

一、统计函数的使用：

1、在表 item 中计算所有商品的数量，价格平均值，价格最大值，价格最小值，价格方差。

```
select count(i_id), avg(i_price), max(i_price), min(i_price), var_pop(i_price) from  
bmsql_item;
```

```
benchmarksql=> select count(*), avg(i_price), max(i_price), min(i_price), var_pop(i_price) from bmsql_item;  
count | avg | max | min | var_pop  
-----+-----+-----+-----+-----  
100000 | 50.4427049000000000 | 100.00 | 1.00 | 820.7008001625159900  
(1 行记录)
```

2、在表 stock 中统计每个仓库保存的商品数量平均值，输出列为 w_id, avg。

```
select s_w_id as w_id, avg(s_quantity) as avg from bmsql_stock group by s_w_id;
```

w_id	avg
1	55.1465100000000000
2	54.9995600000000000
3	55.0342200000000000
4	55.1251600000000000
5	55.0060600000000000
6	54.8776200000000000
7	54.9869000000000000
8	54.8336200000000000
9	54.9940700000000000
10	55.0088500000000000
11	54.9948000000000000
12	54.7537000000000000
13	55.1379500000000000
14	55.0578400000000000
15	55.0433200000000000
16	55.0030800000000000
17	55.0069400000000000
18	55.0266800000000000
19	55.0091100000000000
20	54.9314300000000000
21	54.9991200000000000
22	55.1248400000000000
23	55.0337800000000000
24	55.1471800000000000
25	55.1357500000000000
26	54.9420900000000000
27	54.9271700000000000
28	54.9154200000000000
29	55.0274800000000000
30	55.0411400000000000
31	54.9130000000000000
32	54.8784600000000000
33	55.1345100000000000
34	54.9224500000000000
35	55.0414200000000000
36	54.9449300000000000
37	54.9103500000000000

```

37 | 54.9103500000000000
38 | 55.1366500000000000
39 | 55.0301500000000000
40 | 54.9296800000000000
(40 行记录)

```

二、正则表达式的使用：

1、找出所有以'NB'为名字开头或者以'VT'为结尾的商品的所有信息；（用一个正则表达式解决，不要用 or）

select * from bmsql_item where i_name like 'NB_%' or i_name like '%VT';

i_id	i_name	i_price	i_data	i_in_id
160	NB6eH1uGmgc2s	29.30	BjSbIX8kblXajH0b9litwz7YTgHiv4r55cVDTt9mwiu	1821
2093	NBLeEtC0MyoMjYd4jXYB	70.53	oH669yWZ3CgyhSfaILyD8Xh05rFMK89j6aVLQ14uJGSrJTVzpp	4878
7013	NBRVVs00QgMh5TD1JhMa	25.06	QR4wnJmDgb12GpMnb0zhq57kWoV5pbE1kVwv	9920
7401	NBUu59RjJg8uMJfto1	56.98	r7wuH8Unij4jpwIZ3whfl3pIir7I	682
12695	NBW7tdbsNsZID1	82.00	tlr3lnQcPUsa9DlWMP0oSZsrOLfLIqNan4WYHgEQMnRnzGEInI	1477
12927	NBwGvc1r74kny0Fmj9zf6	7.33	v0HPJ7uBQmPQyYS2HiGj4wk60cGxyAGVBDvu2E2S	8453
13759	NBbDRrD9uj2ILnXW	68.74	nC4jRz8XfPowJprpJ5erSa63wedwdlnCn5KwTH5UIBvs1TzkJw	4212
14820	YoLKqETzUbp6I1KCQVT	1.61	MTSefnavj0DvYP7YboQyy3wtpU0tk7v6F0i8WjJj8GTZx2R9	3842
15020	CZC1Ik62819VWtVT	92.72	CFA8cCDxADSP1Ciap1mQkLcArEihsQjsaqm2RP0yxTL4	5347
16821	NBUbrAjl8MzGFJ5uV	20.91	EBwgZ4Z7ixUq3zFRQsdIqtlNngxUQ0Ub	4400
17768	qXsw3bGvBscQnG34vrjuVT	69.75	SKZ7dsXzWdELa8MGkwmM5cxsbv6dh82o	1428
18044	rI14LHbN48xKBrVT	41.50	kFgXRU3yymM71r6hPL22DaYxd5AeOHmn2CBjhExdBoiSFm	4538
20955	NB8SRWPLRwevoZ8LRnb	51.05	yRLMOPfSbhinqOvrjuGCFORIGINALR2hNOY7bXqeGOi	6400
22770	e68NISbyOpXvXB6GdhhL7VT	91.38	MhZ9ODrtmh3tAY9T8kYLgmIKApuVnTVZ8WhjpwjwObFRAtm	6122
24070	K095W8U3BhIjMGLQqzjVT	94.03	svpruv903slFwlyOwP66S2BU6Yl8q04Xlbc31NNISdi	6799
24523	f2f6P3eEogY1c3A0XWVT	52.24	p8LazqN2bvi4X9TCKFGVgwbKxxHISA4cGmmjTL000HM5pr	7574
24861	NB7reMYICr0HLRoLcti0zXFT	48.83	00ctwWLTPtAydv0t3S2UyLtrCQI4jnlW	4116
24999	OajqdrnmLkMhPDIjSBESLFT	40.61	yRXya1FqthL805DzsPD0AhizB0A	1597
29448	UGTpxwF73p53wcdVT	77.94	TMLij5PCdckluLZORIGINALP2In9	8302
29579	HyP2sLRVNBKRlhGq2DU7VT	20.17	vYERanFdcDBDAjgy2UwKhwaATjVWgd2308kIgwpsn9Sm02	3928
30228	kd3NbQQswMkOgGVt	53.21	H512ldydtYRjJfDgEKQTY5XlbnM45wW	9768
33305	NBpmGSRB6cPv2CD5LP	44.15	jchLL5nDrNT7DfmiXcp1wHTAZ	6268
33553	NB1CMRYvh33ejWbUcvJ52au	72.00	MaCWjQ0YIp8vF3J0YPo6hYnL5SvTwdcU7iGkK	2224
33710	NBYUu0b4DvgvzjC	48.36	dqphKcRNsllW5C6BED6gYaafOXST9tietclBevKLM6tNAE	1648
35146	NBg1MRK8qJ3eLD5k4fkH	97.98	Jp14bDJR1HCjWkVOPsUagip0W1wDK40aHupKF0AyQL	7702
39547	HotKdsVSopXVCaQsJh927VT	96.29	wHsvFbt3rDWUpq6B57yx9AYypwOLuc96VQvwzHLDwK8Y	2371
40264	L3HfMAU8NvbnU1wteVT	94.07	v54p7QXztUAHz5K8Q4Y4nbsAsGH2hyoG94LqGnawPq	4132
41245	cNcVH8usF9N3s89NvKKLVT	31.30	h85JaXL7a5SMBYUqMozV2VsLJCQd9FjpKbRzFdrMNQuj	1020
41621	q15pmfCE1SUGVT	90.79	zG6LmkCcApDr0R4jCeiRytgeu4	6849
42028	hyStdRfXb32ptWHz7nm3BAVT	41.47	Fkt6Eg3srIT86g8uw1cEMazShtzLRhqKndd0x8YwxL0hk0	5398
44593	NB6srxukNAgo0IQjQ	1.51	KnCFvzGnZKcGmBbsMibGafTWKscQID	4476
46084	azSGgHZAhlmluOYrVT	46.36	Pq66Sceckn01i3z9eSAjoJFh	553
49168	Cnprl0Q3VGLfMC0syCPHVT	99.12	WeKtaAJPIDFEY2Fr5ORIGINALSERWHzyko2kQNYcJT5	8846
49433	NBw9r6vs1SHXq0EPRpfdEMi	33.16	FLP3fU82J58qsNd04kRERqV7KepoyJcTuGXnxjqbS	1948
51562	RfFBog5YFDGSwqA3WJSVT	72.75	GeVqL4PpTuXcn9ndn8V0S2ZQvLvz	8852
51742	FFPe6qRLXS70vLVT	49.07	yFVP13TMFeRwUty2ICQ3h4XyHKXapYh9M7AG	6629
52241	uyiDpbxeP0aXVT	93.56	gL9QrepLFW5HAbnkoG5qU3XhgAUR5wm5B9Zt7nXP1Z0	8022
55031	LJMegHtyIrg0Cp8VT	35.32	wIv74xHzvjeDbZVnU43Z9YFwIEXY	7764
56794	Wyyq71G3yN3pbkVT	64.68	LkqNAsyY1iN3sbl5kAcTufcjQfrMP	336
58003	NB0R9xY7YCKH961j7eGsZL	20.89	U3gPxhDOR0RIGINALSfBwLh3LVyiG67FNw4UJ	193
60706	NBYLVamk6Fta0U0h0kLV9Mm	93.72	c32MSKLARtZQ1e9G2k847SjBRNx5jQ0nQMfN	2378
60826	FcEztV13cwpns3FwFLVT	32.54	QRPkGY77tXpxKSZXRvgnzXBSpwOX	1179
64336	oIAkr4ErtL8XNaeOCYvaCPVT	19.91	HvPVCAjWsofjuvgypvr2GfoVLq2WRZThroFMGEsshn0a	4201
64987	NBIldKcRxPU4HtN7SeUT	50.90	qgUv1MbBjrt8dzg1XkrS18am7xvegPo4abZUsZ4jMVMeA0424	521
65660	g5c5Gd8waA1rVT	93.16	NTNLZLZ2DCXG1KkkI1xWT9Qttvmvuocu2CWGucbX8sf8b7S0fNs	6464
66490	ACEgYRjPrG1LaVT	51.49	YwbB6pVJq3UdgLJEXfMQTbuKKL	9036
68027	NBr1YSZ4GpRKHyfr	57.58	YoXLMiTo9axMM8JbyEPVR6JrRB18w5AjiWJRS9gW	3540
68351	NBfMODJ6qq5jLkQ4Y59CaJ	87.31	d55KdMmQN6GrqUXZ2YAQ15r0jKuPNwLWmadghTZEMCO	2338
68666	TorLgKgwmgM8NSbyqzVT	10.09	KVwEUImwufPUfrapcyznNpQ5GKreth038x1WRGbxzsNv4NfhW	1144
71846	krw6pp4cNLDsRkkSrVT	56.63	AE9kyHkswyUORIGINALmh4Q7M5y0ChnY1gu3y	4547
73502	NB0lvZ5JrA0RxDrujd1Pr08	45.39	cLSQ15Sva0sf1S5uJ7CFQjthKk3CMiYthBo9x	8318
76368	NBb77IGACHX4m49qxV2aqCA	31.75	F0AR1tuc4dKpgFwHq5uSlyhYYDcm150w1ucVqKxunEuI	1361
77584	NB1QWkXfzrTmPp1IoLNU	12.44	TZSMETkkX7hActVWg1Y9bDpmE44xxfxe	4714
80958	NBUePzTktN2YUgu1uameJ7	3.42	c9MshkacvNGZ6RgNdusLytiYdrYLa	544
83091	NBMR1SnjuPyUjzAFv0	1.60	vcABLNHxv4Gi1wN5ncb8LESVunUvoJncQw	2640
84068	i4Lz7ejsP6r2LloyDVT	71.54	DNxIe7eORIGINALTWSLHSEz2g5BQNPj5QupYDdbssp9I	3758
84429	a3dpXBYaucmDprjVT	55.78	OGvJe1EZkjmkOm4UvUnwQCA4Ze	6603
84908	NB6QEVNB8CfIsb	17.32	iWkhfG32tokwMr7R04HfJTPTHFAkJ9Cq7qYigUc6XAgA2	971
85104	x5ti0PlQIRmcyKsPiXVT	2.58	YAzWuxz7JX8EMeTgxyj6KwBgj5wZdk	1142
86213	wNbF7kL8u199BkVT	29.81	N9zrFKcpbEoI9C90RheUSMrArM9JORIGINALE7	2640
89383	NB510eL9Nd46bEnc88k4M	33.29	WYiaJrM1Aa4RNo1dAbkXu47qqygt3a0M88XuddXbTyezybV	7717
91822	NBvh82iKtwviq9	41.74	L0CNHkIiOQuHbdcBtH8WbIwSHqaruW4HRRdz3Ek2	4323
92539	rYCYKRoarZbFhyVzvJk9VVT	87.83	vRrCpJrWkEHkLVkuOyKf9e0S0c2ko8G61awkbZLRPAL4nY	6690
93847	NBIgNcyPezKm6jbe	31.44	DQhbJUqr3ORIGINALan9nzFgIXyo7aFNrdQU00Suf	7968
93972	NB190ZxeILM89a9BV	86.05	syQVIZhuu4gWQ0kcytocELBnezK2a9B2AwpeE97YmHfBp	2479

(67 行记录)

2、统计以名字开头字母在 h-m 之间的商品数量，以及平均价格。

```
select count(i_id), avg(i_price) from bmsql_item where i_name >= 'h_%' and i_name  
<= 'm_%';
```

count	avg
19357	50.3375812367618949

(1 行记录)

三、all/any 的使用：

我们作以下定义：

如果商品 a 在仓库 b 中的数量大于 10，则称为仓库 b 有储备商品 a；

如果数量大于 50，则称仓库 b 有充分储备商品 a；

如果数量大于 95，则称仓库 b 主要储备商品 a。

· 商品 a 在仓库 b 中的数量为 s_quantity from bmsql_stock where s_i_id=a and s_w_id=b。

1、对于二.1 中的商品，找出在所有仓库中都有储备的商品，输出商品的所有信息。

```
select * from bmsql_item where i_id in (select i_id from bmsql_item where  
i_name like 'NB_%' or i_name like '%VT') and 10 < all(select s_quantity from  
bmsql_stock where s_i_id = i_id);
```

i_id	i_name	i_price	i_data	i_in_id
7401	NBUu59RJjg8uMJFto1	56.98	r7wuH8uNj4jpWIZ3whfL3pIIR7I	682
12695	NBW7idsNsZID1	82.00	tir3lnQcPUsa9DiwWP0oSzsrOLfLIqNan4WYHgEQMnrnzGEinI	1477
12927	NBWGvc1r74knyOfmj9zf6	7.33	v0HPJ7uBQMqQyYS2HiGj4wk60cGxyAGVBDvu2E25	8453
13759	NBb8DRrD9uj2IlnXW	68.74	nC4jRz8XfPowJprpJ5erSa63wedWdlnCn5KwTH5UIBvs1TzkJw	4212
14820	YoLKqETzUbp6I1KCYVT	1.61	MTSefnavj0DvYP7YboQyY3wtpU0tk7v6F0i8WjJj8GTZx2R9	3842
15020	CZC1Ik6Z8l9VWlVT	92.72	CfA8cCDxADSP1Ciap1mQkLcArEihsQjsaqm2RP0yxTL4	5347
16821	NBUbrAjL8mzGFJSuV	20.91	EBwgZ4Z7ixUq3zFRQsdIqtlnXgUQ0Ub	4400
20955	NB8SRWPLR9wevoZ8lRnb	51.05	yRLuMOPfSbhtqn0VrjuGCFORIGINALR2hNOY7bXqG0i	6400
22770	ee6NISbyOpXvXB6GdhhL7VT	91.38	MHZ90Drtmh3tAY9T8kYLGMiKApuVnTVZ8WhjpjwT0bFRAtm	6122
24070	K09SW8UJBhIjMGLQzjVT	94.03	svppruv903sLfVwyOWPx66S2BU6YoLbQ04Xlbc31NNISdi	6799
24523	f2f6PJeEogY1c3AOXWVT	52.24	p8LazqN2bvi4X9TCKFGVwgbKxxHlSA4CbGmmjTL000HW5pr	7574
24861	NB7reMYICr0HLR0lci10ZxFT	48.83	00ctwWLTpTaydDv0T352UYltrCQI4jnwY	4116
24999	OajqdrnmLkMhPDIjSBESLFVT	40.61	yRXya1FqthLBO5DZsPD0AhizBQA	1597
33305	NBpmGSBR6BcpV2cD5LP	44.15	jChilS5nDrNT7DlFmiXcp1wHTAZ	6268
33710	NBYUu8o4DvgzvjC	48.36	dqphKcRNsllW5G6BED6gYaafoXST9tietclBevKLM6tNAE	1648
41245	cNcVH8uSFN93s89NvKKLVT	31.30	h85JaXL7aSSMBYUqM0zV2VslQJCQd9FjpkBrZFDrMNQj	1020
42028	hyStdRFXb32ptwWz7nm3BAVT	41.47	Fkt6Eg3srIT86g8uw1cEMAz5htzLRQhQKnndOx8YwxL0hk0	5398
44593	NB6srxukNag01QJq	1.51	KmCFvZGnZkCGmBbSMiBGAFTwKseCQlD	4476
46084	azSGgmZhlmuLoDyrvT	46.36	VqP66Sceckn0i13z9eSAj0JfDA	553
49168	CnprbIoQ3VGfLMC0syCPHVT	99.12	WeKTAjPIDfEY2Fr5ORIGINALsERWHzyko2kQNYcjT5	8846
51562	RiFBog5YFDGdSwqAjWJSVT	72.75	GeVqL4PpTuXcn9ndn8V0S2ZQv1vz	8852
53139	NBqQqQvyisfDf9	70.34	cBFvNa63UpU5GDpKtrub27BYMdmEBZCd	5735
58003	NB089vX7YCKH961j7eGsZL	20.89	U3gPxhDORORIGINALfsBwLh3LvyiG67FNw4UJ	193
60706	NBYLVamk6stFA0U0hkLV9MMm	93.72	c32MSKLaRtZQ1e9G2kB47SjBRNxSjQ0nQMFN	2378
64336	oIAKr4ERTl8XNaeOCYvaCPVT	19.91	HvPVCajjWSofjuvgypvr2Gf0VlQ2WRZThroFnMGEsshn0a	4201
64987	NBIidKcRxpU4Htn75eUT	50.90	qgUv1MbBjrt8dzg1Xkr5i8am7xvegPo4abZUsZ4jMVWeA0424	521
65660	g5c5Gd8BewA1r1VT	93.16	NTNLZLZ2DCXG1Kkk11xwT9QtmvuoCu2CWGucbX8sf8b7S0fNs	6464
66490	ACEgYRjPrgiLaVT	51.49	YwbB6pVJq3UdgLJEXfMQTbuKKL	9036
68027	NBr1YSZ4GpRkHyfr	57.58	YoXLMiTo9axMM8JbyEPVR6JrRB18w5AjWJRS9gW	3540
68351	NBfMODJ6qqSjLKJQ4Y59Caj	87.31	d55KdMmQn6GrqUXZ2YAQL5rr0jKuPNwLWmadghTZeMGO	2338
68666	TorLgKgwwgWM8NSbyqzVT	10.09	KVwEUImwufPUfrapcyznNpQ5GKreth038x1WRGbxzsNv4NfhNW	1144
73502	NB0LVzSJRa0RxDRUjD1Pr08	45.39	cLSQ15Sva0sfiS5uJ7CFQjtkK3CMIYtHBo9x	8318
77584	NB1QWkxfKzrTMppL1o1Nu	12.44	TZSMETkkX7hACTvWgiY9bDpmE44xxfxe	4714
80958	NBUePzTktN2YUg1uameJ7	3.42	c9MskhacvNGZ6RgNDusLyYdrYLa	544
84429	aJdpXByauCmDprjVT	55.78	OGvJe1EZKjnmKc0m4VUnwQCA4zE	6603
84908	NB6QEVNV8CIFsb	17.32	lwKwFg32tokwMr7R04HKFJTPHFakJ9Cq7qYIgUc6XAgA2	971
86213	wNbFI7kL8ui99BkVT	29.81	N9zrfKcpbEoI9C90RheUSMraRm9JORIGINALIe7	2640
65660	g5c5Gd8BewA1r1VT	93.16	NTNLZLZ2DCXG1Kkk11xwT9QtmvuoCu2CWGucbX8sf8b7S0fNs	6464
66490	ACEgYRjPrgiLaVT	51.49	YwbB6pVJq3UdgLJEXfMQTbuKKL	9036
68027	NBr1YSZ4GpRkHyfr	57.58	YoXLMiTo9axMM8JbyEPVR6JrRB18w5AjWJRS9gW	3540
68351	NBfMODJ6qqSjLKJQ4Y59Caj	87.31	d55KdMmQn6GrqUXZ2YAQL5rr0jKuPNwLWmadghTZeMGO	2338
68666	TorLgKgwwgWM8NSbyqzVT	10.09	KVwEUImwufPUfrapcyznNpQ5GKreth038x1WRGbxzsNv4NfhNW	1144
73502	NB0LVzSJRa0RxDRUjD1Pr08	45.39	cLSQ15Sva0sfiS5uJ7CFQjtkK3CMIYtHBo9x	8318
77584	NB1QWkxfKzrTMppL1o1Nu	12.44	TZSMETkkX7hACTvWgiY9bDpmE44xxfxe	4714
80958	NBUePzTktN2YUg1uameJ7	3.42	c9MskhacvNGZ6RgNDusLyYdrYLa	544
84429	aJdpXByauCmDprjVT	55.78	OGvJe1EZKjnmKc0m4VUnwQCA4zE	6603
84908	NB6QEVNV8CIFsb	17.32	lwKwFg32tokwMr7R04HKFJTPHFakJ9Cq7qYIgUc6XAgA2	971
86213	wNbFI7kL8ui99BkVT	29.81	N9zrfKcpbEoI9C90RheUSMraRm9JORIGINALIe7	2640
91822	NBvh82iKtwviq9	41.74	L0CNhIki0QuHbdcBtH8WbIWSHqaruW4HRRdz3Ek2	4323
92539	rYCKURoaVZbFhpyVzvjk9VVT	87.83	vRrGpjRwkEHkLVkuOyKf9e0S0czko8G61aWkbZLrPAL4nY	6690
93847	NBIgNcyPezKm6jbe	31.44	DQhbjUqr3ORIGINALan9nzFg1Xyo7aFNrdQU00SUF	7968
93972	NB190ZxeiL3M89a9BV	86.05	syQVIZWuu4gWQ0kcytocELBnezK2a9B2AwpeE97YwMHFbp	2479

2、找出至少有一个仓库主要储备且该仓库销售税 (w_tax) 大于 0.16 的商品 (使用 any)，输出这些商品的所有信息。

```
select * from bmsql_item where i_id in (select s_i_id from bmsql_stock where s_quantity > 95 and s_w_id = any (select w_id from bmsql_warehouse where w_tax > 0.16) group by s_i_id);
```


i_id	i_name	i_price	i_data	i_im_id
1	hdq3ZOpVzgOfaM	35.29	OLDHQEMORIGINAlNPIH64DPDU7xxL2lkNRJ7Hsx6btDLWI5x	9847
6	APsPJcXS9UJdxchiyGS	36.42	AdfGEZH15QTCM6JVntxbX390wOqUgjZjLCHF5iLLqmDh6Su8G	8625
7	fm9av64cKKDBHV4Mn	86.71	kQBw1GEIzkHVINf7pmhd04r11JSrtia8wL4n7Wi4HctIaoPYVY	1636
9	k1RVZkyQfRdbHx	42.04	USEvBjvwHhefXSiu6wwLhaC7BmTM6ORIGINAlVL5t	3576
10	eHGLLCSX1xYMOc	91.17	IV3nEfj1Ts9xWvybJi03If6IU0a	8624
11	wbJY8I6GvJ0JEQ	94.20	Ngb0nkHnYEXzTA0YKM2SDpLFXP7ZLf48pmbwks6wML	4646
13	VJAYr0L9RgN8MVEP20jbxF	87.17	wmCr4rVfWRBANLa5AAcb22zvBQ2NaleclPhx4GF	4955
15	IUIHats5kefShWly7	1.90	WenXEXCsCYUm1ee7sXdCc5aXxbMBjplqiCQEn8ecygsbKhm2	637
16	fE08UUGpHP1GwwQUL0RAgXm	48.76	s64gDNCCnN0LryPy2py756hzoYdVm	5064
17	lg0vTjR00wLJLG	85.06	xHDXfsMoJL37nSxmIcxH25yUanqC2irD	9593
21	l3h8DWQjujw8hm2cIv9	79.93	RkwHpiJ8eIWTsKzXtfAyt0pIqf3cDjLd89tx5njShhX	8478
22	ptxDTjH3kKIj6g3ruSYq582	20.29	OTuabJRDhVxh9btWzyCmBNORIGINAlDzj	6122
24	GnzH5QXyJKV4PS1	93.43	RiQnG3v40KCiBaM8ZeBde0eZyx028h3gDles2BSXD4gbs5L	5930
26	IDBVYQIuRmR74dzj	68.08	dvqq9aPJL8z0t5F74B1hrN1hhLISROJgDxUwAB6Qn0jfepC1Xu	5419
27	bhX9PyPuay3nIcdeOyGdUtzR	97.42	vRiVLfqiE5wvyaXDR2GcdsqgE8jB1zHzmhdlneqTr4W	7573
28	fKETjWQeqqEv4iukshiAtnk	65.44	VhjhD8wLWnuwked0QDc2PA4aaazn95	5923
30	w4X701NsbuKuLkyKy0XEqWIS	93.73	uNpx1VfQjMcB9WY2Piz1m7FEe19NbkKf8neMe68	4115
31	gmwHPqI2AuFE6	82.19	lLY4vJytqW0ffedUSP0A1SGeDKmhCRRLz	1833
32	0iRlBGgzUd1DHM1B8J	74.61	stbqem8Y6fkkFbBkJcIa1UgeAd52A7042xy9w	6967
34	uEL0NLHSCZjGA2g	37.70	V7paooUUXL2J1xwKs7s74X59yyEiFL8XXq00FG6xSKFY8	6084
35	Hd14MIuFHHzrzasKJ0	45.33	gOg21piRTm9tqmQaYo5JoDI3LIWty0F4VXJiC	7686
37	VNkwfp7jThAOWcZ1b9a9VD	1.39	rdjkb9BKxPN3xvYqVfOws3yh8y7FjdasN3uBBNy2ba951CTh	4387
38	Is7qCbt9RSg7XZPB	23.28	sX631vTKReYPUs9a0aBBW0RIGINAljoTtb	6650
39	nBVqh9gSkFIQj0bVL	46.95	Q6vZVQXIxcnrfSv36MMNPDCzSx1zv	1990
40	VV82p3CDzo2nhYp	89.93	qKgACn88XBORIGINAlGLyIIPfLHOXSP	2858
41	itlva3DehSYsRYT9nBQHS	83.66	zM9Tu1TiIrXpr1p6q94SvoIdCe	9918
42	V9oJYHQQfFYRBALNgk6pX	93.99	vRADEIETkK4Ht4ByIas687H1cErFhIjPeZzj62vHlsgvH	2316
43	f7QgkMyaaIowKka1HpC0VpPY	30.16	lF7CApCvqnbbYg22Soptk0ntKzfPzqtroj	465
44	VYmttkudDcTonGMIPt	35.24	FCqYL68UPUANeFof8Cz8nuW5DC6ofeLP3WrsZUPHiSLeUvAi6B	3299
45	cST40KhIHZr1Xte8p9IazKl	50.47	oMhXjgxQhaQZ153ngS3TbORIGINAlfQ	8626
49	m7VJ8sU325TKqsKofiqBryY	83.98	J8UVUEITRAxwD2DeTyYST7Z9D7HiF01bk5tNCX3XqB	8666
52	senbIN8QtjL7K7hqINC	22.57	b04oos1FiLlYZCnYwC8Ji2DHEhussybHm8poQc	2605
54	ik48wQKJTpdl1NURRq	21.14	XRtD9vKELCFs0zBT4w0v70wRMHUFMLiWguHHRar	9600
55	V49hGOfhXHBtGXT85D	35.79	OfoUGD5D9henH0QusFmd8vdC9UMxXTUs0vYCgz806MkXj8Hjvh	6582
56	ZCYa6lMnzjdrER8JAwhDBNq	81.47	t0yoEbaEKezKmd2T5G12AVJ0jzzzXSRHwt4Y5	6647
58	BGwhgpvzEuTq5xP	88.05	SHBpa0jpnYRvo00tEqpCstTTK	6993
59	f262cPq6dA22qVZUSFKU9pS	42.32	dMWcnJbWlmmEwLa5Nq5e0bm99FmNMHdT	9580

99942	M7HGAmsEteY4X1ZC	87.77	FMORIGINAlNAq701a8t0CP0PX7QteLYapeE	6676
99943	r0DMLzF8y5u8dWBRVOMeIw	87.86	HZ5f5XNL EpuL9aah0Jwi9doiWiStzXnqNbp0hu9si	4936
99944	cIsec5iGyT5az7EIH16BI8	24.11	eY5gkLwCFewxfq66fg567YTEfqcsFH2X2TQ20RIGINAlKCZVKU	856
99945	quJj3MFMrRBqIKvkYnFSro	3.85	kbALQBY8e1sW7P5gKJ3vLKCmfY6sGwV5KIGN5	7858
99946	nFrr10Cf1AsRLxZ46AhRnhpo	1.06	vNnxgQz51wTntLNZVTTEVYCi48rQWe1	7764
99947	Lw7Z9nL8tamUFbx	86.13	xLjGoGyCF5121T8d0XezEe7C2iLUks0Bgdu0ZkBNJF	5176
99948	GkYruNGukt0rQkX0821qqS	4.98	t59Br4R5UT9BqMeleuZWIAPhIYgj	7767
99949	HT0Hb36MBBo2v4XRf1	68.41	oDRfHqPyYlWLuTB4cDMg7LmWCGUveh	7562
99950	lBKN3CSEb034XT3cXK	87.09	rH9YN4JZ1I27XASRNPjG5Z3Bhng8C9zeEqWlYLMhwS7XxOXcZ6	6241
99951	clkuUNXtyxDbjgNCgXSV7a	37.30	E2hx2NSGiySceG2bbgsL9ay6950RIGINAlEvgnbSmclPn	2712
99952	SBRAG3UPgz5p0bhb	44.74	yxpkSf0qw9mEteLzW7LlYY0GTLisIkX0ly5hBfZw9rATf0Bxg	772
99953	TL20eQ5YRAsayJlThJLHG23	3.22	mnNXRLxLCYvIN5rHm6STKYiWd520kgBNZ9kgyp9UUVwns4iXe	7057
99954	PqalVsolc29ch2n4jTiegCb	49.40	Od95bRDEVCdPWitayPzZFmRjg2mUPIUkAafb09C44cN0xWP	5039
99958	l60V2JjvdjTcY4bvR3a	71.15	c2TR34UNq0QoPg0WlhBpZASRCH8XYkQZgrNdxPERUIGiXc	3955
99962	ErjAhMwNU9YpHIjp	59.80	w0tG3WwThBVU4KdidTU3MpXVzn6CTw19s	3072
99963	ydONLhKDF05VTFSSS1VM	9.20	HqXabFwPqPjzJndxzXqaFS1iSy52Tt906CySZrzhACStchCNyX	4766
99964	CennZubdafpdJhwCCjTlp7	7.50	gDLdyGGZBmtAewdrdtf2e3TFpND	9060
99965	iqdSPRjbZegXDRSICJGU0	70.58	U7VtchVw94yrOFSCSMx0McLudZXtgpNb	4237
99966	wo5I2x5hw4L6s0RpkRYuBt	47.81	YLiqH5wA0U6Lx98IyOydlPk3Zbw	8979
99968	Opjqj05UqmrCAYt	95.71	TK0ezi6xbT0A7QFKHEd0v3fSLynZ4diIVWm0A	1494
99971	Jst367SABDJWwemBlp	55.00	a6fxPIuQlhashY7uhRzxMb7e53HK8	4906
99972	ry8nine2gG4amQR	2.51	QqOvwqLYBqyVWkZwu1gFLryRUqQ5	6288
99974	o9myGxzLIL2EJn	18.13	c7Srb6mzePi4MMFWYfliGy81hxRf1dzVCMsaDy	7135
99975	Cn1S2I4ri6UCQa6a	63.65	sV049r4ggYWwq54CfTl5qLK6bbuHevAYrZZWK8PygIXvRj	1196
99976	IjYBRGHXxwS8PwGdhj	11.45	Puo0GhpktPjtIP1oSBmRuHREK3cfMG9L2Fi20U	9277
99978	RzNA0DiBu1sFeXAurOC	52.89	OruORIGINAlI2RXbX0uqGUEgq209KmpqfCL	2057
99981	QHBmWTKtzyg8ENxWP	33.19	YsNiSxyVaVVFb8nr4lf408u5jpZC8Io	4788
99984	KJ7UsZ2E12Tys9dc4pDp	51.90	nP0hpt0AL6Iwm6LagC3KtmNF4Y6AYwo	4006
99986	TbFpKmFun71h0KVvcNd6eKPT	6.05	zUGv3WPm5V65j69pd6gLQZE9ai1szup4ViK	3292
99990	zN3mtorJkwj3eIk4gYp	43.86	N9K2xmMkFBCQNdMhiffGbzI4ImESmQKQUQC0FdBok6SRp	2887
99991	lKlNYpmt9IFc0U6eR	65.24	NA6KuLM5Wfde0FHWPTpVICuiojvbPct0q6e9	7465
99993	IGL3HYj4DZBYrSASZ4dFEW	30.54	YI8SaMvr6oNrfkFZLQzjjNs8x7hHI8lyExgCFxCQmgf	792
99994	DrgnP0nt1aNXM330BPueiL	60.87	vm1nMd4Zk7stJzDPe0HmwJz3yZK7t4jRKDXu	359
99995	IghTMatCnsta3UP	13.94	K361bHEMRjKevSRJn6PTRn2l2dmLkRS0yp	1466
99996	LQhTCNxtia00JL	99.53	Wjp36T0GX1GwxDXpiti5cLwErCGOM4ak0I8RUYkn	2278
99997	H5x3KEWuV70T1m1Yv	55.47	rumZ1DvAjmBcuJX8V0BULORIGINAlKF8Fk0d0z0cv	9358
99999	zM8OucuEIT8emI1Ra1ZJ1Cq0	52.90	Jlw8aHuYd3h5aFbQK5RiNHN8BgqN2sIphSc4z0IvX	2688

(59501 行记录)

四、嵌套查询(in):

1、找到有商品税大于 0.18 的仓库主要储备的所有商品，输出它们的所有信息。

```
select * from bmsql_item where 95 < any(select s_quantity from bmsql_stock
where s_i_id = i_id and s_w_id in (select w_id from bmsql_warehouse where w_tax >
0.18));
```

i_id	i_name	i_price	i_data	i_im_id
6	APsPJCS9UJdxchiygS	36.42	AdfCEZH1S0TcM6JVntxbX390wOqUgjZjLCHFStLLqmdh6S5u8G	8625
7	fm9av64cXKD8HV4Mn	86.71	kQBw1GEIzkhVINf7pmhd04r11J5rtla8wL4n7Wt4HctmIaoPYY	1636
9	k1RVZkYQfrdBHx	42.04	USEvBjvwHefXSIU6wwLhaC7BmTM60RIGINALvLS	3576
10	eHGLCSX1xYMOc	91.17	IV3nEFj1Ts9xwvyb3iO3If6IU0a	8624
11	wbJY8I6GvJ0JEQ	94.20	Ngb0nkHnYExZtA0YKM2SDpLFXP7ZLF48pmbwks6wMl	4646
13	VJAYr019RgN8MVEP20jbxF	87.17	wmCr4rVFwRBANLa5ACb22zvBQ2NaIecLPhx4GF	4955
15	IUIHats5kef5Hwly7	1.90	WenXExCsCYUm1ee7sXdCc5aXxbMBjpLqiCQEn8ecygsbKhm2	637
17	lg0vTjR00wLJLG	85.06	xHDXfsMoJL37nSxmIcxH25yUanqC2LrD	5993
21	L3W8DWQjujw8hm2cIv9	79.93	RkwHpIj8eIwTsKzXtFAyt0pIqf3cdJLd89tx5njShhX	8478
22	ptxDtJh3kKIJ6g3ruSVq582	20.29	OTuabJRDhVxh9btWzyCmBnORIGINAlDzj	6122
24	GnzX5QxyJKV4PS1	93.43	RiQnG3v40KCibaM8ZeBde0eZyx028h3gdLes2BSXD4gbs5L	5930
27	bhX9PyPuay3nIcdeOyGdUtzR	97.42	vRiVLfqi5SwvyaXDR2GCCdsqgE8jB1zHzmhdLneqTr4W	7573
28	fKetiJWQeqgEv4IukshiAtnk	65.44	VhjD8w8Lwnuwked0QDC2PAaazn95	5923
30	w4X7O1NsbuKuLKyKyOXEqWIS	93.73	uNpx1VfQjMcB9Wy2Piz1m7FEet9NbkKF8neMe68	4115
32	OirL6GgzT10DHM1B8J	74.61	stbqem8My6fkkFbBkJaIc1UgeAd52A7042xy9w	6967
35	Hd14MIuFHzzazsKJO	45.33	gOg21pIRTrm9tqmQaYo5JoDI3LIWty0F4VXJiC	7686
37	VNkWFp7JThA0wCZ1bya9VD	1.39	rdjK89BKxPN3xVdYqvFOWs3yh8y7Fjdasn3uB8ny2ba951CTh	4387
39	nBvqh9g5kfIq0bVL	46.95	Q6vZVQXixncrSv36MMNPDCzSx1zv	1990
41	ltlva3DehSYsRYT9nBQHS	83.66	zM9Tu1TlIrXpr1p6q94SvoIdCe	9918
42	V9oJYHQFFYRBALNgk6pX	93.99	vRADEIETk4Ht4ByIas687H1cErffHJ3pEzzj62vHLsgvH	2316
43	f7QgKMyaaIowXka1HpC0VyPY	30.16	Lf7CApCvqnbbYg250ptk0ntKzFpzqtroj	465
44	VYmttKuudCtonGMiPT	35.24	FcqvL68UPUANEfof8C28nuW5Dc6ofeLP3WrsZUPH1SleUvAi6B	3299
49	n7VJ8sU325TKqsKowliqBryY	83.98	J8UVEITRAXwD2DEtyYST7Z9D7HlF01bkstNCX3XqB	8666
52	senbIN8QtJ7K7hqINC	22.57	b04oos1FliYzCnywC8Ji2DHEhubybHm8poQc	2605
56	ZCYa6IMnzJdRER8JawhDBNq	81.47	t0YoEbaEkeZKmD2TSG1ZAVJ0jzzzXSRHwt4Y5	6647
59	F262CPq6dA22qZVUSFKU9pS	42.32	dMwcnJbWlmmEwLa5NqSe0bm99FMNMHdT	9580
63	wcT9tMl40VAd8G	76.58	lJLRdKr0DLbb72MMKG3jhjgPuF4JLCS	7974
64	r5RttrTROXs3dgVIAQ	23.02	WQ3CoAJuVdwMP0u7etKNSI2265IqNMXXwXqLVRVlWb	1127
66	aPsPWEATf88bSEKMY	37.79	nRYKORIGINALuoTR0aZxznlg0Jh89eenAJ0WeDousjQXK5GE6	2450
67	CSCtGcJ3JkWIjPMCL	68.42	zpKNQdmjqtVjjXJ4bW9FJFW0jaIdmX6Ct	7690
69	XnIbwc0dhRn98Rbn7G3	14.18	W3fdgRQ28314ZLU0o0T8aEtw	8331
70	BTWf8z0dVohGWI1mTPam	73.35	VmPxLAhIpyBhp2x0ppZSKR2CIhvpJ5	5458
71	nI8iMEWDbgZhp00E0ECH	16.86	Pnm6uPuFnq22nBEiFC00Rg4GFU6jtoXP1L2w5OXVf5FFFb	9816
72	QATYIVDhbsA5ZN66KYkZNPk	82.13	eqDL6fIUUNac4TzakffI6MjeGxhPX0sx3yBnidrr07yki	7880
74	Qu5nXRvluMIx8Jm	57.41	x5MT7bAUDzknRLwNbs4rFelwXgUmRz0p7SZtULJ	4340
79	JiKDXr0tqqExP78Vy	82.78	QLn0PrzyyzIASHbflHraFQU5NJMA3pm	8079
80	Taw2Sn6UXM1tp7JedPau5UZ	31.07	bc9KfUHpAq7PC0oKbwzHJCaQuAViMvYnKF1n32wiE	592
99958	l60V2JjvdjTcy4bvR3a	71.15	c2TR34UNq0QoPg0WihBpZA5RCH8XYkQZgrNdXPERUIGIXc	3955
99963	yd0NLHkDFO5VTFSS1VM	9.20	HqXabFpwqPjzJNdxxXqaFS1iSy52Tt906CysZrzhACStchCNVX	4766
99964	CemnZUdbafpdJhwCCjTLp7	7.50	gDLdyGGZBmtAewrdDrft2e3TfpND	9060
99965	lqdsPRjzbZegXDRSXCJGU0	70.58	U7VtchVw94yrOFSC5Mx0McLudZXtgPnb	4237
99966	wo5I2x5hw4L6s0RpKRYuBt	47.81	YLiQH5wA0U6Lx98IyOYdLPk3Zbw	8979
99968	Opjaj05UqmCAYt	95.71	TK0ezI6xbT0A7QFKHed0v3fSLynZ4diIVWm0A	1494
99971	Jst367SABDJhwemB1p	55.00	a6fxPIuQlhashY7uhRzxMb7e53HK8	4906
99974	o9myGxzLIL2EJn	18.13	c7Srb6mzePi4MMFWYfiGy81hxrF1dZVCMsaDy	7135
99975	Cn1S2I4rt6UCQa6a	63.65	sv049r4ggYwWqS4cFtl5qLK6bbuHevAYrZZWK8PygIXvrJ	1196
99976	IJyBRGHXxwS8PwGdhj	11.45	Puo0GhpktpjtIP1oSBmRuHREK3cfMG9L2Fi20U	9277
99978	RzNA00iBu1sFeXAurOC	52.89	OruORIGINAlI2RxBX0uqGUEgg209KmpqfCL	2057
99981	QhbMwTKtzyg8ENxwP	33.19	YsNiSyxVaVf8bnr4Lf408u5jpZC8Io	4788
99984	KJ7UsZ2E12TyS9dc4pDp	51.90	nP0hPT0Al6Iwm6LAgC3KtnNF4Y6AYwo	4006
99986	TbFpKmFun71hOKVvcNd6eKPT	6.05	zUGv3WpM5V65j69pd6gLQZE9ai1szup4ViK	3292
99991	LKlNYpmt9IFC0u6eR	65.24	NA6KuIM5WfdE0FHWPTpVICuiojvbpPct0q6e9	7465
99994	DrgnP0nt1aNXM330BPueIL	60.87	vm1nMd4Zk7stJzDPeOHMwJ3zyZK7t4jRKDXu	359
99995	IqWTrMatCNStu3P	13.94	K361bHEMRjKevSRJn6PTR2nl2dmLkR50yp	1466
99996	LQhTCNxtia00JL	99.53	Wjp36T0GX1GwDXpiti5cLwErCGOM4akOI8RUYkn	2278
99999	zN8QucuEIT8emI1Ra1ZJ1Cq0	52.90	JLw8aHuYd3h5aFbQk5RLNHN8BgN2sIpWSc4z0IVX	2688

(43387 行记录)

先从 ware_house 表中找到 w_tax>0.18 的所有仓库 w_id，然后从 stock 表中找到所有匹配的仓库的 s_quantity，最后从 item 表中比较 95 与 any(s_quantity)，可得到所有符合条件的 item 的信息

2、找到主要贮备有以'SP'为开头的商品的仓库，输出仓库的所有信息。

```
select * from bmsql_warehouse where w_id in(select distinct s_w_id from
bmsql_stock where s_i_id in (select i_id from bmsql_item where i_name like 'SP_%')
and s_quantity > 95);
```

w_id	w_ytd	w_tax	w_name	w_street_1	w_street_2	w_city	w_state	w_zip
3	300000.00	0.1651	Lah3It	WGtz5zxhFn6H	GgLoHnKSHH4R6	tfI8syBr2XhJK	KZ	610711111
1	300000.00	0.0217	D4SY6N	PL2s1jD87YBvx	chZC6EbGHESDdeS2	DXJjwFyyWrvWpLi	CL	175811111
2	300000.00	0.1103	sJA7FF0	LhXy6ggqHRQ9NrTEP15T	ycf6eXbv2CpMuKW1zL	z3qeeKTeru5XVEUe	NQ	349211111
4	300000.00	0.1241	V6SocKLTsL	X73QcmsTTj9sbrxfv8	vdZGwFRp2wJsxybUUomB	NRLIdsmPAz	NJ	967211111
5	300000.00	0.1573	B5hyCC	PrwQ0QbKQpCq1pHP	aCpT9f8dp0ISyYv0U	Wgw0Je0L20FFETbHQZL	NJ	865211111
6	300000.00	0.1944	SRDP005	F8InnfML8mV4hL	Fn4uVF9fADEU	DcuQ0sHC8qIYoW	AW	993511111
8	300000.00	0.1976	HnUvQ6Wo	OU61UF38uLIquv	fkq7t9SHFUIQvD9W	RKQ2tbTzNpCh0	GO	992811111
10	300000.00	0.1720	r1BG1WA	i4WaE7h2BYVEnJ	AeWrarUi0IedXVN	y9RVccKT6x8A	GI	540311111
12	300000.00	0.0269	vwkY2V0t	y8ZUROFQmogTaX	DHL0J0Tz5KvRK0xG	teaUxIovpSck	GW	378011111
13	300000.00	0.0234	dNr5kV5	GrLJy3mHu8rZJNL	Jffu4GSuIagc	NEvY0sd17TuSqw9Kw	KI	177311111
14	300000.00	0.0437	bLRKJY	rU7kRo3phBG	p8q6hUHVDEXJf28mVPC	H2suMF66a0qXE6CrBe	QI	629811111
15	300000.00	0.0304	XOUjQkn31U	SZkndWSQA1	AH8ZJF3LSpSbeEY	a7dpj0W9IjGSwbYcuE5	OU	905211111
18	300000.00	0.1706	ZiP7My7j	Hos8LJfJBRUCVBSEKZ3	xUPzQwLJGcYKZBzG8	iopADabtLF3wfFj4	XE	735711111
19	300000.00	0.0161	iB7ELj	SmVXXTdYw7WdvGYPvI	SXDiFFvWl5	WPtubkpsSCSsWI2	OK	816411111
21	300000.00	0.1895	a05XhG	e6Z1EVzff4tvi6sQz	Lurhr2TzGcXas4M5nKZ	NALSyWdSG0	MQ	848411111
22	300000.00	0.1978	iUmQQ032Ct	uuqKR4gZkQmCw	ycybgmZ2wtux4hcLG	W4e4N2tFQJupC	UB	676111111
23	300000.00	0.0197	FAHIyu2gk	zqh3HjTtUNZL	FCsck399GoszD1Ac	IINMvynJVjd	MI	484111111
26	300000.00	0.1907	bwtp2cLf	iQgC4K66afviUPIK	XeCx0KDa8cUqYI1aXhq	ye6MLRK1RTG3	ZL	576611111
28	300000.00	0.1391	SF3I86HRhs	DUZpCEAPQf3ddoRkv2	muAdwt35r5rEXp8t	Jr5Uwr1qd4AJpZLWE	VJ	710511111
29	300000.00	0.0442	Grshrd2	ftffMPqoPCmrqeIG	Om2Nhbz7IT7QDNaxBt	bJQ7rYsnzAIPvb	FF	192611111
30	300000.00	0.0186	YQ5X1L	hhpoMyjt5NrBPjv6a5	DI12jrlCBze	QnELtPVZ4Xk9BjEMU	AB	671311111
32	300000.00	0.1452	Y1r32N	Vyn5lVBX3k6	cVHLuTRRWjFVPdeFOY	hBFt8T9xVq3yX0D	PA	696311111
33	300000.00	0.0065	AR5TzV	XLLbS0zM0mhQZ	oSCEdsoTHY	OGM3OKS6fpeWsRL	BO	199211111
34	300000.00	0.1930	PBAF155	fyRLFKMCuF0Db1QNGZ	da5NaxJi8AKQKyf	d0tvIPRLPK2EjTfLRsna	AN	001411111
35	300000.00	0.0688	HHrNUO	fx80NFJo59Z	mb0B4i8BdxhZDsoNE6	E4LVKvHbDct	WC	768711111
37	300000.00	0.1713	NFmPZ4	UsgjoHV0IvY6quzwtVmL	L7hn9Zi1n6ahdFyrQ7	lysNLVLVo19Pscw	OB	360711111
38	300000.00	0.0274	UoohK07N	SLaLkvfm6x	RSO26FiMBtOfny	T350PR8Ysfh	WG	995211111
40	300000.00	0.1985	wayOTm	weaKyHURcbchvsgfX	cz0KJB8CscwJdy4zf2	w88uTgMtZ3j10	FG	385911111

首先再 item 表中找到所有符合 SP 开头的 i_id，然后从 stock 表中再添加一个条件 s_quantity 要大于 95，找到符合条件的 w_id，最后根据 w_id 从 warehouse 表中找到所有符合 w_id 的信息

五、综合题：

1、找到以'SP'为开头, 且在所有仓库储存的平均数量大于 50 的商品的全部信息。

```
select * from bmsql_item where i_id in (select s_i_id from (select s_i_id,
avg(s_quantity) as avg from bmsql_stock where s_i_id in (select i_id from
bmsql_item where i_name like 'SP_%') group by s_i_id) as A where avg > 50);
```

i_id	i_name	i_price	i_data	i_in_id
709	SP8c5nvLccolS62uA9j	9.50	M5QwLSLSVxHrGaV0aC1XXPmCp0w6Q	845
8962	SPqSz0h7gTRL3C	93.90	lEAtXYrpyXhQqHPwy589rSMIDvBexg	2876
23093	SPInn0ruPQhL0N	59.83	Y5cfUrvvziVWndyeC8JUChNIXPNr03vxUR3W2NtzFZ1i9aa8	6918
25276	SPQjHmC8FLfj1BpsERB	68.52	x2ZXEGUvsJkzbJ3w8u1BNAs12PbKTZFZDA2iPHs0HbDf	2224
30222	SPkR1yC5VALHMIzHa	76.00	Nmn7yJ5DYPZuM5UD2L1sYh8cNlqje2PHeH26XJ9FLnjCyAz7S1	7947
36816	SPLh1QvB7wYdmNd	12.08	vfNSzZynUzeeUtmxscr1cbP8DnIOX1vdx2uJ	9759
38078	SPvjmg6JADoHPNGMz	99.70	ThkcSEBFbgv01nUTQPiwv60ZLUVRh63UwPyhKCzfnhCwh	1871
44907	SPoRkfHuNRxrhqyN	80.82	ApJf7onTeDyWtjeYKWIn4jATFRtaYdEU9yuF	4847
49586	SPgXx605fh5SxSc5	75.32	jmlA0TxV6gYtl3BKQ3FenmqayIf	1877
53587	SPSkt8Navw4WeEtXa95jy3L	68.95	KhvTef2nK4WQcxDOGSVcqK5RKWU1AajeY20U4fq95	1163
55068	SPXAq4WFzLS2SsR06K4iI	8.24	qKL3yQk9wctqd0s9uJFLG6tGSWx12H0F9K86htKtvc8	3191
55482	SPie3kyqaODKtYLD	99.34	lX3hBHU6obcdrZjp4jld9NewmtMSU	5115
62449	SPqEsx7T7HwmgLMV14bFEIFT	5.39	OJP9oVaAdSuzCsU3BRsLpD0ZitsJ26kt2YVr6cvgVQzEhHj	4477
67755	SPrAauoAVFbikqxAJJJeWX6ZR	56.93	Nwfj7lx0HtHKQ1PIyIZciuwfNY412u	1304
68375	SP7PRHwZ6VYFU0v9ij4WU	65.74	W1AkIgDdtoBAskFVqAjtqg5qy9I04RF46GR48KD2q5GMqBuL	2646
69555	SPXpQf2pWvpT8VPnTA7hi6Mz	35.31	SStiuYIPnyJ3jCCSGT997LM9MtpLAEd3hBQv4mgM91ee90	9880
77167	SPsgmq0hdngSwpQIz6	92.82	OHr7e3eBwQm47nrNZXz5FKAsL2k4vaut5xT	1381
85276	SPL62MdDUs00rLzqg	66.00	j0wIk8cyyVAFzCnwgvpj4AtvGFImLVii	4601
88288	SPbKV7zKAqGpCzvP9	78.30	FaTnTMP85yaxZRYbtE8Fwx7a2bh	5176
91947	SPbsfqfiolpVSI3	33.71	wjIWt09Jc8lNTD2XyTHBsFi56vw0bJ8ZddY3qfWUgb	9103
93570	SPj6u46iZWRh5QhfWkxvK	14.48	J604MgHtCwdPnt4tb4fkUJP4Pra45i	542
96276	SPoiEkr8gP1lexmqw32	4.52	UGmudGsdI6R04HztbTLqkxLk2NwXr0BhC5Y8BVnx1Dm	2996

(22 行记录)

先从 item 表中找到符合名字为 SP 开头的 `i_id`，然后从 stock 表中以 `i_id` 分组求 `s_quantity` 的平均值，再然后从这些平均值中找到符合大于 50 的 `i_id`，根据这些 `i_id`，从 item 表中获取所有信息。

2、找到所有满足条件的仓库的编号(`w_id`)：该仓库在所有地区的销售税都小于 0.15。

```
select w_id from bmsql_warehouse where 0.15 > all(select d_tax from bmsql_district where d_w_id = w_id);
```

w_id
4
7
19
29
30
34

(6 行记录)

先从 district 表中找到 `d_w_id` 等于 warehouse 表中 `w_id` 的行的所有 `d_tax` 值，如何 0.15 大于这些 `d_tax` 值中的任何一个，则该 `w_id` 符合条件

3、统计五.2 中的仓库主要储备的商品数量，价格平均值，输出列为 `w_id`, `number`,

avg_price。

```
create table A as select s_i_id, s_w_id from bmsql_stock where s_quantity > 95 and  
s_w_id in (select w_id from bmsql_warehouse where 0.15 > all(select d_tax from  
bmsql_district where d_w_id = w_id));
```

```
select s_w_id as w_id, count(s_i_id) as number, avg(i_price) as avg_price from  
bmsql_item, A where s_i_id = i_id group by w_id;
```

w_id	number	avg_price
29	5476	50.1384678597516435
4	5550	51.0328216216216216
34	5514	50.9887286906057309
7	5463	50.1529470986637379
19	5501	50.2806489729140156
30	5433	50.8498748389471747

(6 行记录)

先按照五.2 的条件创建一个表 A，然后从表 A， item 表中，按照 w_id 分组，当 i_id 相等时，得出 s_i_id 的数目和 i_price 的平均值