

Overview of an Information System

From Raw Data to Information

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Raw Data

	A	B	C	D	E	F	G	H	I
1	bkcode	bktitle	author_last	author_first	pub_year	pub_code	category	cost	in_stock
2	BN-0180	Shyness	Zinbardo	Philip	1992	BB	PSY	7.65	6
3	BN-0189	Kane and Abel	Archer	Jeffrey	1993	PB	FIC	5.55	5
4	BN-0200	The Stranger	Camus	Albert	1995	BB	FIC	8.75	6
5	BN-079X	Smoke-screen	Francis	Dick	1990	PB	MYS	4.55	8
6	BN-0808	Knockdown	Francis	Dick	1996	PB	MYS	4.75	2
7	BN-1351	Cujo	King	Stephen	1991	SG	HOR	6.65	4
8	BN-1382	Marcel Duchamp	Paz	Octavio	1992	PB	ART	11.25	15
9	BN-138X	Death on the Nile	Christie	Agatha	1992	BB	MYS	3.95	15
10	BN-2226	Ghost from the Grand Banks	Clarke	Arthur C.	1996	BB	SFI	19.95	3
11	BN-2281	Prints of the 20th Century	Castleman	Riva	1995	PB	ART	13.25	9
12	BN-2766	The Prodigal Daughter	Archer	Jeffrey	1991	PB	FIC	5.45	1
13	BN-3350	Higher Creativity	Harmon	Willis	1994	PB	PSY	9.75	7
14	BN-3743	First Among Equals	Archer	Jeffrey	1992	PB	FIC	3.95	10
15	BN-3906	Vortex	Cussler	Clive	1992	BB	SUS	5.45	10
16	BN-5183	The Organ	Williams	Peter	1994	SG	MUS	16.95	10
17	BN-5790	Database Systems	Pratt	Philip	1992	BF	CS	54.95	6
18	BN-6128	Evil Under the Sun	Christie	Agatha	1992	PB	MYS	4.45	8
19	BN-6328	Vixen 07	Cussler	Clive	1996	BB	SUS	5.55	3
20	BN-689X	A Guide to SQL	Pratt	Philip	1990	BF	CS	23.95	3
21	BN-6908	DOS Essentials	Southworth	Rod	1995	BF	CS	20.5	12
22	BN-7405	Night Probe	Cussler	Clive	1993	BB	SUS	5.65	14
23	BN-7443	Carrie	King	Stephen	1996	SG	HOR	6.75	7
24	BN-7559	Risk	Francis	Dick	1996	PB	MYS	3.95	9

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Limit types of data (Limit columns)

	B	C	D	I
1	bktitle	author_last	author_first	
2	Shyness	Zinbardo	Philip	
3	Kane and Abel	Archer	Jeffrey	
4	The Stranger	Camus	Albert	
5	Smoke-screen	Francis	Dick	
6	Knockdown	Francis	Dick	
7	Cujo	King	Stephen	
8	Marcel Duchamp	Paz	Octavio	
9	Death on the Nile	Christie	Agatha	
10	Ghost from the Grand Banks	Clarke	Arthur C.	
11	Prints of the 20th Century	Castleman	Riva	
12	The Prodigal Daughter	Archer	Jeffrey	
13	Higher Creativity	Harmon	Willis	
14	First Among Equals	Archer	Jeffrey	
15	Vortex	Cussler	Clive	
16	The Organ	Williams	Peter	
17	Database Systems	Pratt	Philip	
18	Evil Under the Sun	Christie	Agatha	
19	Vixen 07	Cussler	Clive	
20	A Guide to SQL	Pratt	Philip	
21	DOS Essentials	Southworth	Rod	
22	Night Probe	Cussler	Clive	
23	Carrie	King	Stephen	
24	Risk	Francis	Dick	

Display only bktitle, author_last and author_first

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Filtered Data (limit rows)

	A	B	C	D	E	F	G	H	I
1	bkcode	bktitle	author_la	author_fi	pub_ye	pub_coi	category	cost	in_sto
2	BN-0180	Shyness	Zinbardo	Philip	1992	BB	PSY	7.65	6
4	BN-0200	The Stranger	Camus	Albert	1995	BB	FIC	8.75	6
9	BN-138X	Death on the Nile	Christie	Agatha	1992	BB	MYS	3.95	15
10	BN-2226	Ghost from the Grand Banks	Clarke	Arthur C.	1996	BB	SFI	19.95	3
15	BN-3906	Vortex	Cussler	Clive	1992	BB	SUS	5.45	10
19	BN-6328	Vixen 07	Cussler	Clive	1996	BB	SUS	5.55	3
22	BN-7405	Night Probe	Cussler	Clive	1993	BB	SUS	5.65	14

Pub_code = "BB"

	A	B	C	D	E	F	G	H	I
1	bkcode	bktitle	author_la	author_fi	pub_ye	pub_coi	category	cost	in_sto
9	BN-138X	Death on the Nile	Christie	Agatha	1992	BB	MYS	3.95	15
15	BN-3906	Vortex	Cussler	Clive	1992	BB	SUS	5.45	10
19	BN-6328	Vixen 07	Cussler	Clive	1996	BB	SUS	5.55	3
22	BN-7405	Night Probe	Cussler	Clive	1993	BB	SUS	5.65	14

Pub_code = "BB" AND cost < 7

	A	B	C	D	E	F	G	H	I
1	bkcode	bktitle	author_la	author_fi	pub_ye	pub_coi	category	cost	in_sto
5	BN-079X	Smoke-screen	Francis	Dick	1990	PB	MYS	4.55	8
6	BN-0808	Knockdown	Francis	Dick	1996	PB	MYS	4.75	2
9	BN-138X	Death on the Nile	Christie	Agatha	1992	BB	MYS	3.95	15
18	BN-6128	Evil Under the Sun	Christie	Agatha	1992	PB	MYS	4.45	8
24	BN-7559	Risk	Francis	Dick	1996	PB	MYS	3.95	9

Author_last = "Francis" OR Author_last = "Christie"

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Sort Data

A	B	C	D	E	F	G	H	I	J
1	bkcode	bktitle	author_last	author_first	pub_year	pub_code	category	cost	in_stock
2	BN-2281	Prints of the 20th Century	Castelman	Riva	1995	PB	ART	13.25	9
3	BN-1382	Marcel Duchamp	Paz	Octavio	1992	PB	ART	11.25	15
4	BN-5790	Database Systems	Pratt	Philip	1992	BF	CS	54.95	6
5	BN-690X	A Guide to SQL	Pratt	Philip	1990	BF	CS	23.95	3
6	BN-6908	DOS Essentials	Southworth	Rod	1995	BF	CS	20.5	12
7	BN-0189	Kane and Abel	Archer	Jeffrey	1993	PB	FIC	5.55	5
8	BN-2766	The Prodigal Daughter	Archer	Jeffrey	1991	PB	FIC	5.45	1
9	BN-3743	First Among Equals	Archer	Jeffrey	1992	PB	FIC	3.95	10
10	BN-0200	The Stranger	Camus	Albert	1995	BB	FIC	8.75	6
11	BN-1351	Cujo	King	Stephen	1991	SG	HOR	6.65	4
12	BN-7443	Carrie	King	Stephen	1996	SG	HOR	6.75	7
13	BN-5163	The Organ	Williams	Peter	1994	SG	MUS	16.95	10
14	BN-138X	Death on the Nile	Christie	Agatha	1992	BB	MYS	3.95	15
15	BN-6128	Evil Under the Sun	Christie	Agatha	1992	PB	MYS	4.45	8
16	BN-079X	Smoke-screen	Francis	Dick	1990	PB	MYS	4.55	8
17	BN-0808	Knockdown	Francis	Dick	1996	PB	MYS	4.75	2
18	BN-7559	Risk	Francis	Dick	1996	PB	MYS	3.95	9
19	BN-3350	Higher Creativity	Harmon	Willis	1994	PB	PSY	9.75	7
20	BN-0180	Shyness	Zimbardo	Philip	1992	BB	PSY	7.65	6
21	BN-2226	Ghost from the Grand Banks	Clarke	Arthur C.	1996	BB	SFI	19.95	3
22	BN-3906	Vortex	Cussler	Clive	1992	BB	SUS	5.45	10
23	BN-6328	Vixen 07	Cussler	Clive	1996	BB	SUS	5.55	3
24	BN-7405	Night Probe	Cussler	Clive	1993	BB	SUS	5.65	14

Sort

☒ My data has headers

Column	Sort On	Order
Sort by category	Cell Values	A to Z
Then by author_last	Cell Values	A to Z

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Perform Calculations

A	B	C	D	E	F	G	H	I	J
1	bkcode	bktitle	author_last	author_first	pub_year	pub_code	category	cost	in_stock value_of_inventory
2	BN-0180	Shyness	Zimbardo	Philip	1992	BB	PSY	7.65	6 45.9
3	BN-0189	Kane and Abel	Archer	Jeffrey	1993	PB	FIC	5.55	5 27.75
4	BN-0200	The Stranger	Camus	Albert	1995	BB	FIC	8.75	6 52.5
5	BN-079X	Smoke-screen	Francis	Dick	1990	PB	MYS	4.55	8 36.4
6	BN-0808	Knockdown	Francis	Dick	1996	PB	MYS	4.75	2 9.5
7	BN-1351	Cujo	King	Stephen	1991	SG	HOR	6.65	4 26.6
8	BN-1382	Marcel Duchamp	Paz	Octavio	1992	PB	ART	11.25	15 168.75
9	BN-138X	Death on the Nile	Christie	Agatha	1992	BB	MYS	3.95	15 59.25
10	BN-2226	Ghost from the Grand Banks	Clarke	Arthur C.	1996	BB	SFI	19.95	3 59.85
11	BN-2281	Prints of the 20th Century	Castelman	Riva	1995	PB	ART	13.25	9 119.25
12	BN-2766	The Prodigal Daughter	Archer	Jeffrey	1991	PB	FIC	5.45	1 5.45
13	BN-3350	Higher Creativity	Harmon	Willis	1994	PB	PSY	9.75	7 68.25
14	BN-3743	First Among Equals	Archer	Jeffrey	1992	PB	FIC	3.95	10 39.5
15	BN-3906	Vortex	Cussler	Clive	1992	BB	SUS	5.45	10 54.5
16	BN-5163	The Organ	Williams	Peter	1994	SG	MUS	16.95	10 169.5
17	BN-5790	Database Systems	Pratt	Philip	1992	BF	CS	54.95	6 329.7
18	BN-6128	Evil Under the Sun	Christie	Agatha	1992	PB	MYS	4.45	8 35.6
19	BN-6328	Vixen 07	Cussler	Clive	1996	BB	SUS	5.55	3 16.65
20	BN-690X	A Guide to SQL	Pratt	Philip	1990	BF	CS	23.95	3 71.85
21	BN-6908	DOS Essentials	Southworth	Rod	1995	BF	CS	20.5	12 246
22	BN-7405	Night Probe	Cussler	Clive	1993	BB	SUS	5.65	14 79.1
23	BN-7443	Carrie	King	Stephen	1996	SG	HOR	6.75	7 47.25
24	BN-7559	Risk	Francis	Dick	1996	PB	MYS	3.95	9 35.55

Value_of_inventory = cost * in_stock

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Summarize Data for entire inventory

A	B	C	D	E	F	G	H	I	J
1	bkcode	bktitle	author_last	author_first	pub_year	pub_code	category	cost	in_stock value_of_inventory
2	BN-0180	Shyness	Zimbardo	Philip	1992	BB	PSY	7.65	6 45.9
3	BN-0189	Kane and Abel	Archer	Jeffrey	1993	PB	FIC	5.55	5 27.75
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5	BN-079X	Smoke-screen	Francis	Dick	1990	PB	MYS	4.55	8 36.4
6	BN-0808	Knockdown	Francis	Dick	1996	PB	MYS	4.75	2 9.5
7	BN-1351	Cujo	King	Stephen	1991	SG	HOR	6.65	4 26.6
8	BN-1382	Marcel Duchamp	Paz	Octavio	1992	PB	ART	11.25	15 168.75
9	BN-138X	Death on the Nile	Christie	Agatha	1992	BB	MYS	3.95	15 59.25
10	BN-2226	Ghost from the Grand Banks	Clarke	Arthur C.	1996	BB	SFI	19.95	3 59.85
11	BN-2281	Prints of the 20th Century	Castelman	Riva	1995	PB	ART	13.25	9 119.25
12	BN-2766	The Prodigal Daughter	Archer	Jeffrey	1991	PB	FIC	5.45	1 5.45
13	BN-3350	Higher Creativity	Harmon	Willis	1994	PB	PSY	9.75	7 68.25
14	BN-3743	First Among Equals	Archer	Jeffrey	1992	PB	FIC	3.95	10 39.5
15	BN-3906	Vortex	Cussler	Clive	1992	BB	SUS	5.45	10 54.5
16	BN-5163	The Organ	Williams	Peter	1994	SG	MUS	16.95	10 169.5
17	BN-5790	Database Systems	Pratt	Philip	1992	BF	CS	54.95	6 329.7
18	BN-6128	Evil Under the Sun	Christie	Agatha	1992	PB	MYS	4.45	8 35.6
19	BN-6328	Vixen 07	Cussler	Clive	1996	BB	SUS	5.55	3 16.65
20	BN-690X	A Guide to SQL	Pratt	Philip	1990	BF	CS	23.95	3 71.85
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22	BN-7405	Night Probe	Cussler	Clive	1993	BB	SUS	5.65	14 79.1
23	BN-7443	Carrie	King	Stephen	1996	SG	HOR	6.75	7 47.25
24	BN-7559	Risk	Francis	Dick	1996	PB	MYS	3.95	9 35.55
25									
26	Total							179	1804.65
27	Largest							54.95	15 329.7
28	Smallest							3.95	1 5.45

SUM, MAX, MIN functions to find totals, and largest, smallest and average values for entire inventory

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Summarize Data for subgroups in the inventory

A	B	C	D
1			
2			
3	Row Labels	Max of cost	Min of cost
4	ART	13.25	11.25
5	CS	54.95	20.5
6	FIC	8.75	3.95
7	HOR	6.75	6.65
8	MUS	16.95	16.95
9	MYS	4.75	3.95
10	PSY	9.75	7.65
11	SFI	19.95	19.95
12	SUS	5.65	5.45
13	Grand Total	54.95	3.95
14			

Find the largest, smallest and average cost for each category and for entire inventory

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