Exercise

1) Retrieve the title and publication date of books. If the publication date is NULL, display "Not available" instead.

Solution:

```sql
use pubs
SELECT title, ISNULL(CONVERT(varchar, pubdate, 106), 'Not available') AS publication_date
FROM titles;
```

Output:

	title	publication_date
1	The Busy Executive's Database Guide	12 Jun 1991
2	Cooking with Computers: Surreptitious Balance She...	09 Jun 1991
3	You Can Combat Computer Stress!	30 Jun 1991
4	Straight Talk About Computers	22 Jun 1991
5	Silicon Valley Gastronomic Treats	09 Jun 1991
6	The Gourmet Microwave	18 Jun 1991
7	The Psychology of Computer Cooking	03 Mar 2024
8	But Is It User Friendly?	30 Jun 1991
9	Secrets of Silicon Valley	12 Jun 1994
10	Net Etiquette	03 Mar 2024
11	Computer Phobic AND Non-Phobic Individuals: Beha...	21 Oct 1991
12	Is Anger the Enemy?	15 Jun 1991

2) Combine the author's first name and last name into a single column and display it in uppercase.

Solution:

```sql
use pubs
SELECT UPPER(CONCAT(au_fname, ' ', au_lname)) AS AuthorFullName FROM authors;
```

Output:

	AuthorFullName
1	ABRAHAM BENNET
2	REGINALD BLOTCHET-HALLS
3	CHERYL CARSON
4	MICHEL DEFRANCE
5	INNES DEL CASTILLO
6	ANN DULL
7	MARJORIE GREEN
8	MORNINGSTAR GREENE
9	BURT GRINGLESBY
10	SHERYL HUNTER
11	LIVIA KARSEN

3) Find the difference in days between the current date and the hire date of employees in the "employee" table.

Solution:

```sql
use pubs
SELECT DATEDIFF(day, hire_date, GETDATE()) AS DaysSinceHired
FROM employee;
```

Output:

	DaysSinceHired
1	11519
2	12131
3	12233
4	12590
5	12080
6	12182
7	12539
8	11825
9	11927
10	11366
11	11621
12	11162

4) Determine the years of experience of each employee based on their hiring date. (Table: Employee, Database: Pubs)

Solution:

```
use pubs
SELECT emp_id, DATEDIFF(year, hire_date, GETDATE()) AS YearsOfExperience FROM employee;
```

Output:

	emp_id	YearsOfExperience
1	PMA42628M	32
2	PSA89086M	34
3	VPA30890F	34
4	H-B39728F	35
5	L-B31947F	33
6	F-C16315M	34
7	PTC11962M	35
8	A-C71970F	33
9	AMD15433F	33

5) Replace the substring "St" with "Street" in the authors' addresses.

Solution:

```
use pubs
SELECT REPLACE(address, 'St', 'Street') AS ModifiedAddress
FROM authors;
```

Output:

	ModifiedAddress
1	10932 Bigge Rd.
2	309 63rd Street. #411
3	589 Darwin Ln.
4	22 Cleveland Av. #14
5	5420 College Av.
6	10 Mississippi Dr.
7	6223 Bateman Street.
8	3410 Blonde Street.
9	PO Box 792

6) Show the order date and the order month for all orders in the "orders" table.

Solution:

```
use Northwind
SELECT OrderDate, DATEPART(month, OrderDate) AS order_month
FROM orders;
```

Output:

	OrderDate	order_month
18	1996-07-25 00:00:00.000	7
19	1996-07-26 00:00:00.000	7
20	1996-07-29 00:00:00.000	7
21	1996-07-30 00:00:00.000	7
22	1996-07-31 00:00:00.000	7
23	1996-08-01 00:00:00.000	8
24	1996-08-01 00:00:00.000	8
25	1996-08-02 00:00:00.000	8
26	1996-08-05 00:00:00.000	8

7) List the products along with their units in stock. If units in stock are NULL, display "Out of stock.

Solution:

```
USE Northwind;
SELECT ProductName, COALESCE(UnitsInStock,'Out of stock')
[Stock available] FROM Products;
```

Output:

	ProductName	Stock available
1	Chai	39
2	Chang	17
3	Aniseed Syrup	13
4	Chef Anton's Cajun Seasoning	53
5	Chef Anton's Gumbo Mix	0
6	Grandma's Boysenberry Spread	120

8) Display the absolute value of the difference between the units in stock and the units on order for each product.

Solution:

```
use Northwind
SELECT ProductName, ABS(UnitsInStock - UnitsOnOrder) AS difference
FROM products;
```

Output:

	ProductName	difference
1	Chai	39
2	Chang	23
3	Aniseed Syrup	57
4	Chef Anton's Cajun Seasoning	53
5	Chef Anton's Gumbo Mix	0
6	Grandma's Boysenberry Spread	120
7	Uncle Bob's Organic Dried Pears	15
8	Northwoods Cranberry Sauce	6

9) **Combine the first three letters of the customer's city and the first two letters of the country for each customer.**

Solution:

```sql
use Northwind
SELECT CONCAT(LEFT(city, 3), LEFT(country, 2)) AS CountryCode
FROM customers;
```

Output:

	CountryCode
1	BerGe
2	MéxMe
3	MéxMe
4	LonUK
5	LulSw
6	ManGe
7	StrFr
8	MadSp

10) **Use getdate() function to get system date then use datepart() function to extract month, year and date from it.**

Solution:

```sql
SELECT DATEPART(day, GETDATE()) AS CurrentDay,
       DATEPART(month, GETDATE()) AS CurrentMonth,
       DATEPART(year, GETDATE()) AS CurrentYear;
```

Output:

	CurrentDay	CurrentMonth	CurrentYear
1	11	3	2024

11) **Use getdate() function to get system date then use day(), month() and year() functions to extract month, year and date from it.**

Solution:

```sql
SELECT DAY(GETDATE()) AS CurrentDay,
       MONTH(GETDATE()) AS CurrentMonth,
       YEAR(GETDATE()) AS CurrentYear;
```

Output:

	CurrentDay	CurrentMonth	CurrentYear
1	11	3	2024