

# 아마존 프로젝트

## 1. 추천 시스템 이름

가격 대비 평점이 높은 상품 추천 시스템

## 2. 추천 시스템의 테마

고객에게 합리적 소비를 할 수 있도록 가격과 평점을 결합한 추천을 제공

## 3. 구현 로직

```
SELECT product_name,  
discounted_price,  
actual_price,  
discount_percentage,  
rating  
FROM symmetric-ace-465202-c6.project.amazon  
WHERE SAFE_CAST(rating AS FLOAT64) >= 4.0  
ORDER BY actual_price asc;
```

## 4. 결과

행	product_name	discounted_price	actual_price	discount_percent...	rating
1	Classmate Octane Neon- Blue Gel Pens(Pack of 5) Smooth Writing Pen Attractive body colour for Boys & Girls Waterproof ink for smudge free writing Preferred by Students for Exam Study at home essential	50.0	50.0	0.0	4.3
2	Classmate Pulse Spiral Notebook - 240 mm x 180 mm, Soft Cover, 200 Pages, Unruled	67.0	75.0	0.11	4.1
3	Kitchenwell 18Pc Plastic Food Snack Bag Pouch Clip Sealer for Keeping Food Fresh for Home, Kitchen, Camping Snack Seal Sealing Bag Clips (Multi-Color)   (Pack of 18)	79.0	79.0	0.0	4
4	VR 18 Pcs - 3 Different Size Plastic Food Snack Bag Pouch Clip Sealer Large, Medium, Small Plastic Snack Seal Sealing Bag Clips Vacuum Sealer (Set of 18, Multi-Color) (Multicolor)	89.0	89.0	0.0	4.2
5	E-COSMOS Plug in LED Night Light Mini USB LED Light Flexible USB LED Ambient Light Mini USB LED Light, LED Portable car Bulb, Indoor, Outdoor, Reading, Sleep (4 pcs)	89.0	99.0	0.1	4.2
6	Apsara Platinum Pencils Value Pack - Pack of 20	99.0	99.0	0.0	4.3
7	BRUSTRO Copytinta Coloured Craft Paper A4 Size 80 GSM Mixed Bright Colour 40 Sheets Pack (10 cols X 4 Sheets) Double Side Color for Office Printing, Art and Craft.	99.0	99.0	0.0	4.3
8	Pilot FriXion Clicker Roller Pen (Blue), (9000019529)	90.0	100.0	0.1	4.1
9	Parker Quink Ink Bottle (Black)	90.0	100.0	0.1	4.3
10	Parker Quink Ink Bottle, Blue	100.0	100.0	0.0	4.3
11	Classmate Octane Colour Burst-Multicolour Gel Pens (Pack of 10)   Gold & Silver Glitter Sparkle Pens 10 colour ink shades for art lovers and kids Fun at home essentials	90.0	100.0	0.1	4.4
12	Pentonic Multicolor Ball Point Pen, Pack of 10	120.0	120.0	0.0	4.1
13	Classmate Pulse 6 Subject Notebook - Unruled, 300 Pages, Spiral Binding, 240mm*180mm	114.0	120.0	0.05	4.2
14	Classmate Drawing Book - Unruled, 40 Pages, 210 mm x 297 mm - Pack Of 4	120.0	120.0	0.0	4.5

평균점수(rating) 4.0대 이상을 기준으로 정가(actual\_price)를 asc로 정렬 가격이 싸면서 평균 점수가 높은 상품을 보여줌

## 1. 추천 시스템 이름

다양한 연관 상품 정보를 제공하는 추천 시스템

## 2. 추천 시스템의 테마

구매한 상품과 같이 쓰거나 연관된 상품을 정보를 제공하여 상품을 찾는 시간을 덜어주기 위한 연관 상품 제공을 추천

## 3. 구현 로직

```
WITH exploded_reviews AS (  
  SELECT  
    TRIM(user_id) AS user_id,  
    TRIM(product_id) AS product_id  
  FROM  
    `symmetric-ace-465202-c6.project.amazon`,  
    UNNEST(SPLIT(user_id, ',')) AS user_id  
,  
  
  pair_counts AS (  
    SELECT  
      LEAST(a.product_id, b.product_id) AS product_id_1,  
      GREATEST(a.product_id, b.product_id) AS product_id_2,  
      COUNT(*) AS pair_count  
    FROM  
      exploded_reviews a  
    JOIN  
      exploded_reviews b  
    ON  
      a.user_id = b.user_id AND a.product_id != b.product_id  
    GROUP BY  
      product_id_1, product_id_2  
,  
  
  unique_names AS (  
    SELECT  
      product_id,  
      ARRAY_AGG(product_name IGNORE NULLS LIMIT 1)[OFFSET(0)] AS product_name  
    FROM  
      `symmetric-ace-465202-c6.project.amazon`  
    GROUP BY  
      product_id
```

```

        product_id
    )

SELECT
    pc.product_id_1,
    p1.product_name AS product_name_1,
    pc.product_id_2,
    p2.product_name AS product_name_2,
    pc.pair_count
FROM
    pair_counts pc
JOIN unique_names p1 ON pc.product_id_1 = p1.product_id
JOIN unique_names p2 ON pc.product_id_2 = p2.product_id
ORDER BY
    pc.pair_count DESC
LIMIT 20;

```

## 4. 결과

명	product_id_1	product_name_1	product_id_2	product_name_2	pair_count
1	B082LZGK39	Ambrane Unbreakable 60W / 3A Fast Charging 1.5m Braided Micro USB Cable for Smartphones, Tablets, Laptops & Other Micro USB Devices, 480Mbps Data Sync, Quick Charge 3.0 (RCM15, Black)	B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging 1.5m Braided Type C Cable for Smartphones, Tablets, Laptops & other Type C devices, PD Technology, 480Mbps Data Sync, Quick Charge 3.0 (RCT15A, Black)	48
2	B082LSVT48	Ambrane Unbreakable 60W / 3A Fast Charging 1.5m Braided Type C to Type C Cable for Smartphones, Tablets, Laptops & Other Type C Devices, PD Technology, 480Mbps Data Sync (RCTT15, Black)	B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging 1.5m Braided Type C Cable for Smartphones, Tablets, Laptops & other Type C devices, PD Technology, 480Mbps Data Sync, Quick Charge 3.0 (RCT15A, Black)	48
3	B08Y15JV5	pTron Solero MB301 3A Micro USB Data & Charging Cable, Made in India, 480Mbps Data Sync, Strong & Durable 1.5-Meter Nylon Braided USB Cable for Micro USB Devices - (Black)	B08Y1TFS6	pTron Solero TB301 3A Type-C Data and Fast Charging Cable, Made in India, 480Mbps Data Sync, Strong and Durable 1.5-Meter Nylon Braided USB Cable for Type-C Devices for Charging Adapter (Black)	48
4	B0789LZTCJ	boAt Rugged v3 Extra Tough Unbreakable Braided Micro USB Cable 1.5 Meter (Black)	B08HDJ86NZ	boAt Deuce USB 300 2 in 1 Type-C & Micro USB Stress Resistant, Tangle-Free, Sturdy Cable with 3A Fast Charging & 480Mbps Data Transmission, 10000+ Bends Lifespan and Extended 1.5m Length(Martian Red)	48
5	B082LSVT48	Ambrane Unbreakable 60W / 3A Fast Charging 1.5m Braided Type C to Type C Cable for Smartphones, Tablets, Laptops & Other Type C Devices, PD Technology, 480Mbps Data Sync (RCTT15, Black)	B082LZGK39	Ambrane Unbreakable 60W / 3A Fast Charging 1.5m Braided Micro USB Cable for Smartphones, Tablets, Laptops & Other Micro USB Devices, 480Mbps Data Sync, Quick Charge 3.0 (RCM15, Black)	32
6	B09NHVCHS9	Flix Micro Usb Cable For Smartphone (Black)	B083NBVG24	FLIX (Beetel) USB to Type C PVC Data Sync & 15W(3A) TPE Fast Charging Cable, Made in India, 480Mbps Data Sync, 1 Meter Long cable for all Andriod & all Type C Devices (Black)(XCD - FPC02)	24
7	B09NHVCHS9	Flix Micro Usb Cable For Smartphone (Black)	B09KXZXMWJ	Flix (Beetel) Usb To Type C Pvc Data Sync And 2A 480Mbps Data Sync, Tough Fast Charging Long Cable For Usb Type C Devices, Charging Adapter (White, 1 Meter) - Xcd-C12	24
8	B09LYXP7Y	Ambrane 60W / 3A Fast Charging Output Cable with Type-C to USB for Mobile, Neckband, True Wireless Earphone Charging, 480Mbps Data Sync Speed, 1m Length (ACT - AZ10, Black)	B09LYB9PB	Ambrane 60W / 3A Fast Charging Output Cable with Micro to USB for Mobile, Neckband, True Wireless Earphone Charging, 480Mbps Data Sync Speed, 1m Length (ACM - AZ1, Black)	24
9	B09NHVCHS9	Flix Micro Usb Cable For Smartphone (Black)	B09NJN8L25	FLIX (Beetel) USB to Micro USB PVC Data Sync & 2A Fast Charging Cable, Made in India, 480Mbps Data Sync, Solid Cable, 1 Meter Long USB Cable for Micro USB Devices (White)(XCD-M11)	24
10	B07JH1C41D	Wayona Nylon Braided (2 Pack) Lightning Fast Usb Data Cable Fast Charger Cord For Iphone, Ipad Tablet (3 Ft Pack Of 2, Grey)	B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Charging and Data Sync Cable Compatible for iPhone 13, 12,11, X, 8, 7, 6, 5, iPad Air, Pro, Mini (3 FT Pack of 1, Grey)	24
11	B08P9RYPLR	FLIX (Beetel) USB to iPhone Lightning Textured Pattern Data Sync & 2A Fast Charging Cable, Made in India, 480Mbps Data Sync, Tough Cable, 1 Meter Long USB Cable for Apple Devices (Black)(XCD-L102)	B09NHVCHS9	Flix Micro Usb Cable For Smartphone (Black)	24
12	B09NHVCHS9	Flix Micro Usb Cable For Smartphone (Black)	B083MQXNFB	FLIX (Beetel) Flow USB to Micro USB PVC Data Sync & 12W(2.4A) Fast Charging Cable,Made in India,480Mbps Data Sync,Solid Cable,1 Meter Long cable for all Andriod & Micro USB Devices (Black)(XCD-FPM01)	24
13	B08R69VDHT	Pinnaciz Original Combo of 2 Micro USB Fast Charging Cable, USB Charging Cable for Data Transfer Perfect for Android Smart Phones White 1.2 Meter Made in India (Pack of 2)	B08R69WBN7	Pinnaciz Original Combo of 2 USB Type C Fast Charging Cable, USB C Data Cable for Charging and Data Transfer Smart Phones White 1.2 Meter Made in India (Pack of 2)	24
14	B07JGDBSM1	Wayona Nylon Braided 2M / 6Ft Fast Charge Usb To Lightning Data Sync And Charging Cable For Iphone, Ipad Tablet (6 Ft Pack Of 1, Grey)	B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Charging and Data Sync Cable Compatible for iPhone 13, 12,11, X, 8, 7, 6, 5, iPad Air, Pro, Mini (3 FT Pack of 1, Grey)	24
15	B09NHVCHS9	Flix Micro Usb Cable For Smartphone (Black)	B09NL4DJZZ	FLIX (Beetel) USB to Type C PVC Data Sync & 2A Smartphone Fast Charging Cable, Made in India, 480Mbps Data Sync, Tough Cable, 1 Meter Long USB Cable for USB Type C Devices Black XCD-C12	24
16	B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Charging and Data Sync Cable Compatible for iPhone 13,	B07LGT5SSJ	Wayona Usb Nylon Braided Data Sync And Charging Cable For Iphone, Ipad Tablet (Red,	24

제품을 구매했을때 연관 상품으로 같이 구매를 많이한 제품을 보여줌

### 1. 추천 시스템 이름

카테고리별 할인율과 평균 평점이 높은 제품 추천 시스템

### 2. 추천 시스템의 테마

카테고리별로 정리된 다양한 상품들을 할인율과 평균 평점을 결합해 추천을 제공

### 3. 구현 로직

```
WITH exploded_reviews AS (  
  SELECT  
    TRIM(user_id) AS user_id,      -- 유저 ID의 공백 제거  
    TRIM(product_id) AS product_id -- 상품 ID의 공백 제거  
  FROM  
    `symmetric-ace-465202-c6.project.amazon`,  
    UNNEST(SPLIT(user_id, ',')) AS user_id -- 쉼표로 구분된 user_id를 분해  
) ,  
  
SELECT  
  category,  
  product_id,  
  product_name,  
  discount_percentage,  
  rating,  
  rank_in_category  
FROM (  
  SELECT  
    category,  
    product_id,  
    product_name,  
    discount_percentage,  
    rating,  
    ROW_NUMBER() OVER (  
      PARTITION BY category  
      ORDER BY discount_percentage DESC, rating DESC  
    ) AS rank_in_category  
  FROM
```

```

    exploded
WHERE
    rating IS NOT NULL AND discount_percentage IS NOT NULL
)
WHERE rank_in_category <= 3
ORDER BY
    discount_percentage desc, rating desc;

```

## 4. 결과

행	category	product_id	product_name	discount_percent...	rating	rank_in_category
1	Computers&Accessories	B097C564GC	rtis [2 Pack] Mini USB C Type C Adapter Plug, Type C Female to USB A Male Charger Charging Cable Adapter Converter compatible for iPhone, Samsung S20 ultra/S21/S10/S8/S9/MacBook Pro iPad Silver	0.94	4.3	1
2	Accessories&Peripherals	B097C564GC	rtis [2 Pack] Mini USB C Type C Adapter Plug, Type C Female to USB A Male Charger Charging Cable Adapter Converter compatible for iPhone, Samsung S20 ultra/S21/S10/S8/S9/MacBook Pro iPad Silver	0.94	4.3	1
3	USBtoUSBAdapters	B097C564GC	rtis [2 Pack] Mini USB C Type C Adapter Plug, Type C Female to USB A Male Charger Charging Cable Adapter Converter compatible for iPhone, Samsung S20 ultra/S21/S10/S8/S9/MacBook Pro iPad Silver	0.94	4.3	1
4	Adapters	B097C564GC	rtis [2 Pack] Mini USB C Type C Adapter Plug, Type C Female to USB A Male Charger Charging Cable Adapter Converter compatible for iPhone, Samsung S20 ultra/S21/S10/S8/S9/MacBook Pro iPad Silver	0.94	4.3	1
5	SmartWatches	B0BF57RN3K	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch with Bluetooth Calling, AI Voice Assistance, 100 Sports Modes IP67 Rating, 240*280 Pixel High Resolution	0.91	4.2	1
6	SmartWatches	B0BF54972T	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch with Bluetooth Calling, AI Voice Assistance, 100 Sports Modes IP67 Rating, 240*280 Pixel High Resolution	0.91	4.2	2
7	SmartWatches	B0BF563HB4	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch with Bluetooth Calling, AI Voice Assistance, 100 Sports Modes IP67 Rating, 240*280 Pixel High Resolution	0.91	4.2	3
8	Electronics	B0BF57RN3K	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch with Bluetooth Calling, AI Voice Assistance, 100 Sports Modes IP67 Rating, 240*280 Pixel High Resolution	0.91	4.2	1
9	Electronics	B0BF54972T	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch with Bluetooth Calling, AI Voice Assistance, 100 Sports Modes IP67 Rating, 240*280 Pixel High Resolution	0.91	4.2	2
10	Electronics	B0BF563HB4	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch with Bluetooth Calling, AI Voice Assistance, 100 Sports Modes IP67 Rating, 240*280 Pixel High Resolution	0.91	4.2	3

행	category	product_id	product_name	discount_percent...	rating	rank_in_category
11	WearableTechnology	B0BF57RN3K	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch with Bluetooth Calling, AI Voice Assistance, 100 Sports Modes IP67 Rating, 240*280 Pixel High Resolution	0.91	4.2	1
12	WearableTechnology	B0BF54972T	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch with Bluetooth Calling, AI Voice Assistance, 100 Sports Modes IP67 Rating, 240*280 Pixel High Resolution	0.91	4.2	2
13	WearableTechnology	B0BF563HB4	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch with Bluetooth Calling, AI Voice Assistance, 100 Sports Modes IP67 Rating, 240*280 Pixel High Resolution	0.91	4.2	3
14	PhoneCharms	B0BBW521YC	LAPSTER 12pcs Spiral Cable Protectors for Charger, Wires, Data Charger Cable Protector for Computers, Cell Phones etc.(Grey)	0.9	4.4	1
15	MobileAccessories	B0BBW521YC	LAPSTER 12pcs Spiral Cable Protectors for Charger, Wires, Data Charger Cable Protector for Computers, Cell Phones etc.(Grey)	0.9	4.4	1
16	Décor	B0BBW521YC	LAPSTER 12pcs Spiral Cable Protectors for Charger, Wires, Data Charger Cable Protector for Computers, Cell Phones etc.(Grey)	0.9	4.4	1
17	Mobiles&Accessories	B0BBW521YC	LAPSTER 12pcs Spiral Cable Protectors for Charger, Wires, Data Charger Cable Protector for Computers, Cell Phones etc.(Grey)	0.9	4.4	1
18	Computers&Accessories	B0BW56G1K9	LAPSTER Spiral Charger Spiral Charger Cable Protectors for Wires Data Cable Saver Charging Cord Protective Cable Cover Set of 3 (12 Pieces)	0.9	4.1	2
19	Cables&Accessories	B0BW56G1K9	LAPSTER Spiral Charger Spiral Charger Cable Protectors for Wires Data Cable Saver Charging Cord Protective Cable Cover Set of 3 (12 Pieces)	0.9	4.1	1
20	CableConnectionProtectors	B0BW56G1K9	LAPSTER Spiral Charger Spiral Charger Cable Protectors for Wires Data Cable Saver Charging Cord Protective Cable Cover Set of 3 (12 Pieces)	0.9	4.1	1

카테고리별로 할인율과 평균 평점이 높은 상위 3개의 상품을 선택하여 정렬해서 보여줌

## 1. 추천 시스템 이름

할인하는 Home&Kitchen의 구매자를 위한 추천 시스템

## 2. 추천 시스템의 테마

저렴하고 신뢰성 높은 Home&Kitchen 관련 상품을 구매하고자 하는 고객들을 위한 추천을 제공

### 3. 구현 로직

```
WITH CategoryProducts AS (  
  SELECT  
    product_id,  
    product_name,  
    discount_percentage,  
    rating,  
    rating_count,  
    cat -- UNNEST로 분리된 개별 카테고리  
  FROM  
    `symmetric-ace-465202-c6.project.amazon`,  
    UNNEST(SPLIT(category, '|')) AS cat  
)  
SELECT *  
FROM CategoryProducts  
WHERE cat = 'Home&Kitchen'  
ORDER BY rating_count DESC  
LIMIT 10;
```

### 4. 결과

행	product_id	product_name	discount_percent...	rating	rating_count	cat
1	B01LWYDEQ7	Pigeon Polypropylene Mini Handy and Compact Chopper with 3 Blades for Effortlessly Chopping Vegetables and Fruits for Your Kitchen (12420, Green, 400 ml)	0.6	4.1	270563	Home&Kitchen
2	B07WMS7TWB	Pigeon by Stovekraft Amaze Plus Electric Kettle (14289) with Stainless Steel Body. 1.5 litre, used for boiling Water, making tea and coffee, instant noodles, soup etc. 1500 Watt (Silver)	0.48	3.9	123365	Home&Kitchen
3	B01MQZ7J8K	Prestige Electric Kettle PKOSS - 1500watts, Steel (1.5Ltr), Black	0.48	3.9	63350	Home&Kitchen
4	B01GFTEVSY	Pigeon by Stovekraft Cruise 1800 watt Induction Cooktop (Black)	0.47	3.8	54032	Home&Kitchen
5	B0BR4F878Q	Swiffer Instant Electric Water Heater Faucet Tap Home-Kitchen Instantaneous Water Heater Tank less for Tap, LED Electric Head Water Heaters Tall Gallon Comfort(3000W) ((Pack of 1))	0.28	4.8	53803	Home&Kitchen
6	B008YW8M0G	Bajaj DX-7 1000W Dry Iron with Advance Soleplate and Anti-bacterial German Coating Technology, White	0.11	4.2	46647	Home&Kitchen
7	B07VQGV68	Glun Multipurpose Portable Electronic Digital Weighing Scale Weight Machine (10 Kg - with Back Light)	0.41	3.9	44994	Home&Kitchen
8	B09XSC9VLK	Lifelong LLMG23 Power Pro 500-Watt Mixer Grinder with 3 Jars (Liquidizing, Wet Grinding and Chutney Jar), Stainless Steel blades, 1 Year Warranty (Black)	0.63	3.8	44050	Home&Kitchen
9	B0756K5DYZ	Prestige Iris 750 Watt Mixer Grinder with 3 Stainless Steel Jar + 1 Juicer Jar (White and Blue)	0.48	3.9	43070	Home&Kitchen
10	B00HVXS7WC	Bajaj Rex 500W Mixer Grinder with Nutri-Pro Feature, 3 Jars, White	0.38	4.2	41349	Home&Kitchen

Home&Kitchen 테마로 리뷰수가 높은 순으로 정렬해서 할인율과 평점을 제공

### 1. 추천 시스템 이름

만족도가 높은 상품 추천 시스템

### 2. 추천 시스템의 테마

고객에게 평점과 리뷰수가 높은 상품들을 추천

### 3. 구현 로직

```
SELECT
  product_name,
  rating,
  rating_count,
  discounted_price
FROM
  symmetric-ace-465202-c6.project.amazon
WHERE
  safe_cast(rating as float64) >= 4.5 AND rating_count >= 500
ORDER BY
  rating DESC, rating_count DESC
LIMIT 10;
```

### 4. 결과

행	product_name	rating	rating_count	discounted_price
1	Swiffer Instant Electric Water Heater Faucet Tap Home-Kitchen Instantaneous Water Heater Tank less for Tap, LED Electric Head Water Heaters Tail Gallon Comfort(3000W) ((Pack of 1))	4.8	53803	1439.0
2	Instant Pot Air Fryer, Vortex 2QT, Touch Control Panel, 360° EvenCrisp™ Technology, Uses 95 % less Oil, 4-in-1 Appliance: Air Fry, Roast, Bake, Reheat (Vortex 1.97Litre, Black)	4.8	3964	4995.0
3	Spigen EZ Fit Tempered Glass Screen Protector for iPhone 14 Pro Max - 2 Pack (Sensor Protection)	4.7	7779	999.0
4	Sony Bravia 164 cm (65 inches) 4K Ultra HD Smart LED Google TV KD-65X74K (Black)	4.7	5935	77990.0
5	Campfire Spring Chef Prolix Instant Portable Water Heater Geyser 1Ltr. for Use Home Stainless Steel Baking Rack   Restaurant   Office   Labs   Clinics   Saloon   with Installation Kit (With MCB)	4.7	2591	1499.0
6	Multifunctional 2 in 1 Electric Egg Boiling Steamer Egg Frying Pan Egg Boiler Electric Automatic Off with Egg Boiler Machine Non-Stick Electric Egg Frying Pan-Tiger Woods (Multy)	4.7	2300	699.0
7	FIGMENT Handheld Milk Frother Rechargeable, 3-Speed Electric Frother for Coffee with 2 Whisks and Coffee Decoration Tool, Coffee Frother Mixer, CRESCENT ENTERPRISES VRW0.50BK (A1)	4.7	1729	699.0
8	Redgear MP35 Speed-Type Gaming Mousepad (Black/Red)	4.6	33434	299.0
9	Spigen EZ Fit Tempered Glass Screen Protector Guard for iPhone 14/13/13 Pro - 2 Pack	4.6	26603	999.0
10	Logitech M331 Silent Plus Wireless Mouse, 2.4GHz with USB Nano Receiver, 1000 DPI Optical Tracking, 3 Buttons, 24 Month Life Battery, PC/Mac/Laptop - Black	4.6	12375	1295.0

리뷰수와 평점이 높은 상품들을 정렬해서 많은 고객들에게 만족을 얻은 상품들을 제공