

# SQL in a Programming Environment

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CIS 4301

*Lecture Notes*

Lecture 22 - 4/11/2006

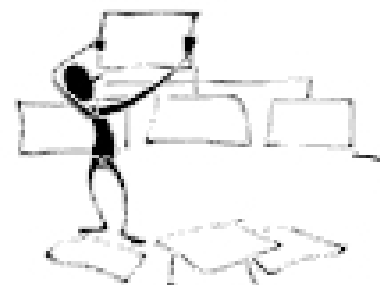
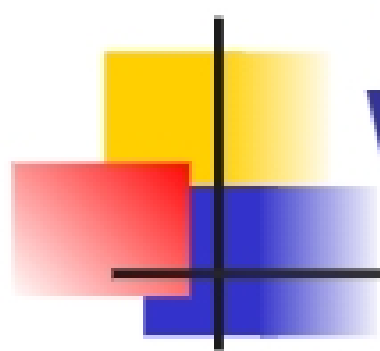


# SQL in a Program

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- You're starting by using "direct" (or "interactive") SQL
- In reality SQL is rarely used in this way, instead it's specified within programs
  - Host language (e.g., ADA, C, Cobol, Fortran, M, Pascal)
  - Some of the steps are actually SQL statements
- Entire program sent to preprocessor, changes the embedded SQL into something that makes sense in host language
- Pre-processed program is then compiled in usual manner
  - DBMS vendor normally provides library that supplies necessary function definitions
  - Call-level interface (CLI)

# Processing Programs with SQL Statements



Host Language  
+  
Embedded SQL

Preprocessor

Host Language  
+  
Function Calls

Object-code  
program

Host-language  
compiler

SQL library