

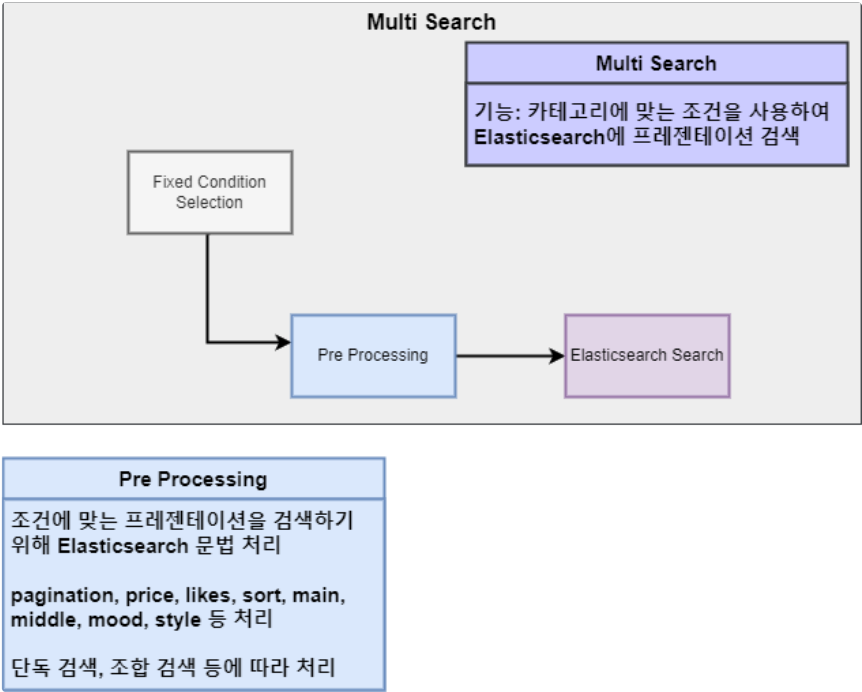
# Multi Search API Documents

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## ★ API 기능 요약 [↗](#)



**i** 다면 검색을 위한 API로써, 각 카테고리를 이용하여 검색

## ★ API 사용 설명서 [↗](#)

**i** 해당 API는 3000번 포트를 사용.

	/category_search
methods	POST, GET

end_point	/category_search
parameters	<div>POST http://192.168.1.46:3000/category_search</div> <div> <pre> {   "main": "",   "page": 1,   "middle": "",   "price": [0, 10000],   "moods": "",   "styles": "",   "perPage": 20,   "sort": "",   "likes": [0, 100],   "isSystem": "True" } </pre> </div>

## ★ API 코드 설명 [↗](#)

- pre-processing

**i** 전달받은 Parameter를 전처리하여 Elasticsearch에 검색이 되도록 처리하는 code

```

1  try:
2      # pagination
3      try:
4          page_number = int(parameters['page'])
5      except:
6          page_number = 1
7
8      if page_number == 1:
9          from_range = 0
10     elif page_number >= 2:
11         from_range = (page_number-1)*parameters['perPage']
12
13     # setting price range
14     if not parameters['price']:
15         price_range = {
16             'gte': 0
17         }
18     else:
19         if len(parameters['price']) == 1: # 이하 처리
20             price_range = {
21                 'gte': 0, # gte: 이상 / gte: 초과
22                 'lte': int(parameters['price'][0]) # lte: 이하 / lt: 미만
23             }
24         elif len(parameters['price']) == 2:
25             price_range = {
26                 'gte': int(parameters['price'][0]),
27                 'lte': int(parameters['price'][1])
28             }
29
30     # setting likes range
31     if not parameters['likes']:
32         likes_range = {
33             'gte': 0
34         }
35     else:
36         if len(parameters['likes']) == 1: # 이하 처리

```

```

37         likes_range = {
38             'gte': 0, # gte: 이상 / gte: 초과
39             'lte': int(parameters['likes'][0]) # lte: 이하 / lt: 미만
40         }
41     elif len(parameters['price']) == 2:
42         likes_range = {
43             'gte': int(parameters['likes'][0]),
44             'lte': int(parameters['likes'][1])
45         }
46
47     # setting sort
48     Tosort = {
49         'updatedAt': {
50             'order': 'desc'}
51     }
52     try:
53         if parameters['sort'] == 'updatedAt':
54             Tosort = {
55                 'updatedAt': {
56                     'order': 'desc'}
57             }
58         elif parameters['sort'] == 'downloadCount':
59             Tosort = {
60                 'downloadCount': {
61                     'order': 'desc'}
62             }
63         elif parameters['sort'] == 'low_price':
64             Tosort = {
65                 'price': {
66                     'order': 'asc'}
67             }
68         elif parameters['sort'] == 'high_price':
69             Tosort = {
70                 'price': {
71                     'order': 'desc'}
72             }
73     except:
74         Tosort = {
75             'updatedAt': {
76                 'order': 'desc'}
77         }

```

- case 1: 아무것도 선택하지 않았을 경우

 아무것도 선택하지 않고 검색을 눌렀을 경우에 적용되는 code (현재는 사용x)

```

1     # When you didn't choose anything
2     if not parameters['price'] and (not parameters['main']) and (not parameters['moods']) and (not parameter
3         body = {
4             'query': {
5                 'bool': {
6                     'must': {
7                         'match_all': {}, # 모든 것 검색
8                     },
9                     'filter': [
10                        {

```

```

11         "match": {
12             "isSystem": parameters['isSystem']
13         }
14     },
15 ]
16 }
17 },
18 'from': from_range,
19 'size': parameters['perPage'],
20 'sort': [
21     Tosort
22 ]
23 }
24
25 category_search_result = es.search(index='presentations', body=body)
26
27 for i in category_search_result['hits']['hits']:
28     if i['_id'] not in res['_id']: # 중복제거
29         # Presentation Information
30         i['_source']['_id'] = i['_id']
31         res['_id'].append(i['_id'])
32         res['Info'].append(i['_source'])
33
34         # Calculate Presentation Page
35         pages['current'] = parameters['page']
36         if parameters['perPage'] == 1:
37             pages['prev'] = 0
38             parameters['hasPrev'] = False
39         else:
40             pages['prev'] = parameters['page']-1
41             parameters['hasPrev'] = True
42
43         if category_search_result['hits']['total']['value'] / (parameters['perPage']*parameters['page']) < 1:
44             pages['next'] = pages['current'] + 1
45             pages['hasNext'] = True
46         else:
47             pages['next'] = pages['current']
48             pages['hasNext'] = False
49
50         if round(category_search_result['hits']['total']['value'] // parameters['perPage']) == 0:
51             pages['total'] = 1
52         else:
53             pages['total'] = round(category_search_result['hits']['total']['value'] // parameters['perPage']) + 1
54
55         # Calculate Presentation number
56         items['begin'] = 1
57         items['end'] = category_search_result['hits']['total']['value']
58         items['total'] = category_search_result['hits']['total']['value']
59
60     result['data'] = res['Info']
61     result['pages'] = pages
62     result['items'] = items
63
64     return jsonify(result)
65

```

- case 2: 가격만 선택하여 검색할 경우

! 가격만 선택하여 검색을 진행했을 경우 code

```
1      # only select price
2      if parameters['price'] and (not parameters['main']) and (not parameters['moods']) and (not parameters[''])
3          body = {
4              'query': {
5                  'bool': {
6                      'must': [
7                          {
8                              'range': {
9                                  'price': price_range # 초기에 Pre-processing에서 처리된 범위 사용
10                              }
11                          }
12                      ],
13                      'filter': [
14                          {
15                              "match": {
16                                  "isSystem": parameters['isSystem']
17                              }
18                          },
19                      ]
20                  }
21              },
22              'from': from_range,
23              'size': parameters['perPage'],
24              'sort': [
25                  Tosort
26              ]
27          }
28      category_search_result = es.search(index='presentations', body=body)
29      for i in category_search_result['hits']['hits']:
30          if i['_id'] not in res['_id']: # 중복제거
31              # Presentation Information
32              i['_source']['_id'] = i['_id']
33              res['_id'].append(i['_id'])
34              res['Info'].append(i['_source'])
35
36              # Calculate Presentation Page
37              pages['current'] = parameters['page']
38              if parameters['perPage'] == 1:
39                  pages['prev'] = 0
40                  parameters['hasPrev'] = False
41              else:
42                  pages['prev'] = parameters['page'] - 1
43                  parameters['hasPrev'] = True
44
45              if category_search_result['hits']['total']['value'] / (
46                  parameters['perPage'] * parameters['page']) != 0:
47                  pages['next'] = pages['current'] + 1
48                  pages['hasNext'] = True
49              else:
50                  pages['next'] = pages['current']
51                  pages['hasNext'] = False
52
53              if round(category_search_result['hits']['total']['value'] // parameters['perPage']) == 0:
54                  pages['total'] = 1
55              else:
```

```

56         pages['total'] = round(category_search_result['hits']['total']['value'] // parameters['p
57
58         # Calculate Presentation number
59         items['begin'] = 1
60         items['end'] = category_search_result['hits']['total']['value']
61         items['total'] = category_search_result['hits']['total']['value']
62
63     result['data'] = res['Info']
64     result['pages'] = pages
65     result['items'] = items
66
67     return jsonify(result)

```

- case 3: 분위기만 선택하여 검색할 경우

### ! 분위기만 선택하여 검색을 진행했을 경우 code

```

1     # only select moods
2     if parameters['moods'] and (not parameters['main']) and (not parameters['price']) and (not parameters['l
3         body = {
4             'query': {
5                 'bool': {
6                     'must': [
7                         {
8                             'match': {
9                                 'moods.moodName': parameters['moods'], # 초기 pre-procssing에서 처리한 분위기
10                            }
11                        }
12                    ],
13                    'filter': [
14                        {
15                            "match": {
16                                "isSystem": parameters['isSystem']
17                            }
18                        },
19                    ]
20                }
21            },
22            'from': from_range,
23            'size': parameters['perPage'],
24            'sort': [
25                Tosort
26            ]
27        }
28        category_search_result = es.search(index='presentations', body=body)
29        for i in category_search_result['hits']['hits']:
30            if i['_id'] not in res['_id']: # 중복제거
31                # Presentation Information
32                i['_source']['_id'] = i['_id']
33                res['_id'].append(i['_id'])
34                res['Info'].append(i['_source'])
35
36            # Calculate Presentation Page
37            pages['current'] = parameters['page']
38            if parameters['perPage'] == 1:
39                pages['prev'] = 0

```

```

40         parameters['hasPrev'] = False
41     else:
42         pages['prev'] = parameters['page'] - 1
43         parameters['hasPrev'] = True
44
45     if category_search_result['hits']['total']['value'] / (
46         parameters['perPage'] * parameters['page']) != 0:
47         pages['next'] = pages['current'] + 1
48         pages['hasNext'] = True
49     else:
50         pages['next'] = pages['current']
51         pages['hasNext'] = False
52
53     if round(category_search_result['hits']['total']['value'] // parameters['perPage']) == 0:
54         pages['total'] = 1
55     else:
56         pages['total'] = round(category_search_result['hits']['total']['value'] // parameters['p
57
58     # Calculate Presentation number
59     items['begin'] = 1
60     items['end'] = category_search_result['hits']['total']['value']
61     items['total'] = category_search_result['hits']['total']['value']
62
63     result['data'] = res['Info']
64     result['pages'] = pages
65     result['items'] = items
66
67     return jsonify(result)

```

- case 4: 좋아요만 선택하여 검색할 경우

**i** 좋아요만 선택하여 검색을 진행했을 경우 code

```

1     # only select likes
2     if parameters['likes'] and (not parameters['main']) and (not parameters['price']) and (not parameters['n
3         body = {
4             'query': {
5                 'bool': {
6                     'must': [
7                         {
8                             'range': {
9                                 'price': likes_range
10                            }
11                        }
12                    ],
13                    'filter': [
14                        {
15                            "match": {
16                                "isSystem": parameters['isSystem']
17                            }
18                        },
19                    ]
20                }
21            },
22            'from': from_range,
23            'size': parameters['perPage'],

```

```

24         'sort': [
25             Tosort
26         ]
27     }
28
29     category_search_result = es.search(index='presentations', body=body)
30     for i in category_search_result['hits']['hits']:
31         if i['_id'] not in res['_id']: # 중복제거
32             # Presentation Information
33             i['_source']['_id'] = i['_id']
34             res['_id'].append(i['_id'])
35             res['Info'].append(i['_source'])
36
37             # Calculate Presentation Page
38             pages['current'] = parameters['page']
39             if parameters['perPage'] == 1:
40                 pages['prev'] = 0
41                 parameters['hasPrev'] = False
42             else:
43                 pages['prev'] = parameters['page'] - 1
44                 parameters['hasPrev'] = True
45
46             if category_search_result['hits']['total']['value'] / (
47                 parameters['perPage'] * parameters['page']) != 0:
48                 pages['next'] = pages['current'] + 1
49                 pages['hasNext'] = True
50             else:
51                 pages['next'] = pages['current']
52                 pages['hasNext'] = False
53
54             if round(category_search_result['hits']['total']['value'] // parameters['perPage']) == 0:
55                 pages['total'] = 1
56             else:
57                 pages['total'] = round(category_search_result['hits']['total']['value'] // parameters['p
58
59             # Calculate Presentation number
60             items['begin'] = 1
61             items['end'] = category_search_result['hits']['total']['value']
62             items['total'] = category_search_result['hits']['total']['value']
63
64         result['data'] = res['Info']
65         result['pages'] = pages
66         result['items'] = items
67
68     return jsonify(result)

```

- case 5: 정렬만 선택하여 검색할 경우

 이미 나온 결과를 정렬을 선택하여 정렬할 code

```

1     # setting only sort
2     if parameters['sort'] and (not parameters['main']) and (not parameters['price']) and (not parameters['mc
3         body = {
4             'bool': {
5                 'must': [
6                     {

```



```

7         'query': {
8             'match_all': {}
9         },
10    },
11 ],
12 'filter': [
13     {
14         "match": {
15             "isSystem": parameters['isSystem']
16         }
17     },
18 ]
19 },
20 'from': from_range,
21 'size': parameters['perPage'],
22 'sort': [
23     Tosort
24 ]
25 }
26 category_search_result = es.search(index='presentations', body=body)
27 for i in category_search_result['hits']['hits']:
28     if i['_id'] not in res['_id']: # 중복제거
29         # Presentation Information
30         i['_source']['_id'] = i['_id']
31         res['_id'].append(i['_id'])
32         res['Info'].append(i['_source'])
33
34         # Calculate Presentation Page
35         pages['current'] = parameters['page']
36         if parameters['perPage'] == 1:
37             pages['prev'] = 0
38             parameters['hasPrev'] = False
39         else:
40             pages['prev'] = parameters['page'] - 1
41             parameters['hasPrev'] = True
42
43         if category_search_result['hits']['total']['value'] / (
44             parameters['perPage'] * parameters['page']) != 0:
45             pages['next'] = pages['current'] + 1
46             pages['hasNext'] = True
47         else:
48             pages['next'] = pages['current']
49             pages['hasNext'] = False
50
51         if round(category_search_result['hits']['total']['value'] // parameters['perPage']) == 0:
52             pages['total'] = 1
53         else:
54             pages['total'] = round(category_search_result['hits']['total']['value'] // parameters['p
55
56         # Calculate Presentation number
57         items['begin'] = 1
58         items['end'] = category_search_result['hits']['total']['value']
59         items['total'] = category_search_result['hits']['total']['value']
60
61 result['data'] = res['Info']
62 result['pages'] = pages
63 result['items'] = items

```

```
64
65         return jsonify(result)
```

- case 6: 스타일만 선택하여 검색할 경우

**i** 스타일만 선택하여 검색을 진행했을 경우 code

```
1         # only select styles
2         if parameters['styles'] and (not parameters['main']) and (not parameters['price']) and (not parameters['
3             body = {
4                 'query': {
5                     'bool': {
6                         'must': [
7                             {
8                                 'match': {
9                                     'styles.styleName': parameters['styles'],
10                                }
11                            }
12                        ],
13                        'filter': [
14                            {
15                                "match": {
16                                    "isSystem": parameters['isSystem']
17                                }
18                            },
19                        ]
20                    }
21                },
22                'from': from_range,
23                'size': parameters['perPage'],
24                'sort': [
25                    Tosort
26                ]
27            }
28            category_search_result = es.search(index='presentations', body=body)
29            for i in category_search_result['hits']['hits']:
30                if i['_id'] not in res['_id']: # 중복제거
31                    # Presentation Information
32                    i['_source']['_id'] = i['_id']
33                    res['_id'].append(i['_id'])
34                    res['Info'].append(i['_source'])
35
36                    # Calculate Presentation Page
37                    pages['current'] = parameters['page']
38                    if parameters['perPage'] == 1:
39                        pages['prev'] = 0
40                        parameters['hasPrev'] = False
41                    else:
42                        pages['prev'] = parameters['page'] - 1
43                        parameters['hasPrev'] = True
44
45                    if category_search_result['hits']['total']['value'] / (
46                        parameters['perPage'] * parameters['page']) != 0:
47                        pages['next'] = pages['current'] + 1
48                        pages['hasNext'] = True
49                    else:
```

```

50         pages['next'] = pages['current']
51         pages['hasNext'] = False
52
53         if round(category_search_result['hits']['total']['value'] // parameters['perPage']) == 0:
54             pages['total'] = 1
55         else:
56             pages['total'] = round(category_search_result['hits']['total']['value'] // parameters['p
57
58         # Calculate Presentation number
59         items['begin'] = 1
60         items['end'] = category_search_result['hits']['total']['value']
61         items['total'] = category_search_result['hits']['total']['value']
62
63     result['data'] = res['Info']
64     result['pages'] = pages
65     result['items'] = items
66
67     return jsonify(result)

```

- case 7: 카테고리, 분위기 등 여러개를 선택하여 검색을 진행할 경우

 여러개의 카테고리를 선택하여 검색을 진행했을 경우 code(현재는 모두 이것을 사용)

```

1     # only select category
2     if parameters['main']:
3         if parameters['middle']:
4             category_body = {
5                 'match': { # category middle설정
6                     'categoryInfo.middle.categoryName': {
7                         'query': parameters['middle']
8                     }
9                 }
10            }
11        else:
12            category_body = {
13                'match': { # category main설정
14                    'categoryInfo.main.categoryName': {
15                        'query': parameters['main']
16                    }
17                }
18            }
19        else:
20            category_body = {
21                'match_all': {}
22            }
23
24    # moods
25    if parameters['moods']:
26        moods_body = {
27            'match': {
28                'moods.moodName': { # mood 설정
29                    'query': parameters['moods']
30                }
31            }
32        }
33    else:

```

```

34     moods_body = {
35         'match_all': {}
36     }
37
38     # styles
39     if parameters['styles']:
40         styles_body = {
41             'match': {
42                 'styles.styleName': { # styles 설정
43                     'query': parameters['styles']
44                 }
45             }
46         }
47     else:
48         styles_body = {
49             'match_all': {}
50         }
51
52     # category main query body
53     m_category_search = {
54         'query': {
55             'bool': {
56                 'must': [ # 해당하는 범위를 가지고 search
57                     category_body,
58                     moods_body,
59                     styles_body
60                 ],
61                 'filter': [
62                     {
63                         'range': {
64                             'price': price_range
65                         },
66                     },
67                     # {
68                     #     'range': {
69                     #         'likes': likes_range
70                     #     }
71                     # },
72                     {
73                         "match": {
74                             "isSystem": parameters['isSystem']
75                         }
76                     },
77                 ]
78             }
79         },
80         'from': from_range,
81         'size': parameters['perPage'],
82         'sort': [
83             Tosort
84         ]
85     }
86 except: # 오류가 발생했을 경우, 모든 프레젠테이션 검색
87     m_category_search = {
88         'query': {
89             'bool': {
90                 'must': {
91                     'match_all': {},

```

```

92         },
93         'filter': [
94             {
95                 "match": {
96                     "isSystem": parameters['isSystem']
97                 }
98             },
99         ]
100     }
101 },
102 'from': from_range,
103 'size': parameters['perPage'],
104 'sort': [
105     Tosort
106 ]
107 }
108
109 category_search_result = es.search(index='presentations', body=m_category_search)
110
111 for i in category_search_result['hits']['hits']:
112     if i['_id'] not in res['_id']: #
113         # Presentation Information
114         i['_source']['_id'] = i['_id']
115         res['_id'].append(i['_id'])
116         res['Info'].append(i['_source'])
117
118         # Calculate Presentation Page
119         pages['current'] = parameters['page']
120         if parameters['perPage'] == 1:
121             pages['prev'] = 0
122             parameters['hasPrev'] = False
123         else:
124             pages['prev'] = parameters['page'] - 1
125             parameters['hasPrev'] = True
126
127         if category_search_result['hits']['total']['value'] / (parameters['perPage'] * parameters['page'])
128             pages['next'] = pages['current'] + 1
129             pages['hasNext'] = True
130         else:
131             pages['next'] = parameters['current']
132             pages['hasNext'] = False
133
134         if round(category_search_result['hits']['total']['value'] // parameters['perPage']) == 0:
135             pages['total'] = 1
136         else:
137             pages['total'] = round(category_search_result['hits']['total']['value'] // parameters['perPage']
138
139         # Calculate Presentation number
140         items['begin'] = 1
141         items['end'] = category_search_result['hits']['total']['value']
142         items['total'] = category_search_result['hits']['total']['value']
143
144     result['data'] = res['Info']
145     result['pages'] = pages
146     result['items'] = items
147
148     return jsonify(result)

```

