Introduction to database access 3

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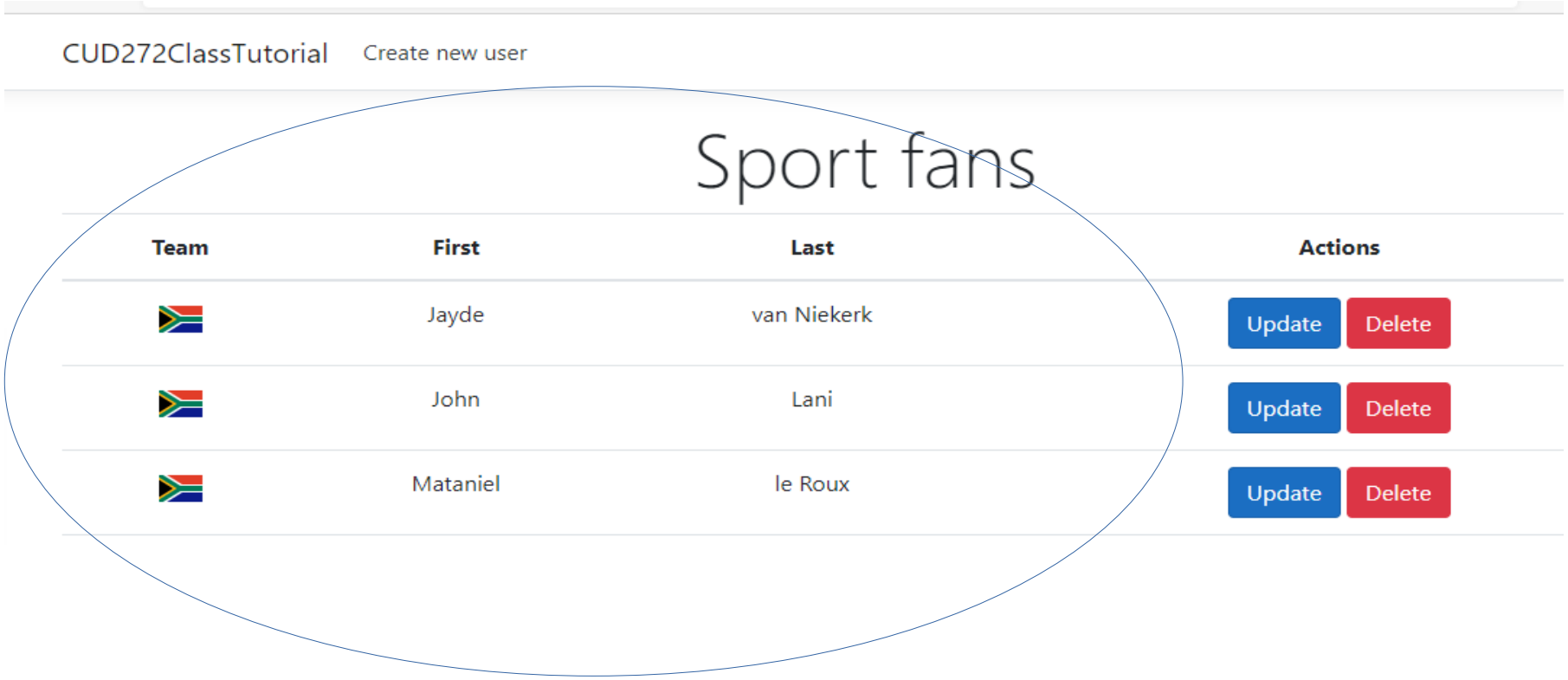
Contents

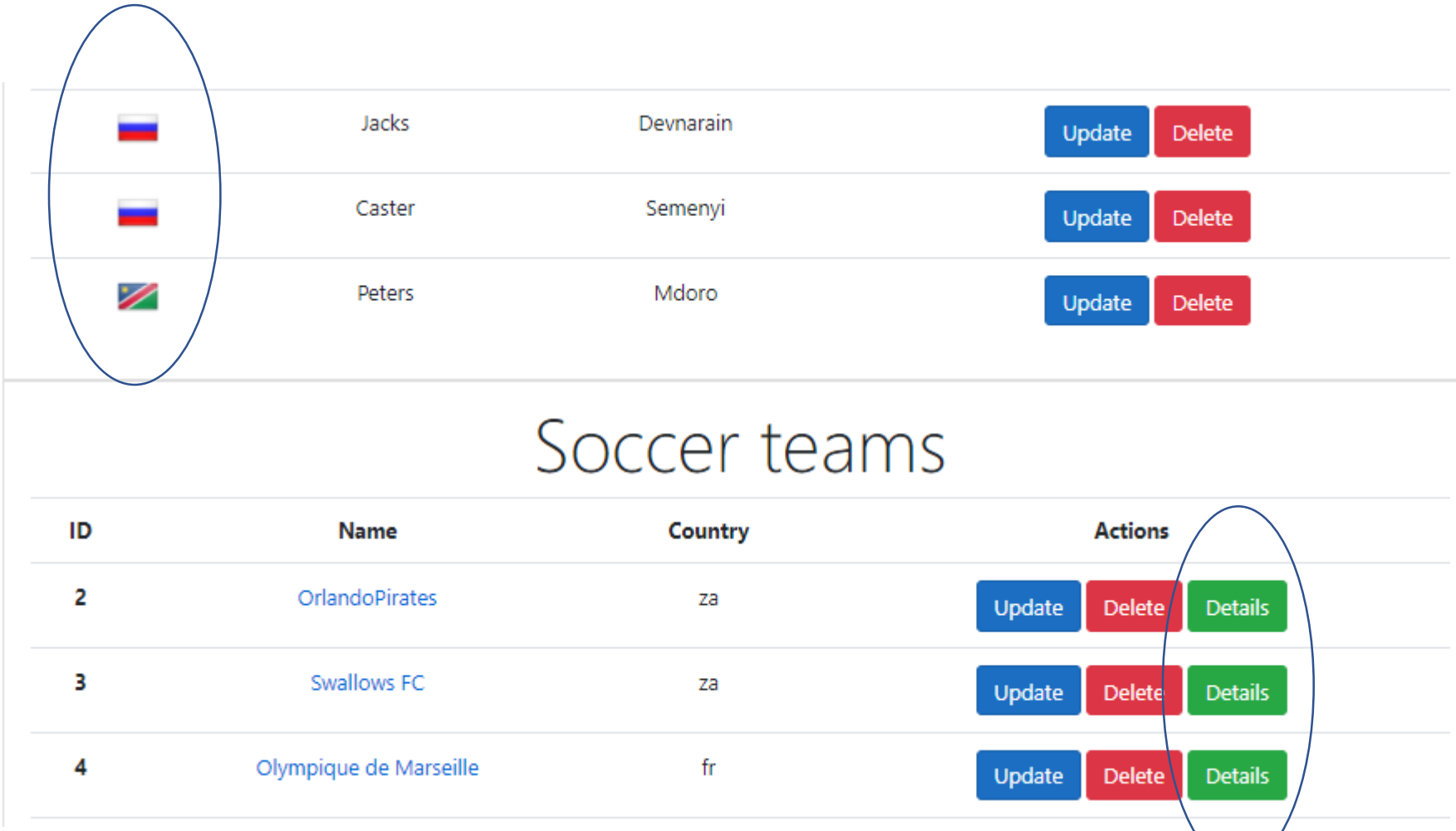
1. Question?
2. Clarification?
3. Comment?

Recall


CUD272ClassTutorial
Create new user
Sport fans
Team
First
Last
Actions
Jayde
van Niekerk
Update
Delete
John
Lani
Update
Delete
Mataniel
le Roux
Update
Delete

Overview for today

Images



	Jacks	Devnarain	Update Delete
	Caster	Semenyi	Update Delete
	Peters	Mdoro	Update Delete

Soccer teams

ID	Name	Country	Actions
2	OrlandoPirates	za	Update Delete Details
3	Swallows FC	za	Update Delete Details
4	Olympique de Marseille	fr	Update Delete Details

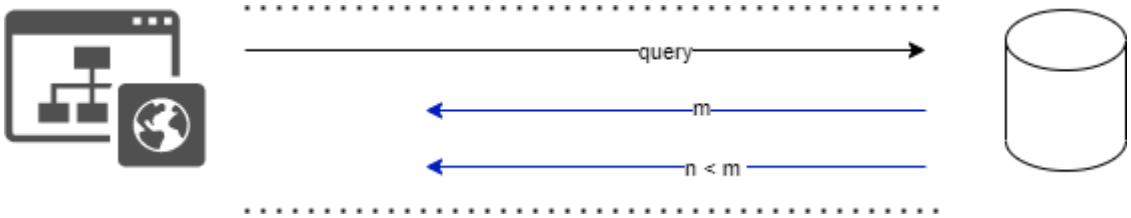
Aggr. functions

Additional clauses

Reminder

1. Create connection
2. Create sql ‘query’ (String)
3. Create a query (via SqlCommand)
4. Pass parameters
5. Execute query (via ExecuteNonQuery/ExecuteReader)
6. Get number of rows affected or resultset

Background: additional clauses

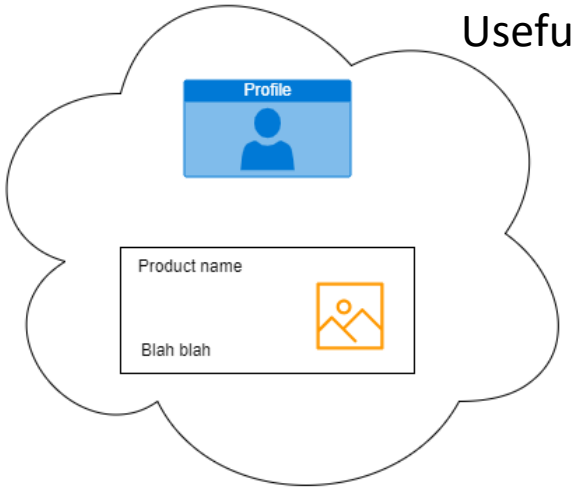


Getting our hands dirty: getting our hands dirty

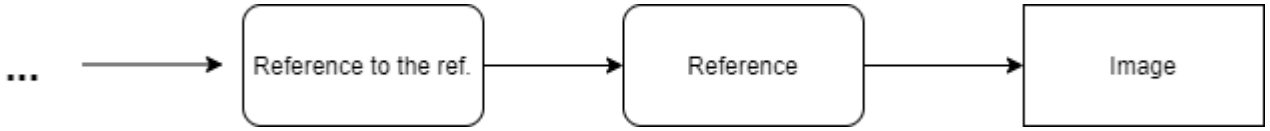
1. Let’s look at the new table
2. Let’s get to work!
    1. public List<PersonModel> getUsers()
    2. public List<TeamModel> getTeams()
    3. TeamStatsModel getTeamStats(int id)

Background: Images

Usefulness of images



Storage options



filesystem vs. database (Sears, Ingen, and Gray, 2006)

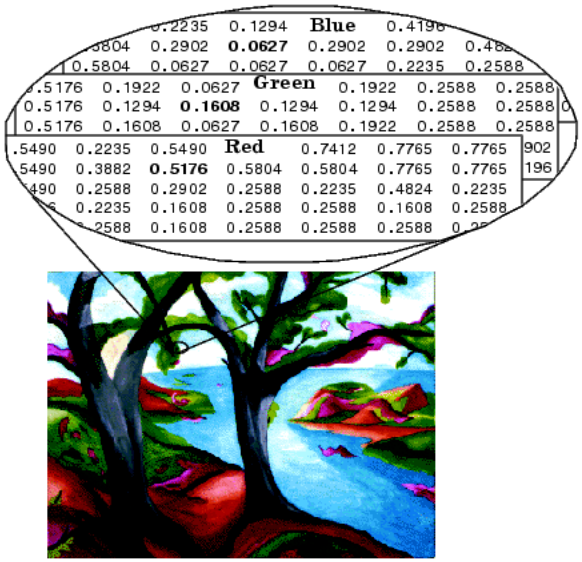
- NTFS file system vs. SQL Server 2005
- Comparison on create, read, replace, delete
- "BLOBs smaller than 256KB are more efficiently handled by SQL Server, while NTFS is more efficient BLOBS larger than 1MB"

were compiled to x86 code with debugging disabled.

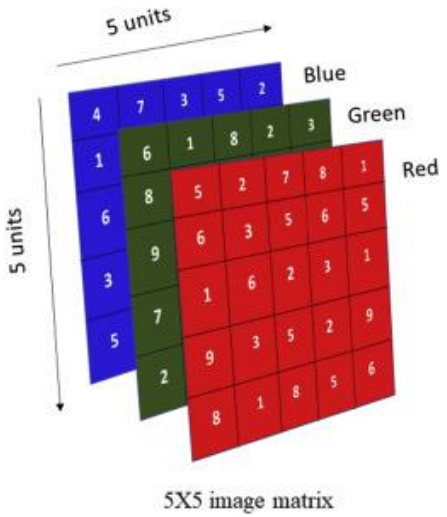
Table 1: Configurations of the test systems
Tyan S2882 K8S Motherboard, 1.8 Ghz Opteron 244, 2 GB RAM (ECC)
SuperMicro "Marvell" MV8 SATA controller
4 Seagate 400GB ST3400832AS 7200 rpm SATA
Windows Server 2003 R2 Beta (32 bit mode).
SQL Server 2005 Beta 2 (32 bit mode).

*To BLOB or Not To BLOB: Large Object Storage in a Database or a Filesystem?, Russell Sears, Catharine van Ingen, Jim Gray

Background: Images



Src:
http://www.ece.northwestern.edu/local-apps/matlabhelp/toolbox/images/intro8.html



Src:
https://www.sciencedirect.com/topics/engineering/rgb-image

Binary string types:

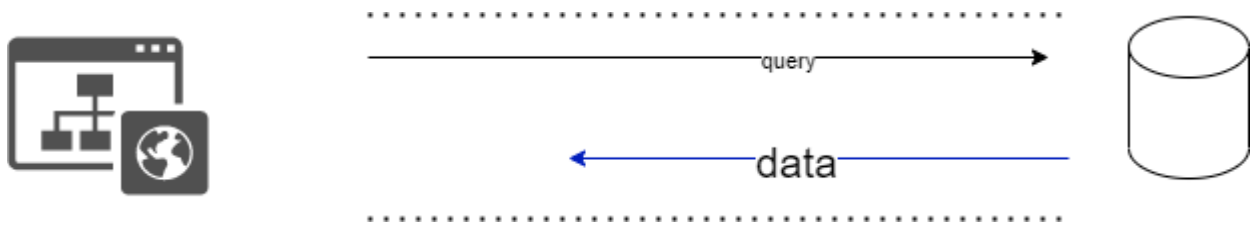
1. binary
2. varbinary
3. image

Src: https://docs.microsoft.com/en-us/sql/t-sql/data-types/data-types-transact-sql?view=sql-server-ver15

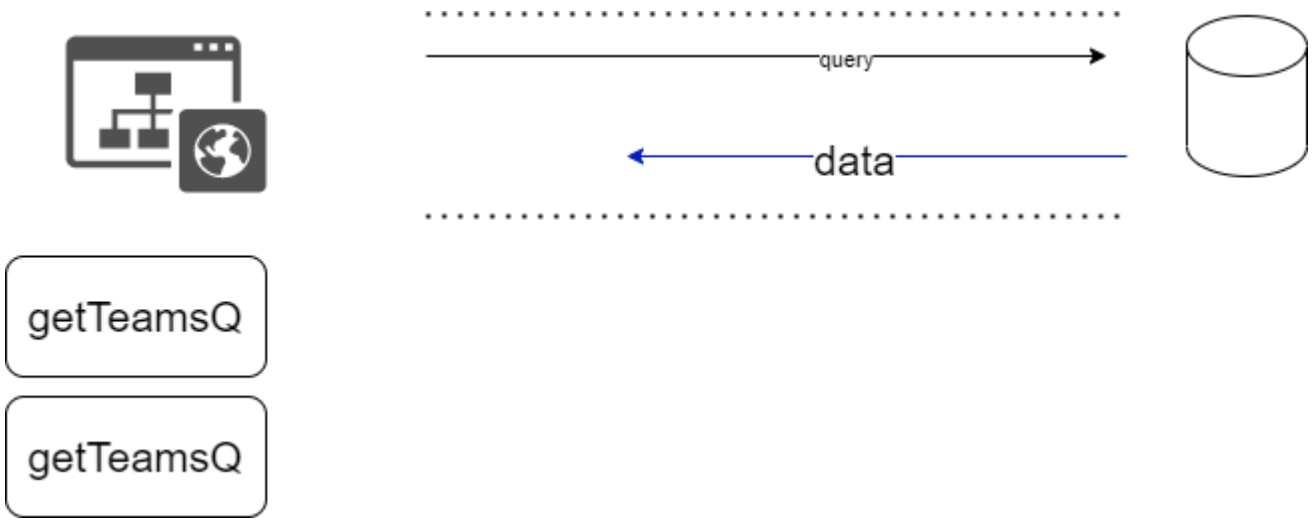
Getting our hands dirty: Images

1. Let’s look at the new database table
2. Let’s get to work!
    1. Inserting and deleting images directly
    2. public void insertFlag(String countryCode, String filename)

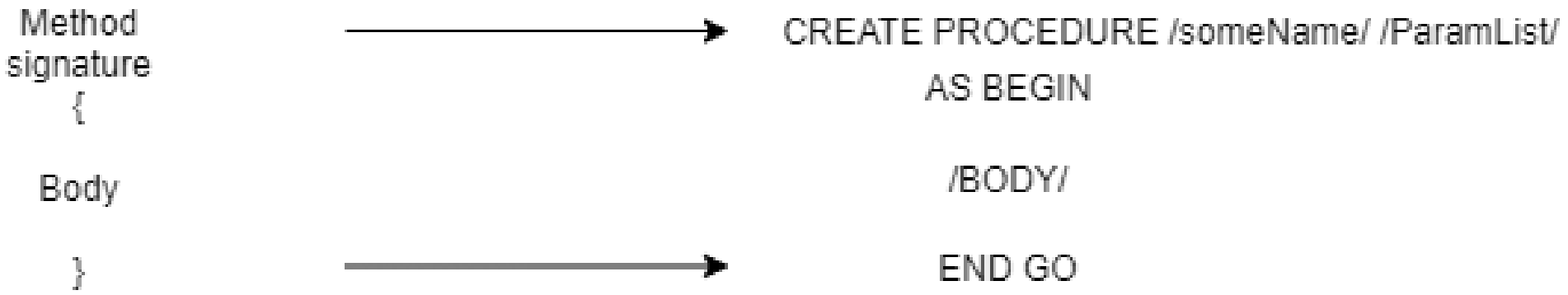
Background: Stored procedures



Background: Stored procedures



Background: Stored procedures

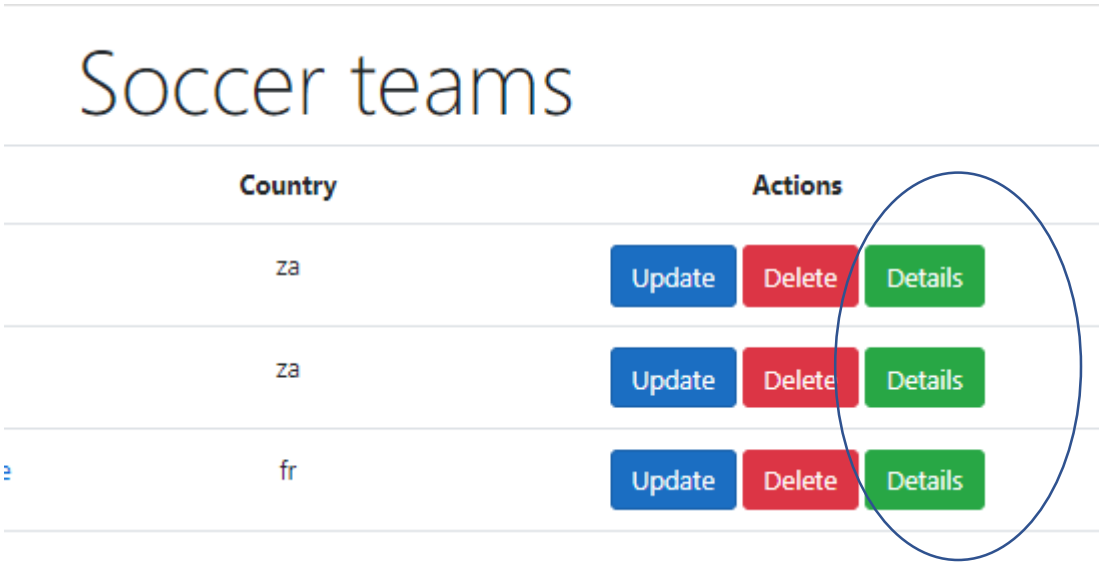


Getting our hands dirty: Stored procedures

1. Creating a stored procedure in our db
2. Let’s get to work!
    1. public List<TeamModel> getTeams()

Practice tasks

1. Choose any five aggregate function types, make a team statistic using it and display the state in the Stats view
2. Recreate the stored procedure called “GetTeams” we discussed in class



The view opened after Clicking button