

## Assignment 1 – Databases

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1.

The screenshot shows the SQL Server Management Studio interface. On the left is a Navigator pane with a 'SCHEMAS' section expanded, showing the schema 'N01537188W23' with various tables listed. The main area contains a SQL editor window titled 'SQL File 13\*' with the following query:

```
1 •   SELECT b.title, p.name, p.phone
2     FROM JL_BOOKS b
3   JOIN JL_PUBLISHER p ON b.PubID = p.PubID;
4
```

Below the SQL editor is a 'Result Grid' window showing the results of the query. The grid has columns 'title', 'name', and 'phone'. The data is as follows:

title	name	phone
REVENGE OF MICKEY	PRINTING IS US	000-714-8321
HOW TO MANAGE THE MANAGER	PRINTING IS US	000-714-8321
BUILDING A CAR WITH TOOTHPICKS	PUBLISH OUR WAY	010-410-0010
E-BUSINESS THE EASY WAY	PUBLISH OUR WAY	010-410-0010
HANDCRANKED COMPUTERS	AMERICAN PUBLISHING	800-555-1211
HOLY GRAIL OF ORACLE	AMERICAN PUBLISHING	800-555-1211
DATABASE IMPLEMENTATION	AMERICAN PUBLISHING	800-555-1211
HOW TO GET FASTER PIZZA	READING MATERIALS INC.	800-555-9743
THE WOK WAY TO COOK	READING MATERIALS INC.	800-555-9743
BODYBUILD IN 10 MINUTES A DAY	READING MATERIALS INC.	800-555-9743
COOKING WITH MUSHROOMS	READING MATERIALS INC.	800-555-9743
SHORTEST POEMS	REED-N-RITE	800-555-8284
PAINLESS CHILD-REARING	REED-N-RITE	800-555-8284
BIG BEAR AND LITTLE DOVE	REED-N-RITE	800-555-8284

2.

The screenshot shows the SQL Server Management Studio interface. On the left is a Navigator pane with a 'SCHEMAS' section expanded, showing the schema 'N01537188W23' with various tables listed. The main area contains a SQL editor window titled 'SQL File 13\*' with the following query:

```
1 •   SELECT o.Order_id, c.FirstName, c.LastName
2     FROM JL_ORDERS o
3   JOIN JL_CUSTOMERS c ON o.Customer_id = c.Customer_id
4   WHERE o.ShipDate IS NULL
5   ORDER BY o.OrderDate;
6
```

Below the SQL editor is a 'Result Grid' window showing the results of the query. The grid has columns 'Order\_id', 'FirstName', and 'LastName'. The data is as follows:

Order_id	FirstName	LastName
1012	BECCA	NELSON
1015	KENNETH	FALAH
1016	LEILA	SMITH
1018	BONITA	MORALES
1019	GREG	MONTIASA
1020	KENNETH	JONES

3.

Navigator: SQL File 13\* SQL File 15\* SQL File 16\* SQL File 17\*

SCHEMAS

Filter objects

▼ N01537188W23

Tables

- addresses
- administrators
- categories
- categories\_copy
- customers
- customers\_copy
- downloads
- employees
- general\_ledger\_acco
- invoice\_archive
- invoice\_line\_items

Administration Schemas Information

```
1 •   SELECT c.FirstName, c.LastName, b.Title, o.Order_id, b.Category
2   FROM JL_CUSTOMERS c
3   JOIN JL_ORDERS o ON c.Customer_id = o.Customer_id
4   JOIN JL_ORDERITEMS oi ON o.Order_id = oi.Order_id
5   JOIN JL_BOOKS b ON oi.ISBN = b.ISBN
6   WHERE c.State = 'FL' AND b.Category = 'COMPUTERS';
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

FirstName	LastName	Title	Order_id	Category
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4.

Navigator: SQL File 13\* SQL File 15\* SQL File 16\* SQL File 17\*

SCHEMAS

Filter objects

▼ N01537188W23

Tables

- addresses
- administrators
- categories
- categories\_copy
- customers
- customers\_copy
- downloads
- employees
- general\_ledger\_acco
- invoice\_archive
- invoice\_line\_items

Administration Schemas

```
2   FROM JL_BOOKS b
3   JOIN JL_ORDERITEMS oi ON b.ISBN = oi.ISBN
4   JOIN JL_ORDERS o ON oi.Order_id = o.Order_id
5   JOIN JL_CUSTOMERS c ON o.Customer_id = c.Customer_id
6   WHERE c.FirstName = 'Jake' AND c.LastName = 'Lucas';
7
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

Title
▶ HOW TO MANAGE THE MANAGER
PAINLESS CHILD-REARING

5.

The screenshot shows the SQL Server Management Studio interface. On the left, the Object Explorer displays the schema N01537188W23 with various tables listed. The central pane contains a SQL query:

```
1 •   SELECT o.OrderDate, b.Title, oi.PaidEach - b.Cost AS Profit  
2     FROM JL_BOOKS b  
3     JOIN JL_ORDERITEMS oi ON b.ISBN = oi.ISBN  
4     JOIN JL_ORDERS o ON oi.Order_id = o.Order_id  
5     JOIN JL_CUSTOMERS c ON o.Customer_id = c.Customer_id  
6     WHERE c.FirstName = 'Jake' AND c.LastName = 'Lucas'  
7     ORDER BY o.OrderDate, Profit DESC;  
8
```

The bottom pane shows the results of the query in a grid:

OrderDate	Title	Profit
2009-03-31	PAINLESS CHILD-REARING	37.45
2009-03-31	HOW TO MANAGE THE MANAGER	16.55
2009-04-03	PAINLESS CHILD-REARING	37.45

6.

The screenshot shows the SQL Server Management Studio interface. On the left, the Object Explorer displays the schema N01537188W23 with various tables listed. The central pane contains a SQL query:

```
1 •   SELECT b.Title  
2     FROM JL_BOOK_AUTHOR ba  
3     JOIN JL_BOOKS b ON ba.ISBN = b.ISBN  
4     JOIN JL_AUTHOR a ON ba.JL_AUTHORID = a.AUTHORID  
5     WHERE a.Lname = 'Adams';  
6
```

The bottom pane shows the results of the query in a grid:

Title
DATABASE IMPLEMENTATION

7.

The screenshot shows the SQL Server Management Studio interface. The left pane displays the Navigator and Schemas for the schema N01537188W23, listing various tables like addresses, administrators, categories, etc. The right pane shows the results of a query in SQL File 3:

```
1 • SELECT Gift
2   FROM JL_PROMOTION
3   WHERE (
4     SELECT Retail
5       FROM JL_BOOKS
6      WHERE Title = 'Shortest Poems'
7      AND Retail BETWEEN Minretail AND Maxretail
8    ) IS NOT NULL;
```

The result grid shows two rows: Gift and BOOK COVER.

8.

The screenshot shows the SQL Server Management Studio interface. The left pane displays the Navigator and Schemas for the schema N01537188W23. The right pane shows the results of a query in SQL File 3:

```
1 • SELECT a.Fname, a.Lname
2   FROM JL_CUSTOMERS c
3   INNER JOIN JL_ORDERS ord ON c.Customer_id = ord.Customer_id
4   INNER JOIN JL_ORDERITEMS oi ON ord.Order_id = oi.Order_id
5   INNER JOIN JL_BOOKS b ON oi.ISBN = b.ISBN
6   INNER JOIN JL_BOOK_AUTHOR ba ON b.ISBN = ba.ISBN
7   INNER JOIN JL_AUTHOR a ON ba.JL_AUTHORID = a.AUTHORID
8   WHERE CONCAT(c.FirstName, ' ', c.LastName) = 'Becca Nelson';
```

The result grid shows a list of names:

Fname	Lname
JANICE	JONES
WILLIAM	WHITE
LISA	WHITE
JACK	BAKER
OSCAR	FIELDS
ROBERT	ROBINSON
ROBERT	ROBINSON

9.

Navigator

SCHEMAS

Filter objects

▼ N01537188W23

Tables

- addresses
- administrators
- categories
- categories\_copy
- customers
- customers\_copy
- downloads
- employees
- general\_ledger\_accounts
- invoice\_archive
- invoice\_line\_items
- invoices

Administration Schemas

Information

No object selected

SQL File 34\* SQL File 3\* SQL File 4\* SQL File 5\*

1 • SELECT b.Title, ord.Order\_id, c.State  
2 FROM JL\_CUSTOMERS c  
3 INNER JOIN JL\_ORDERS ord ON c.Customer\_id = ord.Customer\_id  
4 INNER JOIN JL\_ORDERITEMS oi ON ord.Order\_id = oi.Order\_id  
5 LEFT JOIN JL\_BOOKS b ON b.ISBN = oi.ISBN  
6 ORDER BY b.Title;

Result Grid | Filter Rows: Export: Wrap Cell Content:

	Title	Order_id	State
▶	BIG BEAR AND LITTLE DOVE	1012	MI
▶	BIG BEAR AND LITTLE DOVE	1017	FL
▶	BIG BEAR AND LITTLE DOVE	1007	TX
▶	BODYBUILD IN 10 MINUTES A DAY	1003	FL
▶	COOKING WITH MUSHROOMS	1015	NJ
▶	COOKING WITH MUSHROOMS	1020	WY
▶	COOKING WITH MUSHROOMS	1009	WA
▶	COOKING WITH MUSHROOMS	1000	WA
▶	COOKING WITH MUSHROOMS	1003	FL

10.

Navigator

SCHEMAS

Filter objects

▼ N01537188W23

Tables

- addresses
- administrators
- categories
- categories\_copy
- customers
- customers\_copy
- downloads
- employees
- general\_ledger\_accounts
- invoice\_archive
- invoice\_line\_items
- invoices

Administration Schemas

SQL File 34\* SQL File 3\* SQL File 4\*

1 • SELECT LName, FName  
2 FROM JL\_AUTHOR  
3 WHERE LName LIKE '%IN%'  
4 ORDER BY LName, FName;

Result Grid | Filter Rows:

	LName	FName
▶	AUSTIN	JAMES
▶	MARTINEZ	SHEILA
▶	ROBINSON	ROBERT
▶	WILKINSON	ANTHONY

11.

A:

Navigator

SCHEMAS

Filter objects

▼ N01537188W23

Tables

- addresses
- administrators
- categories
- categories\_copy
- customers
- customers\_copy
- downloads
- employees
- general\_ledger\_accounts
- invoice\_archive
- invoice\_line\_items
- invoices

Administration Schemas

SQL File 34\* SQL File 3\* SQL File 4\* SQL File 5\*

1 • `SELECT Customer_id, LastName, State  
FROM JL_CUSTOMERS  
WHERE State IN ('GA', 'NJ')  
ORDER BY LastName ASC;`

Result Grid | Filter Rows: Edit:

	Customer_id	LastName	State
▶	1020	FALAH	NJ
	1010	LUCAS	GA
	1018	MONTIASA	GA
	1019	SMITH	NJ
*	HULL	NULL	NULL

B:

Navigator

SCHEMAS

Filter objects

▼ N01537188W23

Tables

- addresses
- administrators
- categories
- categories\_copy
- customers
- customers\_copy
- downloads
- employees
- general\_ledger\_accounts
- invoice\_archive
- invoice\_line\_items
- invoices

Administration Schemas

Information

SQL File 34\* SQL File 3\* SQL File 4\* SQL File 5\*

1 • `SELECT Customer_id, LastName, State  
FROM JL_CUSTOMERS  
WHERE State = 'GA'  
OR State = 'NJ'  
ORDER BY LastName ASC;`

Result Grid | Filter Rows: Edit:

	Customer_id	LastName	State
▶	1020	FALAH	NJ
	1010	LUCAS	GA
	1018	MONTIASA	GA
	1019	SMITH	NJ
*	HULL	NULL	NULL

No object selected

12.

A:

The screenshot shows a database interface with a Navigator pane on the left containing a 'SCHEMAS' section with a 'Filter objects' search bar. Below it is a tree view of tables under schema 'N01537188W23'. The tables listed are: addresses, administrators, categories, categories\_copy, customers, customers\_copy, downloads, employees, general\_ledger\_accounts, invoice\_archive, invoice\_line\_items, and invoices. The 'Schemas' tab is selected. On the right, there are four tabs at the top: 'SQL File 34\*', 'SQL File 3\*', 'SQL File 4\*', and 'SQL File 5\*'. Below these tabs is a toolbar with icons for file operations. A SQL query is displayed in the editor area:

```
1 •   SELECT title, category
2   FROM JL_BOOKS
3   WHERE Category LIKE '%Children%'
4   OR Category LIKE '%Cooking%';
```

Below the query is a 'Result Grid' table with the following data:

	title	category
▶	THE WOK WAY TO COOK	COOKING
	COOKING WITH MUSHROOMS	COOKING
	BUILDING A CAR WITH TOOTHPICKS	CHILDREN
	BIG BEAR AND LITTLE DOVE	CHILDREN

B:

The screenshot shows a database interface with a Navigator pane on the left containing a 'SCHEMAS' section with a 'Filter objects' search bar. Below it is a tree view of tables under schema 'N01537188W23'. The tables listed are: addresses, administrators, categories, categories\_copy, customers, customers\_copy, downloads, employees, general\_ledger\_accounts, invoice\_archive, invoice\_line\_items, and invoices. The 'Schemas' tab is selected. On the right, there are five tabs at the top: 'SQL File 34\*', 'SQL File 3\*', 'SQL File 4\*', 'SQL File 5\*', and 'SQL File 6\*'. Below these tabs is a toolbar with icons for file operations. A SQL query is displayed in the editor area:

```
1 •   SELECT title, category
2   FROM JL_BOOKS
3   WHERE Category = 'Children'
4   OR Category = 'Cooking';
```

Below the query is a 'Result Grid' table with the following data:

	title	category
▶	THE WOK WAY TO COOK	COOKING
	COOKING WITH MUSHROOMS	COOKING
	BUILDING A CAR WITH TOOTHPICKS	CHILDREN
	BIG BEAR AND LITTLE DOVE	CHILDREN

C:

Navigator

SCHEMAS

Filter objects

▼ N01537188W23

Tables

- addresses
- administrators
- categories
- categories\_copy
- customers
- customers\_copy
- downloads
- employees
- general\_ledger\_accounts
- invoice\_archive
- invoice\_line\_items
- invoices

Administration Schemas

Information

SQL File 34\* SQL File 3\* SQL File 4\* SQL File 5\* SQL

1 • SELECT title, category  
2 FROM JL\_BOOKS  
3 WHERE Category IN ('Children', 'Cooking');

Result Grid | Filter Rows: Export: | Wrap

	title	category
▶	THE WOK WAY TO COOK	COOKING
	COOKING WITH MUSHROOMS	COOKING
	BUILDING A CAR WITH TOOTHPICKS	CHILDREN
	BIG BEAR AND LITTLE DOVE	CHILDREN

13.

Navigator

SCHEMAS

Filter objects

▼ N01537188W23

Tables

- addresses
- administrators
- categories
- categories\_copy
- customers
- customers\_copy
- downloads
- employees
- general\_ledger\_accounts
- invoice\_archive
- invoice\_line\_items
- invoices

Administration Schemas

Information

SQL File 34\* SQL File 3\* SQL File 4\* SQL

1 • SELECT ISBN, Title  
2 FROM JL\_BOOKS  
3 WHERE Title LIKE '\_A\_%N%'  
4 ORDER BY Title DESC;

Result Grid | Filter Rows: Export: | Wrap

	ISBN	Title
▶	2491748320	PAINLESS CHILD-REARING
	1915762492	HANDCRANKED COMPUTERS
	8843172113	DATABASE IMPLEMENTATION
*	NULL	NULL

14.

A:

The screenshot shows a database interface with a left sidebar for 'Administration' and 'Schemas'. Under 'Schemas', the 'N01537188W23' schema is selected, showing a list of tables: addresses, administrators, categories, categories\_copy, customers, customers\_copy, downloads, employees, general\_ledger\_accounts, invoice\_archive, invoice\_line\_items, and invoices. The main panel displays a SQL query and its results. The SQL code is:

```
1 •   SELECT Title, PubDate
2     FROM JL_BOOKS
3    WHERE Category = 'COMPUTER'
4    AND PubDate BETWEEN '2005-01-01' AND '2005-12-31';
```

The results grid shows two rows:

Title	PubDate
HANDCRANKED COMPUTERS	2005-01-21
HOLY GRAIL OF ORACLE	2005-12-13

B:

The screenshot shows the same database interface. The 'Schemas' sidebar lists the same tables as in screenshot A. The main panel displays a more complex SQL query involving a subquery with a self-join:

```
1 •   SELECT b.Title, b.PubDate
2     FROM JL_BOOKS b
3    WHERE EXISTS (
4        SELECT PubDate
5          FROM JL_BOOKS bb
6         WHERE bb.ISBN = b.ISBN
7         AND PubDate LIKE '%2005%'
8    )
9    AND b.Category = 'COMPUTER';
```

The results grid shows the same two rows as in screenshot A:

Title	PubDate
HANDCRANKED COMPUTERS	2005-01-21
HOLY GRAIL OF ORACLE	2005-12-13

C:

The screenshot shows a database management application window. On the left, the Navigator pane displays the 'SCHEMAS' section, with a schema named 'N01537188W23' expanded to show its 'Tables' (addresses, administrators, categories, categories\_copy, customers, customers\_copy, downloads, employees, general\_ledger\_accounts, invoice\_archive, invoice\_line\_items). A search bar labeled 'Filter objects' is also present. The main area contains a SQL editor with the following query:

```
1 •   SELECT Title, PubDate
2      FROM JL_BOOKS
3     WHERE Category = 'COMPUTER'
4    AND PubDate LIKE '%2005%';
```

Below the SQL editor is a 'Result Grid' showing the results of the query:

	Title	PubDate
▶	HANDCRANKED COMPUTERS	2005-01-21
▶	HOLY GRAIL OF ORACLE	2005-12-13