

Sample Data Document

Examples showing the queries being answered and their relations are listed at the bottom.

Stock

Item ID	Warehouse ID	Count	Current Price	Historical Low	Historical High	Sale Status	Shipping Price
2345	823	2	\$120	\$110	\$140	Sale	\$20
2478	823	5	\$405	\$400	\$430	None	\$30
2598	823	85	\$125	\$100	\$250	Sale	\$22
2989	823	22	\$70	\$70	\$90	Sale	\$15
2999	823	0	\$120	\$110	\$150	Sale	\$50
3022	823	5	\$12	\$12	\$18	Clearance	\$0
4010	450	4	\$747	\$450	\$1199	None	\$300
4010	690	33	\$750	\$750	\$1199	None	\$20
5000	690	22	\$850	\$830	\$950	None	\$20
5000	111	2	\$1099	\$1099	\$1099	None	\$20
5001	040	4	\$170	\$169	\$161	Clearance	\$29223
5555	040	1	\$145	\$145	\$250	None	\$333
5556	040	4	\$100	\$100	\$100	None	\$0
5557	040	8	\$2839	\$2222	\$2839	None	\$22
5558	040	9	\$222	\$222	\$222	None	\$0

5559	040	2	\$939	\$900	\$1000	None	\$0
5560	040	2	\$200	\$200	\$1000	Sale	\$0
5561	040	0	\$20	\$10	\$220	None	\$0
6000	040	5555	\$130	\$130	\$130	None	\$22
6002	333	323	\$850	\$850	\$1000	None	\$0
6003	333	29	\$780	\$780	\$900	Sale	\$0
6004	333	111	\$1250	\$1250	\$1250	None	\$0
6004	333	43	\$72.99	\$70	\$80	None	\$0
6006	333	0	\$150	\$150	\$200	None	\$0
6007	333	1	\$200	\$200	\$200	None	\$0
6008	333	0	\$190	\$150	\$200	None	\$0
6009	543	22	\$18	\$18	\$18	None	\$0
7001	543	0	\$20	\$20	\$20	None	\$0
7002	543	88	\$17	\$17	\$20	None	\$0
7003	209	0	\$135	\$135	\$135	None	\$0
7004	209	765	\$105	\$105	\$105	None	\$0
7005	209	0	\$105	\$105	\$105	None	\$0
7006	209	2	\$100	\$100	\$100	None	\$0

8000	040	2	\$200	\$200	\$200	None	\$0
8001	040	4	\$180	\$180	\$180	None	\$0
8002	040	6	\$775	\$770	\$800	None	\$0
8003	989	8	\$40	\$40	\$55	None	\$0
8004	989	43	\$36	\$36	\$40	None	\$0
8005	989	34	\$36	\$35	\$45	None	\$0

Item

Item ID	Item Name	Category	Manufacturer	Series/Product Line	Release Date	TimeSince Release()	Model Number
2345	Samsung 860 QVO 1TB SSD	Storage	Samsung	860 QVO	12/7/2018	09/25/0001	MZ-76Q1T0B/AM
2478	Intel Core i7-10700K Desktop	CPU	Intel	400	5/20/2020	04/12/0000	BX8070110700K
2598	MSI Z390-A PRO LGA1151	Motherboard	MSI	Z390-A PRO	10/8/2018	11/24/0001	Z390-A PRO
2989	Corsair Vengeance LPX 16GB DDR4	Memory	Corsair	Vengeance LPX	7/13/2015	02/19/0007	CMK16GX4M2B3200C16
2999	Acer SB220Q Ultra-Thin	Monitor	Acer	Zero Frame Monitor	7/09/2018	02/23/0002	SB220Q bi
3022	Microsoft Wired Keyboard 600	Keyboard	Microsoft	null	12/3/2008	09/29/0011	ANB-00001

4010	Samsung Galaxy S10	Phone	Samsung	S	2/21/2019	07/11/0001	SM-G973UZWA XAA
5000	Apple iPhone 11 Pro Max	Phone	Apple	Pro	10/29/2019	11/03/0000	B07ZQSQSBM
5001	Intel Core i5-9600K	CPU	Intel	300	3/20/2019	06/12/0001	B07PZQL75X
5555	Corsair Vengeance RGB Pro 32GB	RAM	Corsair	Vengeance RGB	8/24/2018	01/08/0002	CMW32GX4M2 C3200C16
5556	HP Pavilion 22cwa 21.5-Inch Full HD Monitor	Monitor	HP	Pavilion	8/24/2018	01/08/0002	22cwa
5557	HP Pavilion 22cwb 21.5-Inch 720p Monitor	Monitor	HP	Pavilion	7/13/2015	02/19/0007	22cwb
5558	HP Pavilion 22cwc 21.5-Inch 4k Monitor	Monitor	HP	Pavilion	7/09/2018	02/23/0002	22cwc
5559	HP Pavilion 22cwd 23-Inch Full HD Monitor	Monitor	HP	Pavilion	12/3/2008	09/29/0011	22cwd
5560	HP Pavilion 22cwe 21.5-Inch 1440p Monitor	Monitor	HP	Pavilion	2/21/2019	07/11/0001	22cwe
5561	HP Pavilion 22cwf 2 -Inch 144p Monitor	Monitor	HP	Pavilion	2/21/2019	07/11/0001	22cwf
6000	Apple Magic Keyboard	Keyboard	Apple	null	10/2/2020	00/00/0000	2020KBAPPL
6002	Google Pixel 2 XL	Phone	Google	Pixel	10/2/2018	00/00/0002	GA00151-US

6003	LG G8X ThinQ	Phone	LG	G8	7/13/2015	02/19/0007	LM-G850EM
6004	Samsung Galaxy Note 20 Ultra	Phone	Samsung	Note	3/2/2020	00/07/0000	SPN986U512BK
6004	GIGABYTE - B450M DS3H	Motherboard	GIGABYTE	null	12/7/2018	09/25/0001	889523014196
6006	MSI - MPG Z390 GAMING PLUS	Motherboard	MSI	null	5/20/2020	04/12/0000	824142169643
6007	ASUS - TUF GAMING X570-PLUS	Motherboard	ASUS	null	10/8/2018	11/24/0001	192876388495
6008	ROG STRIX B550-F	Motherboard	ROG	null	2/21/2019	07/11/0001	192876749692
6009	Logitech Wireless	Keyboard	Logitech	null	10/2/2018	00/00/0002	VIPRB-98ANSL M78-WBTA
7001	Anker Bluetooth Ultra Slim	Keyboard	Anker	null	10/29/2019	11/03/0000	920-00897
7002	Dell KB216	Keyboard	Dell	null	3/20/2019	06/12/0001	KB216
7003	Western Digital WD NVME 1 TB	Storage	Western Digital	null	2/21/2019	07/11/0001	WDS100T3X0C
7004	Intel 665p Series M.2 2280 1TB	Storage	Intel	null	10/29/2019	11/03/0000	SSDPEKNW010 T9X1
7005	Western Digital WD Blue SN550 NVMe	Storage	Western Digital	null	3/20/2019	06/12/0001	WDS100T2B0C

7006	WD Blue 3D NAND 1TB Internal SSD	Storage	Western Digital	null	8/24/2018	01/08/0002	WDS100T2B0A
8000	AMD Ryzen 5 3600 6-Core	CPU	AMD	Ryzen	2/21/2019	07/11/0001	B07STGGQ18
8001	Intel Core i5-10400 Desktop Processor	CPU	Intel	i5	10/29/2019	11/03/0000	BX8070110400
8002	Intel Core i9-10980XE Desktop Processor	CPU	Intel	i7	3/20/2019	06/12/0001	B07YP6D8RK
8003	Patriot Signature 8GB	Memory	Patriot	null	8/24/2018	01/08/0002	PS000992
8004	Patriot™ Signature 8GB	Memory	Patriot	null	8/24/2018	01/08/0002	PSD38G1600L2S
8005	Crucial CT51264BF160B	Memory	Crucial	null	10/29/2019	11/03/0000	CT51264BF160B

CPU

Item ID	Chipset	Integrated Graphics	Wattage
2478	Intel 400	1	125
5001	Intel 300	1	120
8000	AM4	1	120
8001	Intel 400	0	125
8002	LGA 2066	1	165

Memory

Item ID	Memory Capacity
2989	16
5555	32
8003	8
8004	8
8005	4

Storage

Item ID	Storage Capacity	Storage Type	Storage Standard	Form Factor	Wattage
2345	1000	SSD	SATA	2.5	2.5
7003	1000	SSD	nvme	m.2	2.5
7004	1000	SSD	nvme	m.2	2.5
7005	1000	SSD	nvme	m.2	2.5
7006	1000	SSD	SATA	2.5	2.5

Motherboard

Item ID	Chipset	num_usbports	wifi+bluetooth	Form Factor
2598	Intel 300	4	0	ATX

6004	AM4	4	0	microATX
6006	LGA1151	3	0	ATX
6007	AM4	4	1	ATX
6008	AM4	2	0	ATX

Website/Vendor

URL	Company
amazon.com/Samsung-Inch-Internal-MZ-76Q1T0B-AM/dp/B07L3D19MY/	Amazon
amazon.com/Intel-i7-10700K-Processor-Unlocked-BX8070110700K/dp/B086ML4XSB	Amazon
amazon.com/MSI-PRO-LGA1151-Gigabit-Motherboard/dp/B07J6Z9KJ2	Amazon
amazon.com/Corsair-Vengeance-3200MHz-Desktop-Memory/dp/B0143UM4TC	Amazon
amazon.com/gp/product/B07CVL2D2S/	Amazon
amazon.com/Microsoft-Wired-Keyboards-600-Black/dp/B001OAR26K	Amazon
amazon.com/Samsung-Galaxy-Factory-Unlocked-Warranty/dp/B07N4GKMHB	Amazon
samsung.com/us/mobile/galaxy-s10/buy/?link=galaxy-s10	Samsung
amazon.com/Apple-iPhone-64GB-Space-Gray/dp/B07ZQSQSBM/	Amazon
apple.com/shop/buy-iphone/iphone-11-pro/6.5-inch-display-64gb-space-gray-unlocked	Apple
amazon.com/Intel-i5-9600K-Processor-Unlocked-Motherboard/dp/B07PZQL75X	Amazon
amazon.com/Corsair-CMW32GX4M2C3200C16-Vengeance-PC4-25600-Desktop/dp/B07GTG2T7L	Amazon

amazon.com/HP-Pavilion-21-5-Inch-Monitor-22cwa/dp/B015WCV70W	Amazon
apple.com/shop/product/MQ052LL/A/magic-keyboard-with-numeric-keypad-us-english-silver	Apple
bestbuy.com/site/google-pixel-2-xl-64gb-just-black-verizon/6099989.p?skuld=6099989	Bestbuy
bestbuy.com/site/lg-g8x-thinq-aurora-black-at-t/6385561.p?skuld=6385561	Bestbuy
bestbuy.com/site/samsung-galaxy-note20-ultra-5g-512gb-mystic-black-sprint/6424231.p?s kuld=6424231	Bestbuy
bestbuy.com/site/gigabyte-b450m-ds3h-socket-am4-usb-3-1-gen-1-amd-motherboard-with-led-lighting/6409173.p?skuld=6409173	Bestbuy
bestbuy.com/site/msi-mpg-z390-gaming-plus-socket-lga1151-usb-3-1-gen-1-intel-motherboard-with-led-lighting/6305798.p?skuld=6305798	Bestbuy
bestbuy.com/site/asus-tuf-gaming-x570-plus-wi-fi-socket-am4-usb-c-gen2-amd-motherboard-with-led-lighting/6356983.p?skuld=6356983	Bestbuy
bestbuy.com/site/rog-strix-b550-f-gaming-am4-socket-usb-3-2-amd-motherboard/6422283.p?skuld=6422283	Bestbuy
walmart.com/ip/Logitech-Wireless-Keyboards-and-Mouse-Combo/605403536	Walmart
walmart.com/ip/Anker-Bluetooth-Ultra-Slim-Keyboards-White/609975070	Walmart
walmart.com/ip/Dell-KB216-keyboard-580-ADMT/47878839	Walmart
newegg.com/western-digital-black-sn750-nvme-1tb/p/N82E16820250110?Item=N82E16820250110	Newegg

newegg.com/intel-665p-series-1tb/p/N82E16820167469?Item=N82E16820167469	Newegg
newegg.com/western-digital-blue-sn550-nvme-1tb/p/N82E16820250135?Item=N82E16820250135	Newegg
newegg.com/western-digital-blue-1tb/p/N82E16820250088?Item=N82E16820250088	Newegg
amazon.com/AMD-Ryzen-3600-12-Thread-Processor/dp/B07STGGQ18	Amazon
amazon.com/Intel-i5-10400-Desktop-Processor-LGA1200/dp/B086MN38Q2	Amazon
amazon.com/Intel-i9-10980XE-Desktop-Processor-Unlocked/dp/B07YP6D8RK	Amazon
staples.com/Patriot-Signature-8GB--1-x-8GB--DDR3--204-Pin-SO-DIMM--DDR3-1600--PC3-12800--Universal-Laptop-Memory/product_937166	Staples
staples.com/Patriot--Signature-8GB-DDR3-SDRAM-SoDIMM-DDR3-1600-PC3-12800-Ultrabook-Memory-Module--PSD38G1600L2S-/product_2580581	Staples
staples.com/Crucial-CT51264BF160B-4GB-DDR3-204-Pin-Laptop-Memory-Module/product_IM1NA4276	Staples

Warehouse

Warehouse ID	URL	Location
823	amazon.com/Samsung-Inch-Internal-MZ-76Q1T0B-AM/dp/B07L3D19MY/ amazon.com/Intel-i7-10700K-Processor-Unlocked-BX8070110700K/dp/B086ML4XSB amazon.com/MSI-PRO-LGA1151-Gigabit-Motherboard/dp/B07J6Z9KJ2 amazon.com/Corsair-Vengeance-3200MHz-Desktop-Memory/dp/B0143UM4TC amazon.com/gp/product/B07CVL2D2S/ amazon.com/Microsoft-Wired-Keyboards-600-Black/dp/B001OAR26K amazon.com/Samsung-Galaxy-Factory-Unlocked-Warranty/dp/B07N4GKMHB	12345
690	samsung.com/us/mobile/galaxy-s10/buy/?link=galaxy-s10	23456

111	apple.com/shop/buy-iphone/iphone-11-pro/6.5-inch-display-64gb-space-gray-unlocked apple.com/shop/product/MQ052LL/A/magic-keyboard-with-numeric-keypad-us-english-silver	34567
040	amazon.com/Intel-i5-9600K-Processor-Unlocked-Motherboard/dp/B07PZQL75X amazon.com/Corsair-CMW32GX4M2C3200C16-Vengeance-PC4-25600-Desktop/dp/B07GTG2T7L amazon.com/Apple-iPhone-64GB-Space-Gray/dp/B07ZQSQSBM/ amazon.com/Intel-i9-10980XE-Desktop-Processor-Unlocked/dp/B07YP6D8RK amazon.com/Intel-i5-10400-Desktop-Processor-LGA1200/dp/B086MN38Q2 amazon.com/AMD-Ryzen-3600-12-Thread-Processor/dp/B07STGGQ18	45678
333	bestbuy.com/site/google-pixel-2-xl-64gb-just-black-verizon/6099989.p?skuld=6099989 bestbuy.com/site/lg-g8x-thinq-aurora-black-at-t/6385561.p?skuld=6385561 bestbuy.com/site/samsung-galaxy-note20-ultra-5g-512gb-mystic-black-sprint/6424231.p?skuld=6424231 bestbuy.com/site/msi-mpg-z390-gaming-plus-socket-lga1151-usb-3-1-gen-1-intel-motherboard-with-led-lighting/6305798.p?skuld=6305798 bestbuy.com/site/gigabyte-b450m-ds3h-socket-am4-usb-3-1-gen-1-amd-motherboard-with-led-lighting/6409173.p?skuld=6409173 bestbuy.com/site/asus-tuf-gaming-x570-plus-wi-fi-socket-am4-usb-c-gen2-amd-motherboard-with-led-lighting/6356983.p?skuld=6356983 bestbuy.com/site/rog-strix-b550-f-gaming-am4-socket-usb-3-2-amd-motherboard/6422283.p?skuld=6422283	89483
543	walmart.com/ip/Logitech-Wireless-Keyboards-and-Mouse-Combo/605403536 walmart.com/ip/Anker-Bluetooth-Ultra-Slim-Keyboards-White/609975070 walmart.com/ip/Dell-KB216-keyboard-580-ADMT/47878839	92738
209	newegg.com/western-digital-black-sn750-nvme-1tb/p/N82E16820250110?Item=N82E16820250110 newegg.com/intel-665p-series-1tb/p/N82E16820167469?Item=N82E16820167469 newegg.com/western-digital-blue-sn550-nvme-1tb/p/N82E16820250135?Item=N82E16820250135	42231

	newegg.com/western-digital-blue-1tb/p/N82E16820250088?Item=N82E16820250088	
989	staples.com/Crucial-CT51264BF160B-4GB-DDR3-204-Pin-Laptop-Memory-Module/product_IM1NA4276 staples.com/Patriot--Signature-8GB-DDR3-SDRAM-SoDIMM-DDR3-1600-PC3-12800-Ultrabook-Memory-Module--PSD38G1600L2S-/product_2580581 staples.com/Patriot-Signature-8GB--1-x-8GB--DDR3--204-Pin-SO-DIMM--DDR3-1600-PC3-12800--Universal-Laptop-Memory/product_937166	57284

Monitor

Item ID	Screen Size	Resolution	Refresh Rate	Type	Audio	HDMI	DisplayPort	DVI	Color
2999	21.5	1080	75	IPS	0	1	0	3	Black
5556	21.5	1080	60	IPS	0	1	0	0	Black
5557	21	720	60	IPS	0	1	0	0	Black
5558	21	4k	60	IPS	0	1	0	0	Black
5559	23	1080	60	IPS	0	1	0	0	Black
5560	21	1440	60	IPS	0	1	0	0	Black
5561	2	144	60	IPS	0	1	0	0	Black

Keyboard

Item ID	Color	Backlight Color	Numpad	Wireless/Wired
3022	Black	null	1	0
6000	White	null	1	1

6009	Black	null	1	1
7001	Black	null	0	1
7002	Black	null	1	1

Phone

Item ID	Resolution	Type	IP Rating	Storage	RAM	CPU	OS	Carrier	LTE/5G	Battery Size	Phone Size
4010	3040x1440	OLED	68	128	8	Snapdragon 855	Android 9	Unlocked	1	3100	5.8
5000	2688 x 1242	OLED	68	64	4	Apple A13 Bionic	IOS 13	Unlocked	1	3969	6.5
6002	2040 x 1080	OLED	67	64	4	Snapdragon 845	Android 8	Verizon	1	3520	6
6003	2340 x 1080	OLED	68	64	4	Snapdragon 855	Android 10	AT&T	1	4000	6.4
6004	3040x1440	OLED	68	128	8	Snapdragon 865	Android 10	Sprint	1	4500	6.9

These are the queries that our database will be expected to answer. They have been answered below using sample data.

The red is the alteration to the query to make it specific (ex. instead of just Phone we list an iPhone X).

1. What is the current price for an Acer **SB220Q Ultra-Thin**?
 - a. \$120
2. What is the lowest price for a **Samsung Galaxy S10** across all vendor websites?
 - a. A Samsung Galaxy S10 from Amazon costs \$747, whereas the best price from Samsung costs \$750. Therefore, \$747 is the current lowest price.
3. Which vendor has the lowest price for a **Samsung Galaxy S10** currently?
 - a. A Samsung Galaxy S10 from Amazon costs \$747, whereas the best price from Samsung costs \$750. Therefore, Amazon is selling it for the lowest price currently.
4. What is the highest price historically for an **Intel Core i7-10700K Desktop**, on **Amazon**?
 - a. \$430
5. List all item IDs of **phones that are currently priced above \$800 dollars** and have less than **30 stock** in warehouse **690**.
 - a. 5000 (Apple iPhone 11 Pro Max).
6. Does **Amazon** have a **Microsoft Wired Keyboard 600** in stock?
 - a. Yes
7. List all items available in the **Pro Series** from **Apple**.
 - a. The Iphone 11 Pro Max, etc.
8. What items are currently sold by **Microsoft**?
 - a. A Microsoft Wired Keyboard 600
9. List all items under a **\$1000** under **the phone** category, across all vendor sites.
 - a. The Samsung Galaxy S10 costs \$747 at Amazon and \$750 on Samsung.com. The iPhone 11 Pro Max costs \$850 at Amazon.
10. What motherboards are compatible with this **Intel Core i5-9600K**? (matching chipset)
 - a. The MSI Z390-A PRO LGA1151 is compatible with that CPU.

11. List all the memory + corresponding prices on **Amazon** that are at least 8GB.
 - a. The Corsair Vengeance RGB Pro 32GB and the Corsair Vengeance LPX 16GB.
12. What is the location of the warehouse where the **Microsoft Wired Keyboard 600 from Amazon** is located?
 - a. 12345
13. What sites have free shipping available for this **Microsoft Wired Keyboard 600**?
 - a. Amazon
14. Which SSDs on **Amazon** are currently on sale?
 - a. Samsung 860 QVO 1TB SSD
15. What devices are compatible with **T-mobile**?
 - a. The Samsung S10s from Amazon and Samsung.com, and the iPhone 11 Pro Max from Amazon and Apple.com.
16. What devices run on **Android 9**?
 - a. Samsung Galaxy S10
17. List all products **by Samsung that are currently on sale whose price has never exceeded \$150 and has never been below \$100.**
 - a. The Samsung 860 QVO 1TB SSD is currently on sale and has only been within that price range.
18. What phones were released so far this year?
 - a. The Samsung Note 20 Ultra
19. What is the most **outdated hard-drive that is still in stock in warehouse 823**?
 - a. Samsung 860 QVO 1TB SSD
20. What are the 5 most expensive monitors from **HP**?
 - a. HP Pavilion 22cwa 21.5-Inch Full HD Monitor
 - b. HP Pavilion 22cwb 21.5-Inch 4k Monitor
 - c. HP Pavilion 22cwc 21.5-Inch 720p Monitor
 - d. HP Pavilion 22cwd 23-Inch Full HD Monitor
 - e. HP Pavilion 22cwe 21.5-Inch 1440p Monitor