Amazon

May 22, 2017

0.0.1 (data engineer applicant required; data analyst bonus). Use Amazon product advertising API to build a function that allows you to search for any keyword. Create a list of 20 tampon products sold on Amazon, use the list you created to get each product's Best Seller Rank. Approximate panty liners % market share of women's hygiene product category.

```
In [ ]: #AMAZON_ASSOC_TAG
In [134]: from amazon.api import AmazonAPI
          from amazon.api import AmazonProduct
          import pandas as pd
In [ ]: ## Create Amazon Object
In [203]: amazon = AmazonAPI('AKIAI7UCRMPRFC5YUM4Q', 'aXT4oOVb4USw5u1lLgODJ6+t8euPt
In [ ]: # Look up of single object and get details of object
In [ ]: product = amazon.lookup(ItemId='B00EOE0WKQ')
       product.title
In [ ]: ####
In [213]: ## Funtion allows you to serach for any keyword
          def searchProduct(amazon , product):
              return amazon.search(Keywords= product, SearchIndex='All')
In [214]: # Data frame that holds tampon products
          tampon_df = pd.DataFrame( columns=['Sno', 'Best Seller Rank', 'Title'])
          tampon_df
Out[214]: Empty DataFrame
          Columns: [Sno, Best Seller Rank, Title]
          Index: []
```

0.0.2 Create a list of 20 tampon products sold on Amazon, use the list you created to get each product's Best Seller Rank. .

```
In [217]: tampon_products = searchProduct(amazon ,'tampons')
```

```
In [218]: for i, product in enumerate(tampon_products):
              if (i < 20):
                  tampon_df.set_value(i, 'Sno', i)
                  tampon_df.set_value(i,'Best Seller Rank', product.sales_rank)
                  tampon_df.set_value(i,'Title', product.title)
                  print ("{0}. {1}. '{2}'".format(i,product.sales_rank, product.tit
0. 1272. 'Tampax Pearl Plastic Tampons, Triplepack, Light/Regular/Super Absorbency,
1. 1199. 'Tampax Pearl Plastic Tampons, Regular Absorbency, Unscented, 50 Count'
2. 1097. 'Tampax Pearl Unscented Super Absorbency Tampons, 96 Count'
3. 746. 'Playtex Sport Tampons with Flex-Fit Technology, Regular and Super Multi-Pa
4. 1367. 'U by Kotex Click Compact Tampons, Regular Absorbency, Unscented, 34 Count
5. 2432. 'Tampax Radiant Plastic Unscented Tampons, Super Absorbency, 16 Count'
6. 6040. 'Tampax Cardboard Applicator Tampons, Regular Absorbency, 40 Count'
7. 37524. 'Tampax Pearl Plastic Tampons, Regular Absorbency, Unscented, 54 Count'
8. 1318. 'Playtex Sport Unscented Tampon, Regular Absorbency, 36 Count'
9. 9814. 'L. Organic Cotton Tampons with BPA-Free Applicator -- Regular (20 count)
10. 17921. 'Tampax Pearl Regular Absorbency Unscented Tampons, 96 Count'
11. 8530. 'Playtex Sport Combo Pack with Regular and Super Tampons and Ultra Thin
12. 2021. 'o.b. Pro Comfort Applicator Free Digital Tampons, Super - 40 Count'
13. 22155. 'Sea Pearl Sponge Tampon Md 2pk'
14. 1551. 'U by Kotex Security Tampons, Super Plus, Unscented, 50 Count'
15. 31457. 'Tampax Pearl Active Plastic Triplepack Light/Regular/Super Absorbency,
16. 20466. 'Tampax Radiant Plastic Tampons Duo Pack, Unscented, 84 Count'
17. 2052. 'Tampax Radiant Plastic Unscented Tampons, Regular Absorbency, 16 Count'
18. 9319. 'HOSPECO MT100FS HOS Tampons, Original, Regular Absorbency (Pack of 100)
19. 5567. 'Playtex Gentle Glide Tampons with Triple Layer Protection, Regular and S
In [219]: tampon_df["Best Seller Rank"]
Out [219]: 0
                 1272
          1
                 1199
          2
                 1097
          3
                  746
          4
                 1367
          5
                 2432
          6
                 6040
          7
                37524
          8
                 1318
          9
                 9814
          10
                17921
          11
                 8530
          12
                 2021
          13
                22155
          14
                1551
          15
                31457
```

16

20466

```
17 2052
18 9319
19 5567
Name: Best Seller Rank, dtype: object
```

0.0.3 Create a list of 20 tampon products sold on Amazon, use the list you created to get each product's Best Seller Rank.

```
In [241]: tampons = amazon.search_n(20, Keywords='Tampons', SearchIndex='All')
          for i, product in enumerate(tampons):
              print ("{0}. {1}. '{2}'".format(i,product.sales_rank, product.title))
0. 1334. 'Tampax Pearl Plastic Tampons, Triplepack, Light/Regular/Super Absorbency,
1. 1170. 'Tampax Pearl Plastic Tampons, Regular Absorbency, Unscented, 50 Count'
2. 1105. 'Tampax Pearl Unscented Super Absorbency Tampons, 96 Count'
3. 730. 'Playtex Sport Tampons with Flex-Fit Technology, Regular and Super Multi-Pa
4. 1122. 'U by Kotex Click Compact Tampons, Regular Absorbency, Unscented, 34 Count
5. 2161. 'Tampax Radiant Plastic Unscented Tampons, Super Absorbency, 16 Count'
6. 6318. 'Tampax Cardboard Applicator Tampons, Regular Absorbency, 40 Count'
7. 36820. 'Tampax Pearl Plastic Tampons, Regular Absorbency, Unscented, 54 Count'
8. 1131. 'Playtex Sport Unscented Tampon, Regular Absorbency, 36 Count'
9. 10247. 'L. Organic Cotton Tampons with BPA-Free Applicator -- Regular (20 count)
10. 18305. 'Tampax Pearl Regular Absorbency Unscented Tampons, 96 Count'
11. 7613. 'Playtex Sport Combo Pack with Regular and Super Tampons and Ultra Thin
12. 1680. 'o.b. Pro Comfort Applicator Free Digital Tampons, Super - 40 Count'
13. 22752. 'Sea Pearl Sponge Tampon Md 2pk'
14. 1205. 'U by Kotex Security Tampons, Super Plus, Unscented, 50 Count'
15. 32215. 'Tampax Pearl Active Plastic Triplepack Light/Regular/Super Absorbency,
16. 20758. 'Tampax Radiant Plastic Tampons Duo Pack, Unscented, 84 Count'
17. 1688. 'Tampax Radiant Plastic Unscented Tampons, Regular Absorbency, 16 Count'
18. 9731. 'HOSPECO MT100FS HOS Tampons, Original, Regular Absorbency (Pack of 100)
19. 5049. 'Playtex Gentle Glide Tampons with Triple Layer Protection, Regular and S
In [228]: no_page_liner = amazon.search(Keywords='Panty Liners', SearchIndex='Heal
          for i, product in enumerate(no_page_liner):
              print ("{0}. {1}. '{2}'".format(i,product.sales_rank, product.title))
0. 434. 'Always Thin Dailies Unscented Wrapped Liners, Regular, 120 Count (Pack of
1. 342. 'U by Kotex Barely There Liners, Light Absorbency, Unscented'
2. 1298. 'Carefree Acti-Fresh Ultra-Thin Panty Liners, Regular, Unscented - 120 Cou
3. 2220. 'Playtex Sport Body Shape Liners, Regular - 54 Count'
4. 5012. 'U by Kotex Lightdays Panty Liners, Regular, 129 Count'
```

7. 71403. 'Carefree Body Shape Thin To-Go Pantiliners-Unscented-60 ct' 8. 10158. 'Always Xtra Protection Long Daily Liners Unscented 108 Count'

5. 2904. 'Carefree Original Ultra-Thin Panty Liners, Long, Unscented - 92 Count' 6. 690. 'Always Discreet Incontinence Liners for Women, Very Light Absorbency, Long

9. 2603. 'ORGANYC Hypoallergenic 100% Organic Cotton Panty Liners, 24-count Box'

- 10. 1684. 'U by Kotex Lightdays Liners, Extra Coverage, Unscented, 112 Count'
- 11. 33099. 'Always Xtra Protection Regular Daily Liners 50 ea'
- 12. 9595. 'NATRACARE Natural Curved Panty Liner 30 Liners'
- 13. 21712. 'Always Thin Dailies, Unscented, Wrapped 60 Count'
- 14. 61711. '3 Pack Carefree Original Pantiliners in Fresh Scent'
- 15. 11788. 'Love My® /Mama/Girl/Maiden/Antibacterial Bamboo fiber/ Menstrual Pads/
- 16. 5418. 'U by Kotex Barely There Thong Pantiliners 50 ea (Pack of 2)'
- 17. 10310. 'KOTEX Lightdays Liners, Regular, 192 Count'
- 18. 42346. 'L. Organic Cotton, Chlorine Free, Ultra Thin Liners (40 count)'
- 19. 36454. 'U by Kotex Curves Regular Liners, Unscented, 102 Count'
- 20. 30041. 'Always Xtra Protection Daily Liners, Regular, 100 Count'
- 21. None. 'NATRACARE PANTY SHIELDS, CURVED, 30 CT (2 Pack)'
- 22. 4555. 'Always Discreet, Incontinence Liners, Very Light, Long Length , 132 cour
- 23. 13988. 'Always Dailies Xtra Protection Long Pantiliner Dri-liners, 160 Count +
- 24. 3374. 'Always Xtra Protection Daily Liners, Regular, 50 Count (Pack of 6)'
- 25. 6923. 'Carefree Thong Pantiliners-Unscented-49 ct (Pack of 3)'
- 26. 3038. 'Always Xtra Protection Daily Liners, Extra Long, 34 Count (Pack of 6)'
- 27. 12261. 'Rael 100% Organic Cotton Panty Liners 2Pack/40Count total Unscented
- 28. 15553. 'Always Xtra Protection Pantiliners 200 Count'
- 29. 6911. 'Carefree Body Shape Extra Long Unscented, 93 Count'
- 30. 60573. 'Poise Microliners, Incontinence Panty Liners, Lightest Absorbency, Requ
- 31. 10512. 'U by Kotex Lightdays Liners, Thin, Regular, Unscented (Pack of 6)'
- 32. 43900. 'Always Radiant Regular Panty Liners 96 Count'
- 33. 11706. 'Poise Incontinence Panty Liners, Very Light Absorbency, Regular (Pack
- 34. 120396. 'HailiCare 9.8 Inches Reusable Sanitary Pads, Pack of 10 Regular Flow
- 35. 11226. 'Always Discreet, Incontinence Liners, Very Light, Regular Length, 120 (
- 36. 31714. 'The Honest Company Organic Cotton Ultra-Thin Panty Liners (96 count)'
- 37. 93949. '2 box Femtastic Black panty liners 32 count total 64 liners'
- 38. 10319. 'Natracare Normal Wrapped Panty Liners, 18 Count'
- 39. 38034. 'Always, Radiant Pantiliners, Regular, Unscented, 48 Count'
- 40. 43504. 'U by Kotex Unscented Long Light Absorbency Fitness Panty Liners, 64 Cou
- 41. 25106. 'ORGANYC Hypoallergenic 100% Organic Cotton Panty Liners, flat, 24-count
- 42. None. 'Always Extra Long Plus with Odor Lock Dri-Liners-60 ct'
- 43. 21587. 'Natracare Natural Panty Liners, Curved, 30 Count Boxes (480 Liners) (Pa
- 44. 40191. 'U by Kotex Absorbent Pantiliners, Long, Individually Wrapped, Unscented
- 45. 40640. 'Carefree Body Shape Thin Unscented, 60 Count (Pack of 2)'
- 46. None. 'Natracare Panty Shields 30 per box, 3 boxes (90 Shield Total)'
- 47. 145404. 'U By Kotex Fitness Panty Liners, Light Absorbency/Regular-Unscented,
- 48. 43405. 'Veeda Natural Cotton Liners, Hypoallergenic, Folded 40 Count'
- 49. 24910. 'Carefree Body Shape Regular Unscented, 54-count (Pack of 2)'
- 50. None. 'Natracare Natural Organic Thong Style Panty Liners -- 30 Pads (2 packs)
- 51. 12606. 'TENA Serenity Active Incontinence Liners, Regular, 26 Count (Pack of 2)
- 52. 99137. 'JOLIE ORGANIC Ultra Thin Panty Liners- 24 Count...'
- 53. 86567. 'Bella Flor Daily Panty Liners 264 Count Light and Comfortable, Great
- 54. 11952. 'Natracare Panty Liners Long, 16 Count'
- 55. 119524. 'Carefree Carefree Body STape Regular Unscented, 20 Count (Pack of 6)'
- 56. 129475. 'Kotex Lightdays Unscented Liners, Regular Protection 22 Liners'
- 57. 28412. 'Carefree Thong Pantiliners, Regular Protection, Unscented, 98 Count'

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58. 118809. 'Natracare Panty Liners Thong Style 30 ct, 3 Boxes (90 Liners Total)'
59. 36118. 'Natracare Organic Cotton Natural Panty Liners Ultra Thin 22 Liner(s)'
60. 8467. 'TENA Incontinence Liners for Women, Very Light, Long, 44 Count (Pack of
61. 16642. 'U by Kotex Lightdays Liners, Extra Coverage, Unscented, 80 Count (Pack
62. 31770. 'Natratouch 7" Length Organic Cotton Panty Liners 42 piece (super)'
63. 16988. 'U by Kotex Lightdays Liners, Long, Unscented, 96 Count (Pack of 6)'
64. 33642. 'Natracare Organic Cotton Natural Panty Liners Tanga 30 Liner(s)'
65. 2258. 'U by Kotex Security Ultra Thin Pads, Long, Unscented, 56 Count'
66. 61710. 'Carefree Original Long Scented, 42-count (Pack of 3)'
67. 74287. 'Kotex Natural Balance Lightdays Liners, Regular -64 ct.'
68. None. 'Poise Liners, Regular Length, Very Light Absorbency-48 ct'
69. 34639. 'Seventh Generation Pantiliner Pads, Free & Clear Chlorine Free, 50ct (F
70. 32763. 'Always Incredibly Thin Fresh Liners Wrapped Scented 60 Count (Pack of
71. 73848. 'Poise Very Light Absorbency Liner, Long (132 Ct.)'
72. 69950. 'Natratouch 6" Length Organic Cotton Panty Liners 48 piece (Regular)'
73. 112764. 'Cardinal Health FH-LNR01 Panty Liner Light Absorbency Adhesive Unscent
74. 123328. 'U By Kotex Barely There Thong Panty Liners, 50 Count'
75. 26672. 'Carefree Original Regular Unscented, 54 Count (Pack of 3)'
76. None. 'Always Ultra Thin Fresh Size 4 Overnight Pads With Wings, Scented, 24 co
77. 113927. 'Lohanstore 7.5" Pantie liners / Cloth Sanitary Pads / Mild Incontinent
78. 102344. 'Dutchess Reusable Sanitary Panty Liners - Cloth Menstrual Sanitary Page
79. 44752. 'Always Dailies Xtra Protection Long Pantiliner Dri-liners, Unscented (1
80. 197864. 'Tena-SERENITY Pantiliners, Regular, Full case of 156 Liners (217-0421)
81. 100516. 'Natracare Natural Curved Panty Liners, 30 Count'
82. 42234. 'Natracare Mini Pant Liner, 30 Count (Pack of 10)'
83. None. 'Always Ultra Thin Size 2 Long Pads With Wings, Super Absorbency, Unscent
84. 275632. 'Always Extra Long Plus with Odor Lock Dri-Liners - 30 ct'
85. 144689. 'Genial Day Organic Cotton Unscented Eco Certified Light Absorbency Lin
86. 15559. 'Wegreeco Bamboo Reusable Sanitary Pads - Cloth Sanitary Pads - Pack of
87. 142595. 'Dutchess Reusable Panty Liner for Light Bladder Leakage or Sanitary pa
88. 110764. 'Natracare Natural Panty Liners, Tanga, 30 Count Boxes (480 Liners) (Pa
89. 26631. 'Seventh Generation Pantiliners, (2 Pack of 50 Count)'
90. 81619. 'Veeda Natural Cotton Liners, Folded, Hypoallergenic, Folded, 3 Boxes,
91. 152009. 'Always Thin Active'
92. 84367. 'U By Kotex Lightdays Liners Long - 96 CT'
93. None. 'Always Dri Liners Xlong Unscntd 30 Ct (2Pk)'
94. 153741. 'Always Thong Liners - 42 ct - 2 pk'
95. 55579. 'Carefree Acti Fresh Body Shape Extra Long To-go Pantiliners, Unscented
96. None. 'Always Maxi Size 1 Pads with Wings, Regular Absorbency, Unscented, 36 Co
97. 79618. 'Imse Vimse Sanitary Pads - 3 pack (Panty Liner, Flowers)'
98. 34864. 'Alva Baby Antibackerial Charcoal Bamboo Reusable Panty Liners/ Menstrua
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In []:

In [229]: liner = amazon.search(Keywords='Panty Liners', SearchIndex='HealthPerson

99. 21552. 'Carefree Thong Pantiliners-Unscented, 49-count (Pack of 3)'

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1. 342. 'U by Kotex Barely There Liners, Light Absorbency, Unscented'
2. 1298. 'Carefree Acti-Fresh Ultra-Thin Panty Liners, Regular, Unscented - 120 Cou
3. 2220. 'Playtex Sport Body Shape Liners, Regular - 54 Count'
4. 5012. 'U by Kotex Lightdays Panty Liners, Regular, 129 Count'
5. 2904. 'Carefree Original Ultra-Thin Panty Liners, Long, Unscented - 92 Count'
6. 690. 'Always Discreet Incontinence Liners for Women, Very Light Absorbency, London
7. 71403. 'Carefree Body Shape Thin To-Go Pantiliners-Unscented-60 ct'
8. 10158. 'Always Xtra Protection Long Daily Liners Unscented 108 Count'
9. 2603. 'ORGANYC Hypoallergenic 100% Organic Cotton Panty Liners, 24-count Box'
10. 1684. 'U by Kotex Lightdays Liners, Extra Coverage, Unscented, 112 Count'
11. 33099. 'Always Xtra Protection Regular Daily Liners 50 ea'
12. 9595. 'NATRACARE - Natural Curved Panty Liner - 30 Liners'
13. 21712. 'Always Thin Dailies, Unscented, Wrapped 60 Count'
14. 61711. '3 Pack Carefree Original Pantiliners in Fresh Scent'
15. 11788. 'Love My® /Mama/Girl/Maiden/Antibacterial Bamboo fiber/ Menstrual Pads/
16. 5418. 'U by Kotex Barely There Thong Pantiliners 50 ea (Pack of 2)'
17. 10310. 'KOTEX Lightdays Liners, Regular, 192 Count'
18. 42346. 'L. Organic Cotton, Chlorine Free, Ultra Thin Liners (40 count)'
19. 36454. 'U by Kotex Curves Regular Liners, Unscented, 102 Count'
20. 30041. 'Always Xtra Protection Daily Liners, Regular, 100 Count'
21. None. 'NATRACARE PANTY SHIELDS, CURVED, 30 CT (2 Pack)'
22. 4555. 'Always Discreet, Incontinence Liners, Very Light, Long Length , 132 cour
23. 13988. 'Always Dailies Xtra Protection Long Pantiliner Dri-liners, 160 Count +
24. 3374. 'Always Xtra Protection Daily Liners, Regular, 50 Count (Pack of 6)'
25. 6923. 'Carefree Thong Pantiliners-Unscented-49 ct (Pack of 3)'
26. 3038. 'Always Xtra Protection Daily Liners, Extra Long, 34 Count (Pack of 6)'
27. 12261. 'Rael 100% Organic Cotton Panty Liners - 2Pack/40Count total - Unscented
28. 15553. 'Always Xtra Protection Pantiliners - 200 Count'
29. 6911. 'Carefree Body Shape Extra Long Unscented, 93 Count'
30. 60573. 'Poise Microliners, Incontinence Panty Liners, Lightest Absorbency, Regu
31. 10512. 'U by Kotex Lightdays Liners, Thin, Regular, Unscented (Pack of 6)'
32. 43900. 'Always Radiant - Regular Panty Liners - 96 Count'
33. 11706. 'Poise Incontinence Panty Liners, Very Light Absorbency, Regular (Pack
34. 120396. 'HailiCare 9.8 Inches Reusable Sanitary Pads, Pack of 10 - Regular Flow
35. 11226. 'Always Discreet, Incontinence Liners, Very Light, Regular Length, 120 (
36. 31714. 'The Honest Company Organic Cotton Ultra-Thin Panty Liners (96 count)'
37. 93949. '2 box Femtastic Black panty liners 32 count total 64 liners'
38. 10319. 'Natracare Normal Wrapped Panty Liners, 18 Count'
39. 38034. 'Always, Radiant Pantiliners, Regular, Unscented, 48 Count'
40. 43504. 'U by Kotex Unscented Long Light Absorbency Fitness Panty Liners, 64 Cou
41. 25106. 'ORGANYC Hypoallergenic 100% Organic Cotton Panty Liners, flat, 24-count
42. None. 'Always Extra Long Plus with Odor Lock Dri-Liners-60 ct'
43. 21587. 'Natracare Natural Panty Liners, Curved, 30 Count Boxes (480 Liners) (Pa
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print ("{0}. {1}. '{2}'".format(i,product.sales_rank, product.title))

0. 434. 'Always Thin Dailies Unscented Wrapped Liners, Regular, 120 Count (Pack of

for i, product in enumerate(liner):

44. 40191. 'U by Kotex Absorbent Pantiliners, Long, Individually Wrapped, Unscented

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47. 145404. 'U By Kotex Fitness Panty Liners, Light Absorbency/Regular-Unscented,
48. 43405. 'Veeda Natural Cotton Liners, Hypoallergenic, Folded 40 Count'
49. 24910. 'Carefree Body Shape Regular Unscented, 54-count (Pack of 2)'
50. None. 'Natracare Natural Organic Thong Style Panty Liners -- 30 Pads (2 packs)
51. 12606. 'TENA Serenity Active Incontinence Liners, Regular, 26 Count (Pack of 2)
52. 99137. 'JOLIE ORGANIC Ultra Thin Panty Liners- 24 Count...'
53. 86567. 'Bella Flor Daily Panty Liners - 264 Count - Light and Comfortable, Great
54. 11952. 'Natracare Panty Liners Long, 16 Count'
55. 119524. 'Carefree Carefree Body STape Regular Unscented, 20 Count (Pack of 6)'
56. 129475. 'Kotex Lightdays Unscented Liners, Regular Protection - 22 Liners'
57. 28412. 'Carefree Thong Pantiliners, Regular Protection, Unscented, 98 Count'
58. 118809. 'Natracare Panty Liners Thong Style 30 ct, 3 Boxes (90 Liners Total)'
59. 36118. 'Natracare Organic Cotton Natural Panty Liners Ultra Thin 22 Liner(s)'
60. 8467. 'TENA Incontinence Liners for Women, Very Light, Long, 44 Count (Pack of
61. 16642. 'U by Kotex Lightdays Liners, Extra Coverage, Unscented, 80 Count (Pack
62. 31770. 'Natratouch 7" Length Organic Cotton Panty Liners 42 piece (super)'
63. 16988. 'U by Kotex Lightdays Liners, Long, Unscented, 96 Count (Pack of 6)'
64. 33642. 'Natracare Organic Cotton Natural Panty Liners Tanga 30 Liner(s)'
65. 2258. 'U by Kotex Security Ultra Thin Pads, Long, Unscented, 56 Count'
66. 61710. 'Carefree Original Long Scented, 42-count (Pack of 3)'
67. 74287. 'Kotex Natural Balance Lightdays Liners, Regular -64 ct.'
68. None. 'Poise Liners, Regular Length, Very Light Absorbency-48 ct'
69. 34639. 'Seventh Generation Pantiliner Pads, Free & Clear Chlorine Free, 50ct (F
70. 32763. 'Always Incredibly Thin Fresh Liners Wrapped Scented 60 Count (Pack of
71. 73848. 'Poise Very Light Absorbency Liner, Long (132 Ct.)'
72. 69950. 'Natratouch 6" Length Organic Cotton Panty Liners 48 piece (Regular)'
73. 112764. 'Cardinal Health FH-LNR01 Panty Liner Light Absorbency Adhesive Unscent
74. 123328. 'U By Kotex Barely There Thong Panty Liners, 50 Count'
75. 26672. 'Carefree Original Regular Unscented, 54 Count (Pack of 3)'
76. None. 'Always Ultra Thin Fresh Size 4 Overnight Pads With Wings, Scented, 24 co
77. 113927. 'Lohanstore 7.5" Pantie liners / Cloth Sanitary Pads / Mild Incontinent
78. 102344. 'Dutchess Reusable Sanitary Panty Liners - Cloth Menstrual Sanitary Page 102344.
79. 44752. 'Always Dailies Xtra Protection Long Pantiliner Dri-liners, Unscented (1
80. 197864. 'Tena-SERENITY Pantiliners, Regular, Full case of 156 Liners (217-0421)
81. 100516. 'Natracare Natural Curved Panty Liners, 30 Count'
82. 42234. 'Natracare Mini Pant Liner, 30 Count (Pack of 10)'
```

83. None. 'Always Ultra Thin Size 2 Long Pads With Wings, Super Absorbency, Unscent

85. 144689. 'Genial Day Organic Cotton Unscented Eco Certified Light Absorbency Line 86. 15559. 'Wegreeco Bamboo Reusable Sanitary Pads - Cloth Sanitary Pads - Pack of 87. 142595. 'Dutchess Reusable Panty Liner for Light Bladder Leakage or Sanitary page 88. 110764. 'Natracare Natural Panty Liners, Tanga, 30 Count Boxes (480 Liners) (Page 1988).

45. 40640. 'Carefree Body Shape Thin Unscented, 60 Count (Pack of 2)' 46. None. 'Natracare Panty Shields 30 per box, 3 boxes (90 Shield Total)'

84. 275632. 'Always Extra Long Plus with Odor Lock Dri-Liners - 30 ct'

89. 26631. 'Seventh Generation Pantiliners, (2 Pack of 50 Count)'

HTTPError Traceback (most recent call last)

```
<ipython-input-229-4e668c03910b> in <module>()
               1 liner = amazon.search(Keywords='Panty Liners', SearchIndex='HealthPers
----> 3 for i, product in enumerate(liner):
                             print ("{0}. {1}. '{2}'".format(i,product.sales_rank, product.title
          /Users/jyothi/anaconda/lib/python3.5/site-packages/amazon/api.py in ___iter_
                                                   Yields a :class:`~.AmazonProduct` for each result item.
          542
          543
--> 544
                                        for page in self.iterate_pages():
          545
                                                   for item in getattr(page.Items, 'Item', []):
          546
                                                             yield AmazonProduct(
          /Users/jyothi/anaconda/lib/python3.5/site-packages/amazon/api.py in iterate
          559
                                                   while not self.is_last_page:
          560
                                                             self.current_page += 1
--> 561
                                                             yield self._query(ItemPage=self.current_page, **self.kv
          562
                                        except NoMorePages:
          563
                                                  pass
          /Users/jyothi/anaconda/lib/python3.5/site-packages/amazon/api.py in _query
          571
                                                   An lxml root element.
                                         11 11 11
          572
--> 573
                                        response = self.api.ItemSearch(ResponseGroup=ResponseGroup, **}
          574
                                        root = objectify.fromstring(response)
          575
                                        if (hasattr(root.Items.Request, 'Errors') and
          /Users/jyothi/anaconda/lib/python3.5/site-packages/bottlenose/api.py in ____
          263
                                        # make the actual API call
          264
                                        response = self._call_api(api_url,
--> 265
                                                                                                            { 'api_url': api_url, 'cache_url': cache_url': cache_u
          266
          267
                                        # decompress the response if need be
          /Users/jyothi/anaconda/lib/python3.5/site-packages/bottlenose/api.py in _ca
          224
                                                             else:
          225
                                                                       # the simple way
```

except:

return urllib2.urlopen(api_request, timeout=self.Ti

--> 226

227

```
/Users/jyothi/anaconda/lib/python3.5/urllib/request.py in urlopen(url, data
    161
            else:
    162
                opener = _opener
--> 163
            return opener.open(url, data, timeout)
    164
    165 def install opener (opener):
    /Users/jyothi/anaconda/lib/python3.5/urllib/request.py in open(self, fullus
                for processor in self.process_response.get(protocol, []):
    470
    471
                    meth = getattr(processor, meth_name)
--> 472
                    response = meth(req, response)
    473
    474
                return response
    /Users/jyothi/anaconda/lib/python3.5/urllib/request.py in http_response(sel
    580
                if not (200 \le code \le 300):
    581
                    response = self.parent.error(
--> 582
                        'http', request, response, code, msg, hdrs)
    583
    584
                return response
    /Users/jyothi/anaconda/lib/python3.5/urllib/request.py in error(self, proto
    508
                if http_err:
    509
                    args = (dict, 'default', 'http_error_default') + orig_args
--> 510
                    return self._call_chain(*args)
    511
    512 # XXX probably also want an abstract factory that knows when it makes
    /Users/jyothi/anaconda/lib/python3.5/urllib/request.py in _call_chain(self,
    442
                for handler in handlers:
    443
                    func = getattr(handler, meth_name)
--> 444
                    result = func(*args)
    445
                    if result is not None:
    446
                        return result
    /Users/jyothi/anaconda/lib/python3.5/urllib/request.py in http_error_defaul
    588 class HTTPDefaultErrorHandler(BaseHandler):
    589
            def http_error_default(self, req, fp, code, msg, hdrs):
--> 590
                raise HTTPError(req.full_url, code, msg, hdrs, fp)
```

if not self. Error Handler:

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591

```
592 class HTTPRedirectHandler(BaseHandler):
        HTTPError: HTTP Error 503: Service Unavailable
In [231]: hygiene_df = pd.DataFrame( columns=['Sno', 'Best Seller Rank', 'Title']
         hygiene_df
Out [231]: Empty DataFrame
          Columns: [Sno, Best Seller Rank, Title]
          Index: []
In [242]: hygieneproducts =amazon.search( Keywords='Feminine Hygiene Products', Sea
In [243]: for i, product in enumerate(hygieneproducts):
              hygiene_df.set_value(i,'Sno', i)
              hygiene_df.set_value(i,'Best Seller Rank', product.sales_rank)
              hygiene_df.set_value(i,'Title', product.title)
In [244]: hygiene_df.shape
Out [244]: (50, 3)
In [245]: hygiene_df.head()
Out[245]: Sno Best Seller Rank
                                                                              Title
                           95185 ELEVATED (by TAYLOR'S) Punani Paste - All Natu...
          1
                           13837 Clean Coochy All Natural "On The Go" Feminine ...
            1
                                             RepHresh Vaginal Gel, 0.07 Oz, 4 Count
          2
              2
                             725
          3
             3
                           15952 Fds Soothing Aloe Wash, 13 Ounce, For All-Day ...
          4
                            9988
                                  Summer's Eve Cleansing Wash, Naturally Normal, ...
In []: #https://docs.aws.amazon.com/AWSECommerceService/latest/DG/prod-adv-api-dq
```

In []: # There is a limition is resutls retrieved. And according to the docummetal