Module 2
Introduction to Databases and DBMSs
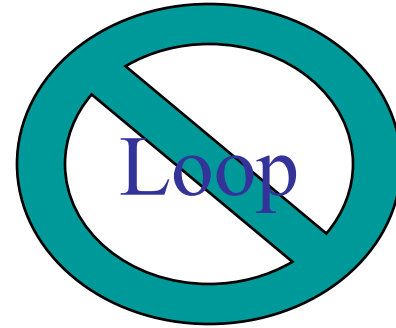
Lesson 4: Non-Procedural Access

Lesson Objectives

- Discuss the importance of non-procedural access
- Explain the link between the five types of application development tools and nonprocedural access
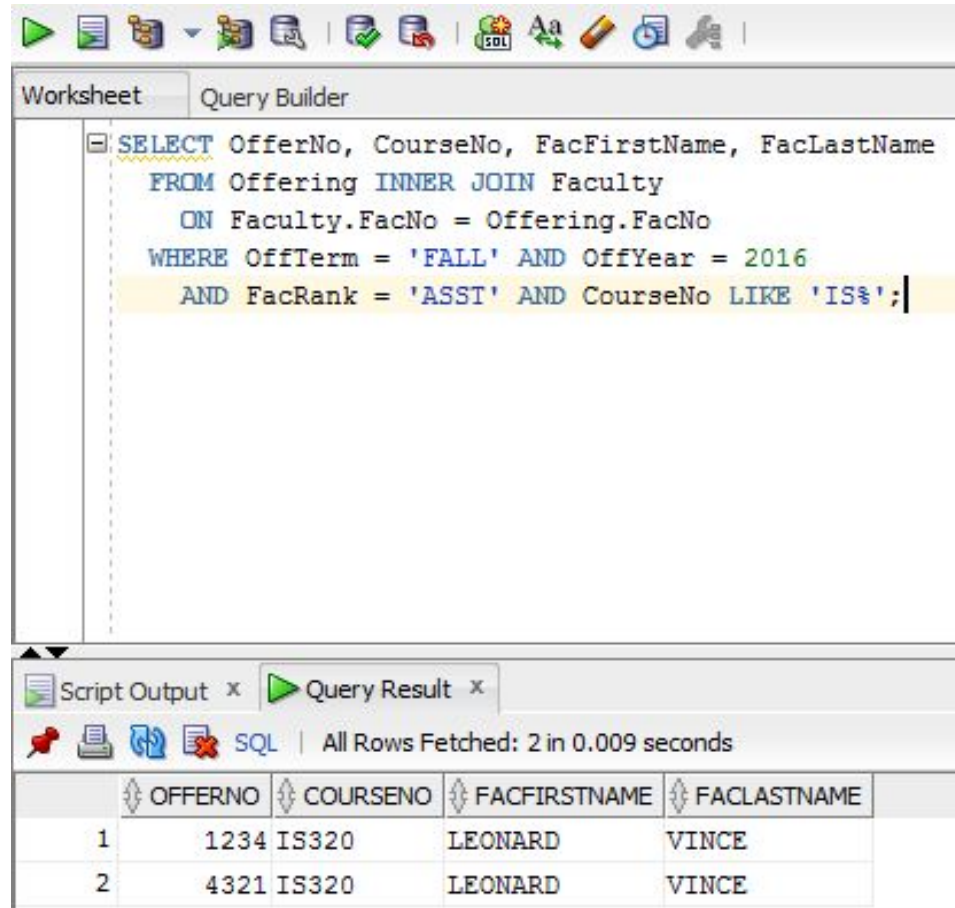
Nonprocedural Database Access

Loop

- Query: request for data to answer a question
- Indicate what parts of database to retrieve not the procedural details
- Improve productivity and improve accessibility
- SQL SELECT statement and graphical tools

SELECT Statement Execution

Graphical Tool for Nonprocedural Access
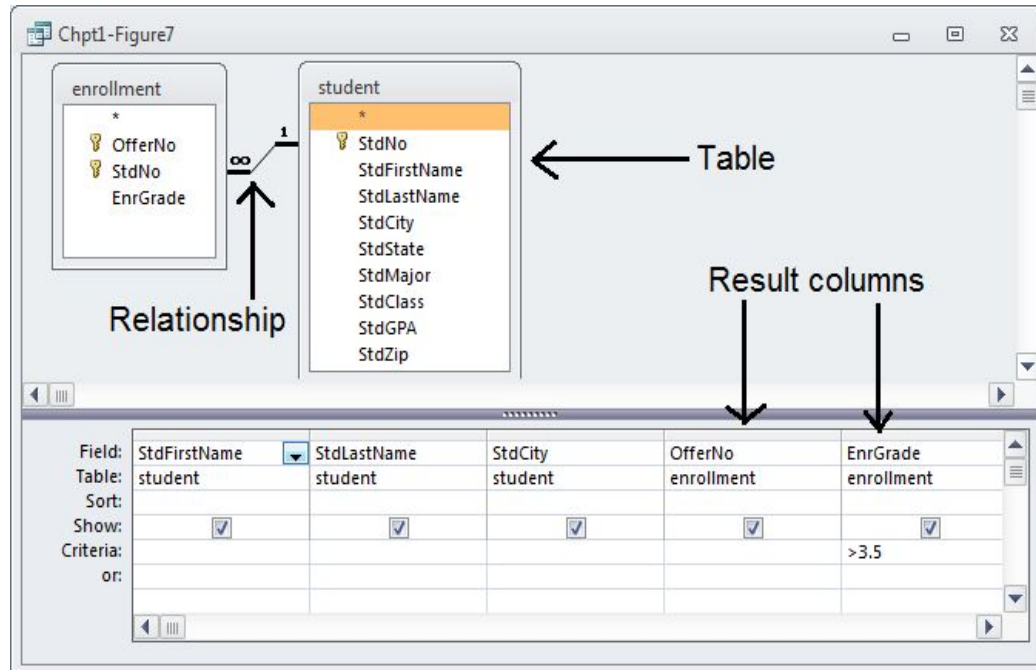
StdFirstName	StdLastName	StdCity	OfferNo	EnrGrade
MARIAH	DODGE	SEATTLE	1234	3.8
BOB	NORBERT	BOTHELL	5679	3.7
ROBERTO	MORALES	SEATTLE	5679	3.8
MARIAH	DODGE	SEATTLE	6666	3.6
LUKE	BRAZZI	SEATTLE	7777	3.7
WILLIAM	PILGRIM	BOTHELL	9876	4

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Information Systems Program

Sample Data Entry Form

Sample Report

Faculty Work Load Report for the 2016-2017 Academic Year

Department	Name	Term	Offer Number	Units	Limit	Enrollment	Percent Full	Low Enrollment
FIN								
	JULIA MILLS							
		WINTER	5678	4	20	1	5.00%	☑

Summary for 'term' = WINTER (1 detail record)

| | | | Sum | 4 | | 1 | | |
| | | | Avg | | | | 5.00% | |

Summary for JULIA MILLS

| | Sum | | | 4 | | 1 | | |
| | Avg | | | | | | 5.00% | |

Summary for 'department' = FIN (1 detail record)

| Sum | | | | 4 | | 1 | | |
| Avg | | | | | | | 5.00% | |

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Procedural Language Interface

- Combine procedural language with nonprocedural access
- Why
  - Batch processing
  - Customization (especially for ecommerce) and automation
  - Performance improvement

Summary

- Database technology vital to modern organizations
- Crucial DBMS feature: nonprocedural access
- Query language, visual tool, form tool, report tool, and embedding
- Fundamental skill: query formulation