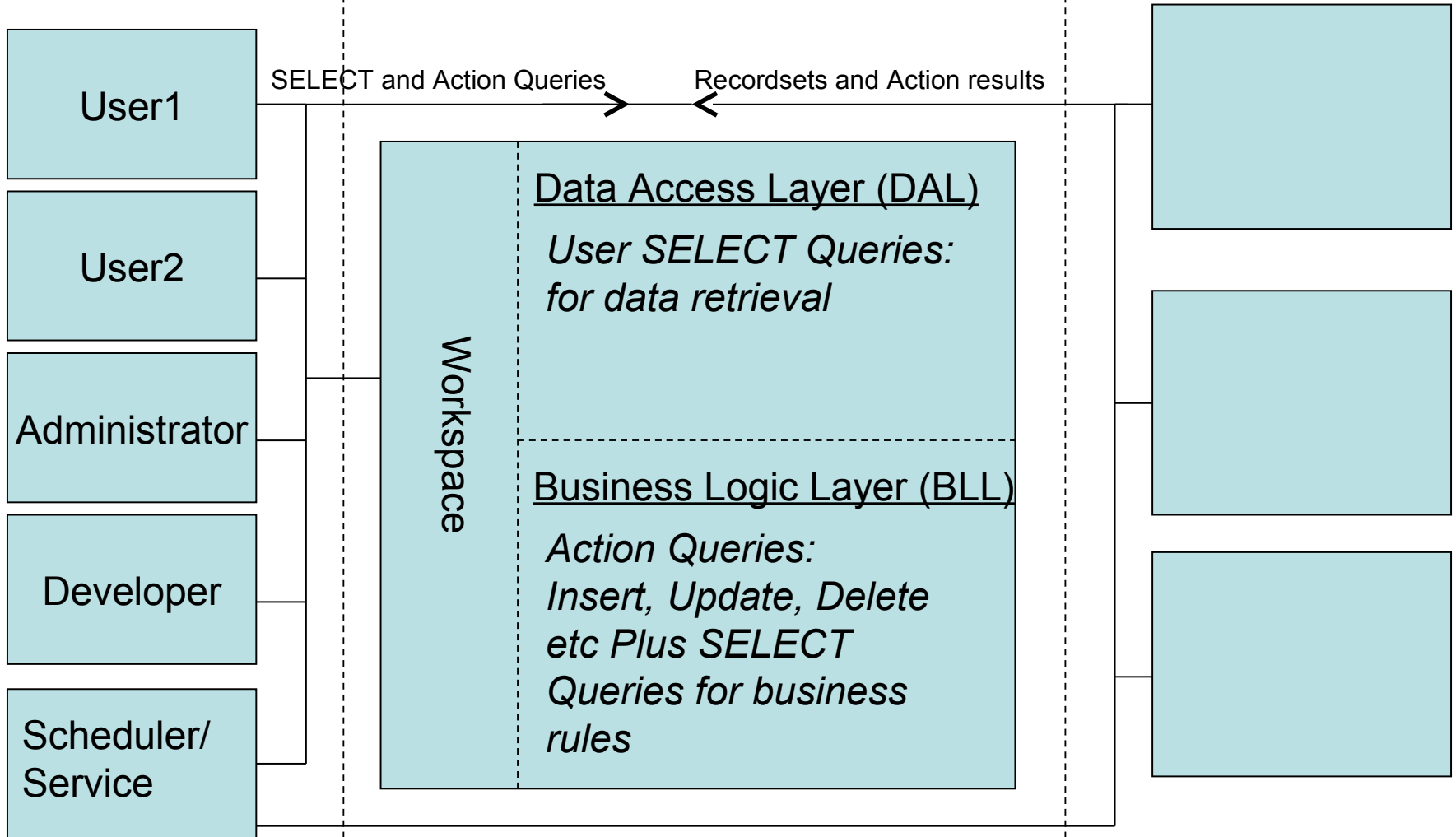
- The environment should simplify the production and management of all the SQL within an application
- The user interface should be small, fast, flexible and be the same for all types of users
- The structure should enable WEB browser and mobile device versions to be developed as needed

Architecture

User Interface

User DataBase (DAL/BLL)

Application DataBases



A single User Interface

- Users can (within their accessible data), decide what fields they see, filter and save filters, add, update, delete records and set their own defaults, perform the actions on data with the tools provided.
- Administrators control who can see what and what they can do to that data (DAL)
- Developers can add functionality, business rules etc (BLL)