# Lab 4 – Functions

Create new query file for QAStore database and save as: **04Functions.sql**

## Exercise 4.1 – Text Functions

**Exercise 4.1.1 – Manipulation**

Display the following in a single SELECT from **dept**

1. **dept\_name**
2. The first three characters of **dept\_name**
3. The 5th and 6th characters of **dept\_name**
4. **dept\_name** in capitals
5. **dept\_name** in small letters

**Tip:** make use of the following functions: **LEFT,RIGHT,SUBSTRING,UPPER,LOWER**

**Exercise 4.1.2 – Search**

Display the following in a single SELECT from **dept** (using the CHARINDEX function)

1. **dept\_name**
2. The position of the first space character (" ") in **dept\_name**
3. The starting position of ‘systems’ in **dept\_name**

**Note:** Using the above two positional indexes you can get the name of the system or the first word of the department's name.   
Try this if you've time.

## Exercise 4.2 – Date / Time Functions

**Exercise 4.2.1 – Date**

Display the following in a single SELECT from **sale**Tip: use these functions: CAST, CONCAT, LEFT and   
DATEPART(mm, somedate), DATEPART(yyy, somedate),   
DATENAME(mi, somedate), DATENAME(s, somedate)

1. **order\_date**
2. Just the date part of **order\_date**
3. The date of **order\_date** in format:

* 3 letter name of day
* 2 digit day-of-month
* 3 letter name of month
* 4 digit year
* For example: “Fri 20 Jan 2017”

**Exercise 4.2.2 – Time**

Display the following in a single SELECT from **sale**

1. **order\_date**
2. Just the time part of **order\_date**
3. The time of **order\_date** in format: HH:MM:SS – For example: “15:49:21”

**Exercise 4.2.3 – Current Date / Time**

Display the following in a single SELECT from **sale**

1. The current date and time using SYSDATE as a number
2. The current date and time using SYSDATE as a number
3. Just the UTC date
4. Just the UTC time

**Tip:** Use the GATEDATE function to get the current data and time.  
For the rest, try the CAST function AS INT, DATE and TIME

**Exercise 4.2.4 – Date / Time Calculations**

Display the following in a single SELECT from **sale**

1. The current date and time using the GETDATE() function
2. **order\_date**
3. Add 1 week to **order\_date**Subtract 1 hour from **order\_date**
4. Time difference between current date and time and noon today.

**Tip**: Use the DATEDIFF() function. Use the DATEADD() function with the first parameter of WEEK,HOUR and hh. View the slides for more info.

## Exercise 4.3 – Conversion Functions

**Exercise 4.3.1 – Conversion Functions**

Display the following in a single SELECT from **sale**

1. **order\_value**
2. Round **order\_value** to one decimal places  
   Tip: Use the CAST/CONVER and ROUND functions

## Exercise 4.4 – NULL Functions

**Exercise 4.4.1 – NULL Functions**

Display the following in a single SELECT from **salesperson**

1. **emp\_no**
2. **notes** as is (NULL or not)
3. If **notes** is NULL display "No Notes Specified"

## Exercise 4.5 – Nested Functions

**Exercise 4.5.1 – Nested Functions**

Display the following in a single SELECT from **sale**

1. **order\_date**
2. Current date and time
3. Minutes of current date and time
4. Minutes of current date and time rounded to nearest 10 minutes  
   Tip: Use the DATEPART() function. View the slides.