

## Advanced filter

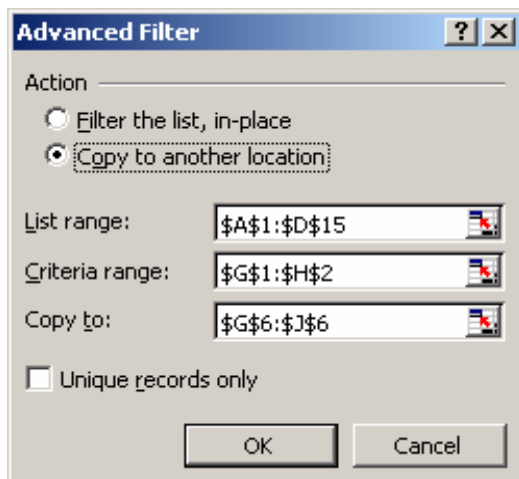
The Advanced Filter enable you to create a more complex selection then AutoFilter based on different criteria in multiple columns.

- random sampling
- checking data integrity between original list and working list
- selecting list of employees beeing among 20% best paid
- set the list of employees with salary between 85% - 115% of average value
- identify values missing in list A and occuring in list B



Name	Department	Salary	Quarter
Jameson	Marketing	€ 14 667	Q2
Smith	Marketing	€ 14 333	Q1
Kingsly	Marketing	€ 14 333	Q1
Barow	Marketing	€ 12 000	Q2
Star	Controlling	€ 10 667	Q2
Basil	Controlling	€ 8 333	Q2
Rowny	Controlling	€ 10 667	Q2
Carlsson	Controlling	€ 7 333	Q1
Baker	Audit	€ 15 333	Q1
Porter	Audit	€ 17 933	Q1
Black	Audit	€ 10 667	Q1
Arrow	Audit	€ 11 333	Q2
Hawkey	IT	€ 11 000	Q2
Parker	IT	€ 20 333	Q2

Average € 12 781



TRUE	TRUE

=C2>=AVERAGE(\$C\$2:\$C\$15)\*0,85  
 =C2<=AVERAGE(\$C\$2:\$C\$15)\*1,15

Name	Department	Salary	Quarter
Jameson	Marketing	€ 14 667	Q2
Smith	Marketing	€ 14 333	Q1
Kingsly	Marketing	€ 14 333	Q1
Barow	Marketing	€ 12 000	Q2
Arrow	Audit	€ 11 333	Q2
Hawkey	IT	€ 11 000	Q2

**How to set the list of employees with salary between 85% - 115% of average value.**

- 1- Select a cell of our data (for example A1)
- 2 - **Data/Filter/Advanced filter**
- 3 - Activate **Copy to another position**
- 4 - Define criteria range (**G1:H2**)
- 5 - Define target range - Copy to: (**G6:J6**)

Name	Department	Salary	Quarter
Jameson	Marketing	€ 14 667	Q2
Smith	Marketing	€ 14 333	Q1
Kingsly	Marketing	€ 14 333	Q1
Barow	Marketing	€ 12 000	Q2
Star	Controlling	€ 10 667	Q2
Basil	Controlling	€ 8 333	Q2
Rowny	Controlling	€ 10 667	Q2
Carlsson	Controlling	€ 7 333	Q1
Baker	Audit	€ 15 333	Q1
Porter	Audit	€ 17 933	Q1
Black	Audit	€ 10 667	Q1
Arrow	Audit	€ 11 333	Q2
Hawkey	IT	€ 11 000	Q2
Parker	IT	€ 20 333	Q2

Average € 12 781

Check

FALSE
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=C2>=PERCENTILE(\$C\$2:\$C\$15;1-0,2)

Name	Department	Salary	Quarter
Baker	Audit	€ 15 333	Q1
Porter	Audit	€ 17 933	Q1
Parker	IT	€ 20 333	Q2

Top 20 %

Top 20 %

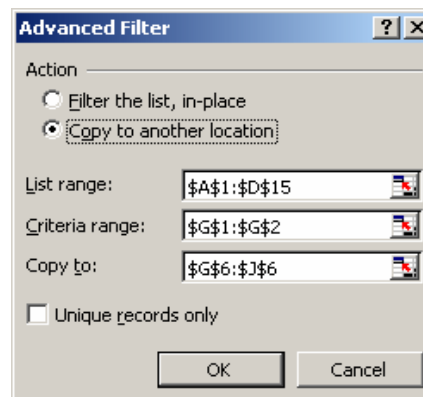
Top 20 %

### How to set the list of employees being among 20% best paid.

- 1- Select a cell of our data (for example A1)
- 2 - **Data/Filter/Advanced filter**
- 3 - Activate **Copy to another position**
- 4 - Define criteria range (**G1:G2**)
- 5 - Define target range - Copy to: (**G6:J6**)

Salary	Unique values	Frequency	Ratio	Cumulative
€ 7 333	€ 7 333	1	7,14%	7,14%
€ 8 333	€ 8 333	1	7,14%	14,29%
€ 10 667	€ 10 667	3	21,43%	35,71%
€ 10 667	€ 11 000	1	7,14%	42,86%
€ 10 667	€ 11 333	1	7,14%	50,00%
€ 11 000	€ 12 000	1	7,14%	57,14%
€ 11 333	€ 14 333	2	14,29%	71,43%
€ 12 000	€ 14 667	1	7,14%	78,57%
€ 14 333	€ 15 333	1	7,14%	85,71%
€ 14 333	€ 17 933	1	7,14%	92,86%
€ 14 667	€ 20 333	1	7,14%	100,00%
€ 15 333				
€ 17 933				
€ 20 333				

{=FREQUENCY(Salary,Unique values)}



Nom1

Paris
Prague
New York
Caracas
Montreal
Roma
Hamburg
London
Barcelona

Nom2

Prague
San Diego
Roma
London
Stockholm
Wien

Criterion  
TRUE

```
=SUMPRODUCT((nom1=C2)*1)>0  
or  
=COUNTIF(nom1;C2)>0
```

Nom2

Prague
Roma
London

values occurring in both lists Nom1 and Nom2

**How to select duplicates in two lists**

- 1- Select a cell **C2**
- 2 - **Data/Filter/Advanced filter**
- 3 - Activate **Copy to another position**
- 4 - Define criteria range (**E1:E2**)
- 5 - Define target range - Copy to: **J1**



**Named ranges**

nom1 =DuplicatesFilter!\$A\$2:\$A\$10  
nom2 =DuplicatesFilter!\$C\$2:\$C\$7

Nom1

Paris
Prague
New York
Caracas
Montreal
Roma
Hamburg
London
Barcelona

Nom2

Prague
San Diego
Roma
London
Stockholm
Wien

Criterion  
FALSE

=SUMPRODUCT((nom1=C2)\*1)>0  
nebo  
=COUNTIF(nom1;C2)>0

Nom2

San Diego
Stockholm
Wien

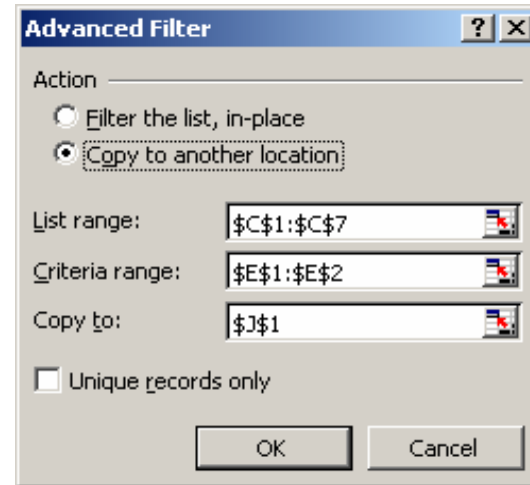
values occuring in list  
Nom2 but missing in list  
Nom1

**Filter "new" values from original list**

- 1- Select a cell **C2**
- 2 - **Data/Filter/Advanced filter**
- 3 - Activate **Copy to another position**
- 4 - Define criteria range (**E1:E2**)
- 5 - Define target range - Copy to: **J1**

**Pojmenované oblasti**

nom1 =NewValuesFilter\$A\$2:\$A\$10  
nom2 =NewValuesFilter\$C\$2:\$C\$7



CustNr	Customer	Amount
1001	PQR CO	28 188,36
1002	PPP CO	9 454,31
1003	DEF CO	19 218,48
1004	WWW CO	33 178,44
1005	RRR CO	13 870,15
1006	VWX CO	27 162,13
1007	OOO CO	7 720,55
1008	QQQ CO	31 976,70
1009	BBB CO	11 648,71
1010	HHH CO	10 445,43
1011	VVV CO	33 004,62
1012	YZZ CO	26 815,11
1013	SSS CO	39 676,11
1014	UUU CO	27 578,32
1015	YYY CO	15 175,02
1016	GGG CO	2 341,67
1017	ABC CO	5 956,79
1018	LLL CO	30 096,98

FALSE

select randomly

CustNr	Customer	Amount
1 1019	MNO CO	30 845,99
2 1085	YYY CO	32 274,99
3 1090	STU CO	12 292,69
4 1096	GHI CO	7 342,42
5 1125	STU CO	20 169,22
6 1150	HHH CO	29 330,08
7 1232	III CO	11 250,80
8 1279	CCC CO	38 152,98
9 1284	WWW CO	27 259,35
10 1367	ABC CO	3 849,73
11 1474	MNO CO	20 117,70
12 1485	KKK CO	20 331,70
13 1514	AAA CO	36 332,50
14 1608	SSS CO	8 209,35
15 1614	MNO CO	8 082,60
16 1627	JKL CO	12 500,59
17 1679	UUU CO	24 636,21
18 1712	YZZ CO	13 099,28
19 1795		

Advanced Filter

Action

Filter the list, in-place

Copy to another location

List range: \$A\$1:\$C\$1435

Criteria range: \$E\$1:\$E\$2

Copy to: \$G\$1:\$I\$1

Unique records only

OK Cancel

Why I use value 0.02 in formula =RAND()**0.02** for filter criteria?

The value estimates probable number of selected records.

- original data set has 800 records
- $800 * 0,02 = 16$
- so we expect as result roughly 16 records

1033	MMM CO	8 796,27
1034	CCC CO	36 620,17
1035	ZZZ CO	15 156,03
1036	PQR CO	15 801,54
1037	PPP CO	35 365,67
1038	DEF CO	14 653,55
1039	WWW CO	970,03
1040	RRR CO	15 158,05
1041	VWX CO	35 670,82
1042	OOO CO	11 535,61
1043	QQQ CO	19 688,75
1044	BBB CO	11 676,16
1045	HHH CO	3,17
1046	VVV CO	39 626,50
1047	YZZ CO	20 283,77
1048	SSS CO	15 351,68
1049	UUU CO	17 319,55

CustNr	CustomerID
1048-0630-9	WWW CO
1048-6348-5	RRR CO
1077-7850-1	VWX CO
1148-7366-7	OOO CO
1042-5166-8	PQR CO
1055-3948-9	PPP CO
1044-8652-5	DEF CO
1283-0434-7	BBA CO

Criterion  
FALSE

CustNr	CustomerID
1077-7850-1	VWX CO
1055-3948-9	PPP CO
1283-0434-7	BBA CO

=SUMPRODUCT((CustomerNr\_List=A2)\*(CustomerID\_List=B2))=0

CustNr	CustomerID
1042-5166-8	PQR CO
1044-3948-9	PPP CO
1044-8652-5	DEF CO
1048-0630-9	WWW CO
1048-6348-5	RRR CO
1077-7850-0	VWX CO
1148-7366-7	OOO CO
1157-1106-7	QQQ CO
1283-0434-7	BBB CO

**How to check data integrity  
(to filter records occurring in working list A1:B9 and missing in original list J1:K10)**

- 1- Select a cell **A1**
- 2 - **Data/Filter/Advanced filter**
- 3 - Activate **Copy to another position**
- 4 - Define criteria range (**D1:D2**)
- 5 - Define target range - Copy to: **F1:G1**

**Named Ranges**

CustomerNr\_List =DataIntegrity!\$J\$2:\$J\$7  
CustomerID\_List =DataIntegrity!\$K\$2:\$K\$7

