

Welcome

To Advance through Presentation
Use Page Up and Page Down Keys



99 | Worldwide
Developers
Conference

WebObjects



“This year’s Software Product of the Year is Apple Computer’s WebObjects 4.0... Along with substantial power and flexibility, WebObjects brings an ease of development rarely seen in industrial-strength development environments.”





Using SQL/Relational Databases

Scott Keith,
OpenBase International, Ltd.

Scott Sweet,
AES Systems Engineer

What Is a Relational Database?

- TABLE
- Relationships between tables
- Key values
- TO-MANY/TO-ONE Relationships



Table

- A collection of information with similar structure

Patient	
SSN	Name
046-68-0001	Andrew
046-68-0002	Sarah
046-68-0003	Daniel
046-68-0004	Thomas
...	...
...	...

Billing	
SSN	Amount
046-68-0001	532.25
046-68-0002	99.00
046-68-0002	136.27
046-68-0002	1295.00
...	...



Relationships Between Tables

- Tables relate to one another when they have values in common

Patient		Billing	
SSN	Name	SSN	Amount
046-68-0001	Andrew	046-68-0001	532.25
046-68-0002	Sarah	046-68-0002	99.00
046-68-0003	Daniel	046-68-0002	136.27
046-68-0004	Thomas	046-68-0002	1295.00
...
...	...		



Key Values

Primary Key

Patient

SSN	Name
046-68-0001	Andrew
046-68-0002	Sarah
046-68-0003	Daniel
046-68-0004	Thomas
...	...
...	...

Foreign Keys

Billing

SSN	Amount
046-68-0001	532.25
046-68-0002	99.00
046-68-0002	136.27
046-68-0002	1295.00
...	...



To-Many Relationship

Patient		Billing	
SSN	Name	SSN	Amount
046-68-0001	Andrew	046-68-0001	532.25
046-68-0002	Sarah	046-68-0002	99.00
046-68-0003	Daniel	046-68-0002	136.27
046-68-0004	Thomas	046-68-0002	1295.00
...
...	...		



To-One Relationship

Billing		Patient	
SSN	Amount	SSN	Name
046-68-0001	532.25	046-68-0001	Andrew
046-68-0002	99.00	046-68-0002	Sarah
046-68-0002	136.27	046-68-0003	Daniel
046-68-0002	1295.00	046-68-0004	Thomas
...
	



Standard Query Language (SQL)

- Allows client applications to ask database servers for information



Find Patient with SSN = “046-68-0000”

```
SELECT name FROM patient WHERE ssn = "046-68-0000"
```

```
SELECT patient.name FROM patient WHERE patient.ssn =  
"046-68-0000"
```



Find Bills for Patient

```
SELECT patient.name, billing.amount, billing.date  
FROM billing, patient  
WHERE patient.ssn = "046-68-0000"  
AND billing.ssn = patient.ssn
```



Find the Bills for a Group of Patients

```
SELECT patient.name, billing.amount, billing.date
FROM billing, patient
WHERE patient.ssn
IN("046-68-0000",
    "046-68-0001",
    "046-68-0002",
    "046-68-0003")
AND billing.ssn = patient.ssn
```



Summarize the Bill for Each Patient

```
SELECT patient.name,  
SUM(billing.amount) from billing, patient  
WHERE patient.ssn  
IN("046-68-0000",  
    "046-68-0001",  
    "046-68-0002",  
    "046-68-0003")  
AND billing.ssn = patient.ssn  
GROUP BY patient.name
```





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What Is EOF?

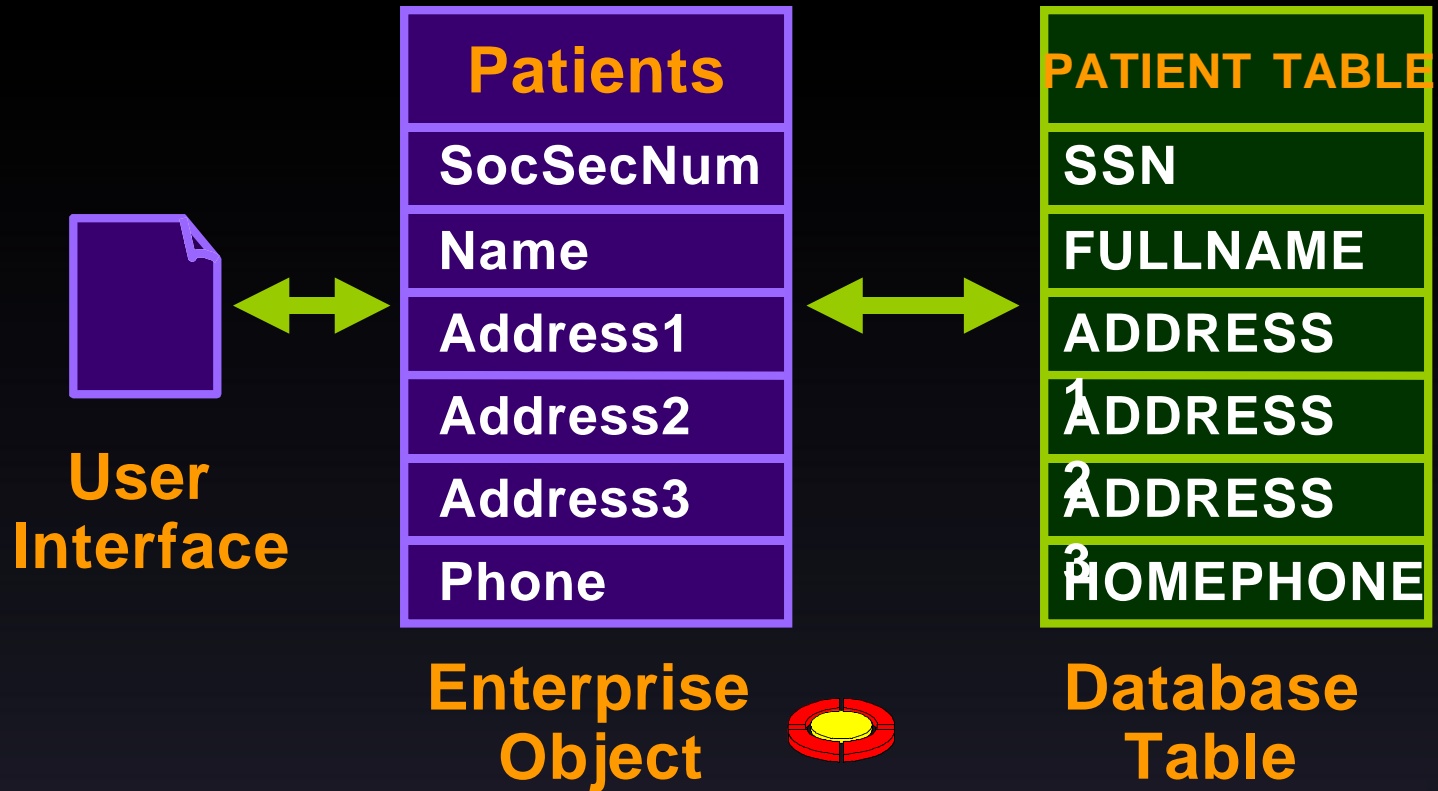
What Is EOF?

Enterprise Object Framework

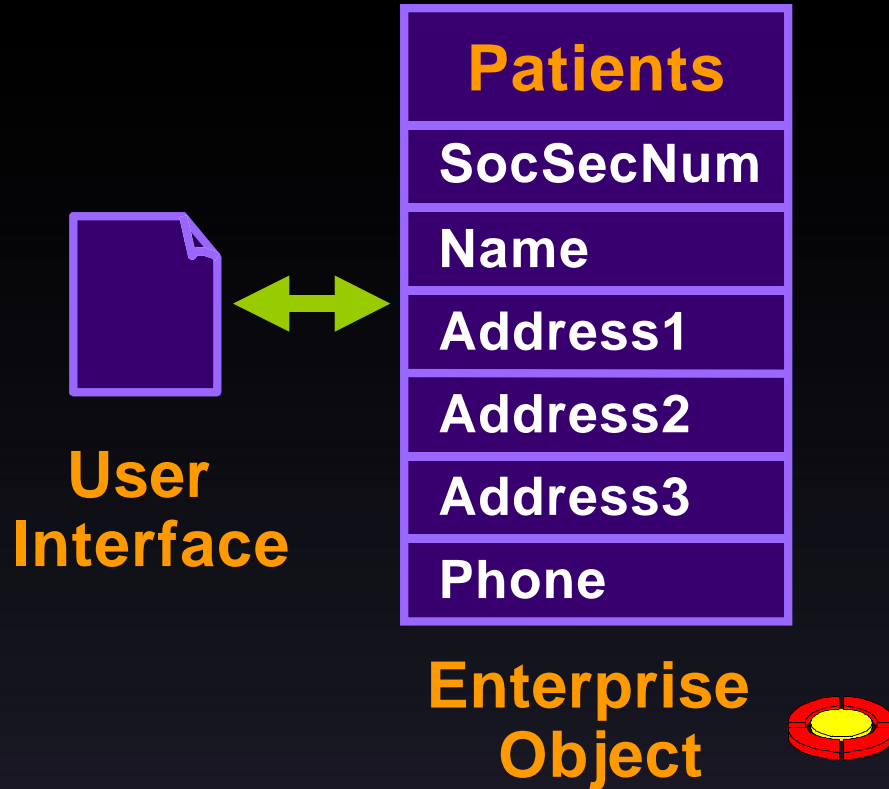
- A collection of objects that define:
 - Business functionality
 - Database interfacing between the application and the database of choice



Database Interfacing



Features

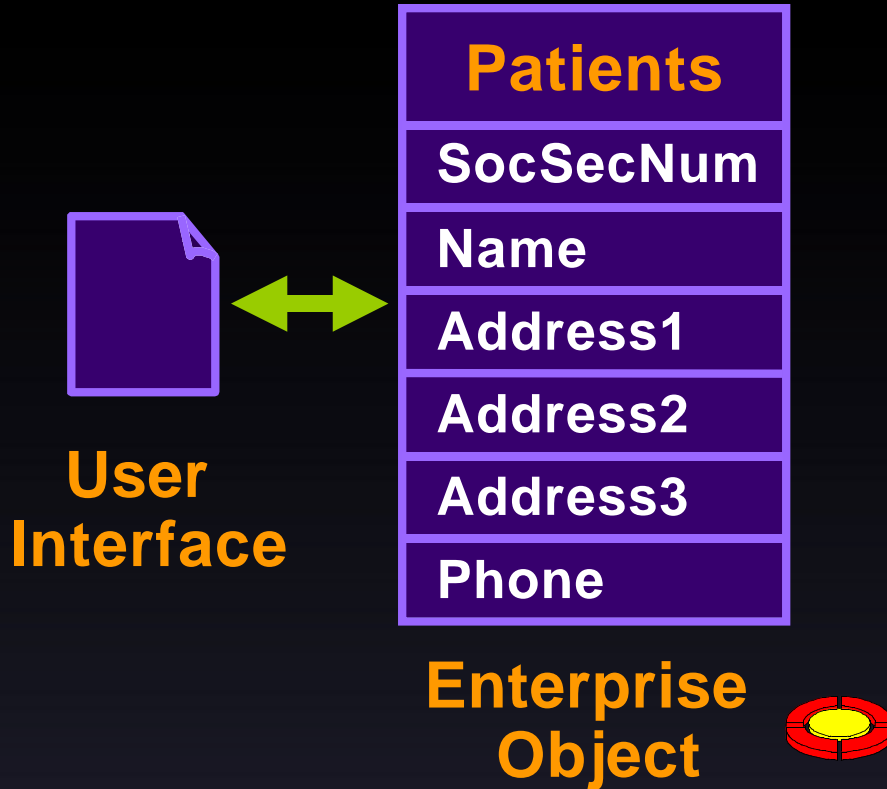


- Dynamic SQL generation
- Automatic implementation of the business rules
- Automatic support of joins across multiple tables
- Easily change the database without application changes

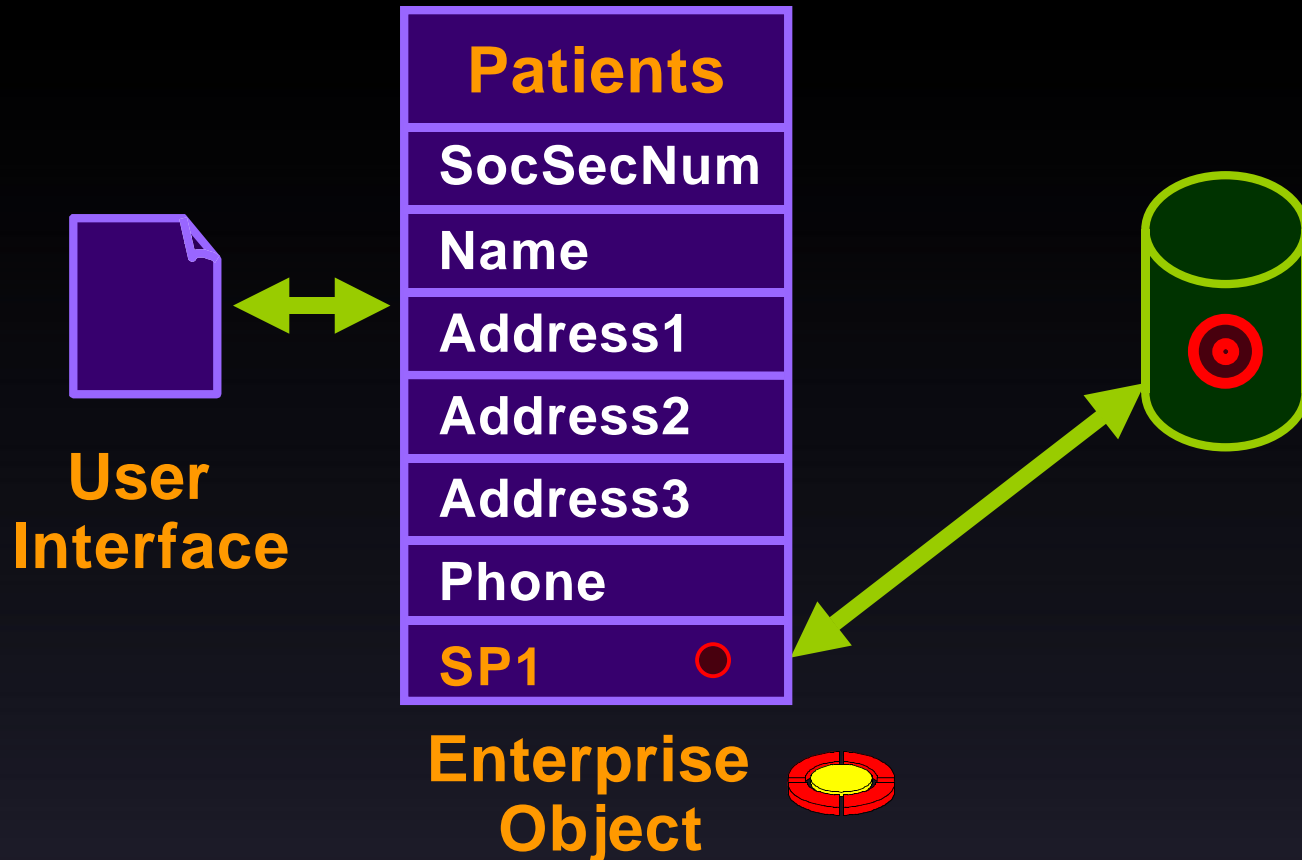


Features (Cont.)

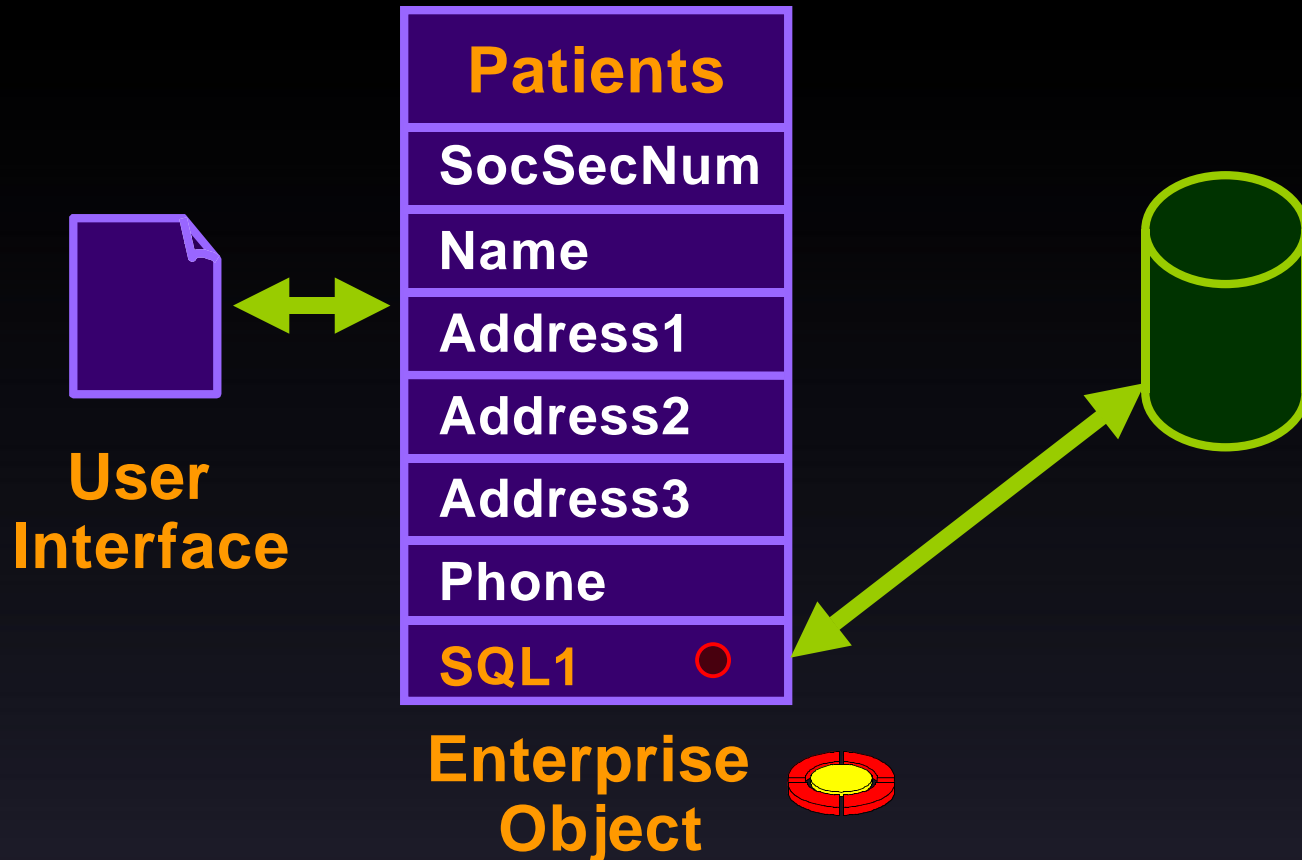
- Import/Export data model
- Native database access to OpenBase, Oracle, Informix, Sybase and MS SQL Server
- Result set caching
- Interface to other applications
- Interface to CORBA, DCOM, DLLs and programs



Stored Procedures



Raw SQL





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Demo



Contact Information

- Scott Keith, OpenBase International, Ltd.
<http://www.openbase.com>
scott@openbase.com
- Scott Sweet, Apple Computer, Inc.
AES Systems Engineer
sweet@apple.com



WebObjects Sessions

**WebObjects
Java Client
Introduction**

Hall B
Tues., 4:00pm

Learning EOModeler

Hall B
Wed., 9:00am

**Deploying
WebObjects**

Hall B
Wed., 10:15am



Please Note - Schedule Change

**WebObjects - Java Client
Introduction has been moved to
4:00 today. It will be held in this
room!!**



WebObjects Sessions

**Generating Reports in
WebObjects Apps**

Hall B
Wed., 1:00pm

**Debugging Techniques
in WebObjects**

Hall B
Wed., 2:30pm

**Fine-Tuning the
Performance of
WebObjects**

Hall B
Wed., 4:00pm



WebObjects Sessions

**Complex WebObjects
Application Design**

Hall B
Thur., 9:00am

**WebObjects:
Tips from the Experts**

Hall B
Thur., 10:15am

**Advanced HTML/DHTML/
JavaScript Tips and Tricks**

Hall B
Thur., 4:00pm





Think different.TM



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