Excel
Database functions

Catarina
Oliveira

DCT DEPARTAMENTO **CIÊNCIA**
E TECNOLOGIA

UNIVERSIDADE PORTUCALENSE

CONTENT

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Objective

Perform operations over a table's column

The operations are performed according to a set of user-defined criteria

Combination of mathematical and statistical operations over tables/ranges with criteria also used in advanced filters

Allow performing conditional operations on a column

Database functions all have the same structure:
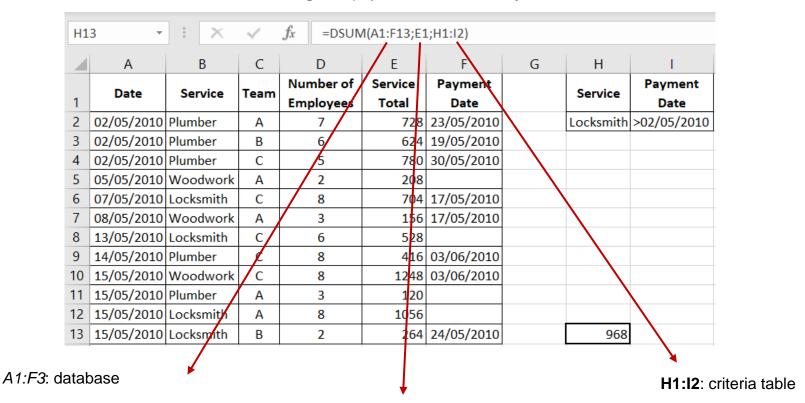
FUNCTION(database; column; table of criteria)

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DSUM (1)

Obtain the **total value of the services** of **Plumbing** with payment date **after May 2nd, 2010**

H13 · =DSUM(A1:F13;E1;H1:I2)

	A	B	C	D	E	F	G	H	I
1	Date	Service	Team	Number of Employees	Service Total	Payment Date		Service	Payment Date
2	02/05/2010	Plumber	A	7	728	23/05/2010		Locksmith	>02/05/2010
3	02/05/2010	Plumber	B	6	624	19/05/2010			
4	02/05/2010	Plumber	C	5	780	30/05/2010			
5	05/05/2010	Woodwork	A	2	208				
6	07/05/2010	Locksmith	C	8	704	17/05/2010			
7	08/05/2010	Woodwork	A	3	156	17/05/2010			
8	13/05/2010	Locksmith	C	6	528				
9	14/05/2010	Plumber	C	8	416	03/06/2010			
10	15/05/2010	Woodwork	C	8	1248	03/06/2010			
11	15/05/2010	Plumber	A	3	120				
12	15/05/2010	Locksmith	A	8	1056				
13	15/05/2010	Locksmith	B	2	264	24/05/2010		968	

1st step:

It is mandatory to define a table with the criteria

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DSUM (2)

Obtain the **total value of the services** of **Plumbing** with payment date **after May 2nd, 2010**

| H13 | | | ✗ ✓ | f_x | =DSUM(A1:F13;E1;H1:I2) | | | | |

	A	B	C	D	E	F	G	H	I
1	Date	Service	Team	Number of Employees	Service Total	Payment Date		Service	Payment Date
2	02/05/2010	Plumber	A	7	728	23/05/2010		Locksmith	>02/05/2010
3	02/05/2010	Plumber	B	6	624	19/05/2010			
4	02/05/2010	Plumber	C	5	780	30/05/2010			
5	05/05/2010	Woodwork	A	2	208				
6	07/05/2010	Locksmith	C	8	704	17/05/2010			
7	08/05/2010	Woodwork	A	3	156	17/05/2010			
8	13/05/2010	Locksmith	C	6	528				
9	14/05/2010	Plumber	C	8	416	03/06/2010			
10	15/05/2010	Woodwork	C	8	1248	03/06/2010			
11	15/05/2010	Plumber	A	3	120				
12	15/05/2010	Locksmith	A	8	1056				
13	15/05/2010	Locksmith	B	2	164	24/05/2010		968	

A1:F3: database

E1: cell with the title of the column to use

H1:I2: criteria table

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DSUM (3)

Obtain the **total value of the services** of **Plumbing** with payment date **after May 2nd, 2010**

| H13 | | | × | ✓ | f_x | =DSUM(A1:F13;5;H1:I2) |

	A	B	C	D	E	F	G	H	I
1	Date	Service	Team	Number of Employees	Service Total	Payment Date		Service	Payment Date
2	02/05/2010	Plumber	A	7	728	23/05/2010		Locksmith	>02/05/2010
3	02/05/2010	Plumber	B	6	624	19/05/2010			
4	02/05/2010	Plumber	C	5	780	30/05/2010			
5	05/05/2010	Woodwork	A	2	208				
6	07/05/2010	Locksmith	C	8	704	17/05/2010			
7	08/05/2010	Woodwork	A	3	156	17/05/2010			
8	13/05/2010	Locksmith	C	6	528				
9	14/05/2010	Plumber	C	8	416	03/06/2010			
10	15/05/2010	Woodwork	C	8	1248	03/06/2010			
11	15/05/2010	Plumber	A	3	120				
12	15/05/2010	Locksmith	A	8	1056				
13	15/05/2010	Locksmith	B	2	264	24/05/2010		968	

5: ordinal number of the column to use

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DSUM (4)

Obtain the **total value of the services** of **Plumbing** with payment date **after May 2nd, 2010**

H13			×	✓	f_x	=DSUM(A1:F13;"Service Total";H1:I2)				

	A	B	C	D	E	F	G	H	I
1	Date	Service	Team	Number of Employees	Service Total	Payment Date		Service	Payment Date
2	02/05/2010	Plumber	A	7	728	23/05/2010		Locksmith	>02/05/2010
3	02/05/2010	Plumber	B	6	624	19/05/2010			
4	02/05/2010	Plumber	C	5	780	30/05/2010			
5	05/05/2010	Woodwork	A	2	208				
6	07/05/2010	Locksmith	C	8	704	17/05/2010			
7	08/05/2010	Woodwork	A	3	156	17/05/2010			
8	13/05/2010	Locksmith	C	6	528				
9	14/05/2010	Plumber	C	8	416	03/06/2010			
10	15/05/2010	Woodwork	C	8	1248	03/06/2010			
11	15/05/2010	Plumber	A	3	120				
12	15/05/2010	Locksmith	A	8	1056				
13	15/05/2010	Locksmith	B	2	264	24/05/2010		968	

"Service Total": title of the column to use

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DSUM (4)

Obtain the **total value of the services** of **Plumbing** of team **C** with payment date **after May 2nd, 2010**

H13   fx   =DSUM(A1:F13;"Service Total";H1:J2)

	A	B	C	D	E	F	G	H	I	J
1	Date	Service	Team	Number of Employees	Service Total	Payment Date		Service	Team	Payment Date
2	02/05/2010	Plumber	A	7	728	23/05/2010		Locksmith	C	>02/05/2010
3	02/05/2010	Plumber	B	6	624	19/05/2010				
4	02/05/2010	Plumber	C	5	780	30/05/2010				
5	05/05/2010	Woodwork	A	2	208					
6	07/05/2010	Locksmith	C	8	704	17/05/2010				
7	08/05/2010	Woodwork	A	3	156	17/05/2010				
8	13/05/2010	Locksmith	C	6	528					
9	14/05/2010	Plumber	C	8	416	03/06/2010				
10	15/05/2010	Woodwork	C	8	1248	03/06/2010				
11	15/05/2010	Plumber	A	3	120					
12	15/05/2010	Locksmith	A	8	1056					
13	15/05/2010	Locksmith	B	2	264	24/05/2010		704		

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Do conhecimento à prática.