

### Import Statement

```
use
Magento\Catalog\Api\ProductRepositoryInterface;
use Magento\Catalog\Api\Data\ProductInterfaceFactory;
```

### Constructor

```
/**
 * @var ProductRepositoryInterface
 */
protected $productRepositoryInterface;
/**
 * @var ProductInterfaceFactory
 */
protected $productInterfaceFactory;
/**
 * @param ProductRepositoryInterface $productRepositoryInterface
 *
 * public function __construct(
     ProductRepositoryInterface $productRepositoryInterface,
     ProductInterfaceFactory $productInterfaceFactory,
 ) {
     $this->productRepositoryInterface = $productRepositoryInterface;
     $this->productInterfaceFactory = $productInterfaceFactory;
 }
```

### Product Types

```
\Magento\Catalog\Model\Product\Type::TYPE_SIMPLE
\Magento\Catalog\Model\Product\Type::TYPE_BUNDLE
\Magento\Catalog\Model\Product\Type::TYPE_VIRTUAL
\Magento\Downloadable\Model\Product\Type::TYPE_DOWNLOADABLE
\Magento\ConfigurableProduct\Model\Product\Type\Configurable::TYPE_CODE
\Magento\GroupedProduct\Model\Product\Type\Grouped::TYPE_CODE
```

### Get info about product by product SKU

```
$product = $this->productRepositoryInterface->get($sku);
/**
 * @param string $sku
 * @param bool $editMode
 * @param int|null $storeId
 * @param bool $forceReload
 * @return \Magento\Catalog\Api\Data\ProductInterface
 * @throws \Magento\Framework\Exception\NoSuchEntityException
 */
```

### Get info about product by product id

```
$product = $this->productRepositoryInterface->getId($productId);
/**
 * @param int $productId
 * @param bool $editMode
 * @param int|null $storeId
 * @param bool $forceReload
 * @return \Magento\Catalog\Api\Data\ProductInterface
 * @throws \Magento\Framework\Exception\NoSuchEntityException
 */
```



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### Delete by SKU

```
$this->productRepositoryInterface-
>deleteById($sku);

/**
 * @param string $sku
 * @return bool Will returned True if deleted
 * @throws \Magento\Framework\Exception\NoSuchEntityException
 * @throws \Magento\Framework\Exception\StateException
 */
```

### Create New Product

```
$product = $this->productInterfaceFactory
->create()
->setSku('SKU');
// other required attributes
$product = $this->productRepositoryInterface->s-
ave($product);
```

### Update Existing Product

```
$product = $this->productRepositoryInterface-
>get('SKU');
$product->setStatus(\Magento\Catalog\Model\Produ-
ct\Attribute\Source\Status::STATUS_DISABLED);
$updated = $this->productRepositoryInterface->s-
ave($product);
```

### Advanced Search Filter Group

```
/**
 * @var \Magento\Catalog\Api\ProductRepositoryI-
nterface
 */
private $productRepository;
/**
 * @var \Magento\Framework\Api\SearchCriteriaBu-
ilder
 */
private $searchCriteriaBuilder;
```

### Advanced Search Filter Group (cont)

```
/**
 * @var \Magento\Framework\Api\FilterBuilder
 */
private $filterBuilder;
/**
 * @var \Magento\Framework\Api\Search\FilterGro-
upBuilder
 */
private $filterGroupBuilder;
/**
 * @var \Magento\Framework\Api\SortOrderFactory
 */
private $sortOrder;
/**
 * @param \Magento\Catalog\Api\ProductRepositoryI-
nterface $productRepository
 * @param \Magento\Framework\Api\SearchCriteriaBu-
ilder $searchCriteriaBuilder
 * @param \Magento\Framework\Api\FilterBuilder
$filterBuilder
 * @param \Magento\Framework\Api\Search\FilterGro-
upBuilder $filterGroupBuilder
 * @param \Magento\Framework\Api\SortOrderFactory
$sortOrder
 */
public function __construct(
    \Magento\Catalog\Api\ProductRepositoryInte-
rface $productRepository,
    \Magento\Framework\Api\SearchCriteriaBuilder
$searchCriteriaBuilder,
    \Magento\Framework\Api\FilterBuilder $filte-
rBuilder,
    \Magento\Framework\Api\Search\FilterGroupB-
uilder $filterGroupBuilder,
```



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### Advanced Search Filter Group (cont)

```

\Magento\Framework\Api\SortOrderFactory
$sortOrder
) {
    $this->productRepository = $productRepository;
    $this->searchCriteriaBuilder = $searchCriteriaBuilder;
    $this->filterBuilder = $filterBuilder;
    $this->filterGroupBuilder = $filterGroupBuilder;
    $this->sortOrder = $sortOrder;
}
[...]
$filter1 = $this->filterBuilder
    ->setField("url")
    ->setValue("%magento.com")
    ->setConditionType("like")
    ->create();
$filter2 = $this->filterBuilder
    ->setField("store_id")
    ->setValue("1")
    ->setConditionType("eq")
    ->create();
$filterGroup1 = $this->filterGroupBuilder
    ->setFilters([$filter1, $filter2])
    ->create();
$filter3 = $this->filterBuilder
    ->setField("url_type")

```

### Advanced Search Filter Group (cont)

```

->setValue(1)
->setConditionType("eq")
->create();
$filterGroup2 = $this->filterGroupBuilder
    ->setFilters([$filter3])
    ->create();
$searchCriteria = $this->searchCriteriaBuilder->create();
$searchCriteria->setFilterGroups([$filterGroup1, $filterGroup2]);
$this->productRepository->getList($searchCriteria->getItems());

```

The code above creates a Search Criteria with the Filters put together in the following way: (url like %magento.com OR store\_id eq 1) AND (url\_type eq 1)

### Search Criteria

```

/**
 * @var ProductRepositoryInterface
 */
private $productRepositoryInterface;
/**
 * @var SearchCriteriaBuilder
 */
private $searchCriteriaBuilder;
/**
 * @param ProductRepositoryInterface $productRepositoryInterface
 * @param SearchCriteriaBuilder $searchCriteriaBuilder

```



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### Search Criteria (cont)

```

*/
public function __construct(
    ProductRepositoryInterface $productRepository-
Interface,
    SearchCriteriaBuilder $searchCriteriaBuilder
) {
    $this->productRepository = $productRepository-
Interface;
    $this->searchCriteriaBuilder = $searchCrite-
riaBuilder;
}
/**
 * Get products by ids
 * @param array $productIds
 * @return ProductInterface[]
 */
public function getProducts(array $productIds):
array
{
    $this->searchCriteriaBuilder->addFilter('enti-
ty_id', $productIds, 'in');
    $searchCriteria = $this->searchCriteriaBuilde-
r->create();
    $products = $this->productRepositoryInterf-
ace->getList($searchCriteria)->getItems();
    $count = $products->getTotalCount();
    return $products;
}

```

### Useful constants

```

\Magento\Catalog\Api\Data\ProductInterface::SKU
\Magento\Catalog\Api\Data\ProductInterface::NAME
\Magento\Catalog\Api\Data\ProductInterface::PRICE
\Magento\Catalog\Api\Data\ProductInterface::WEIGHT
\Magento\Catalog\Api\Data\ProductInterface::STATUS
\Magento\Catalog\Api\Data\ProductInterface::VISI-
BILITY
\Magento\Catalog\Api\Data\ProductInterface::ATTR-
IBUTE_SET_ID
\Magento\Catalog\Api\Data\ProductInterface::T-
YPE_ID
\Magento\Catalog\Api\Data\ProductInterface::CREA-
TED_AT
\Magento\Catalog\Api\Data\ProductInterface::UPDA-
TED_AT
\Magento\Catalog\Api\Data\ProductInterface::MEDI-
A_GALLERY
\Magento\Catalog\Api\Data\ProductInterface::TIER-
_PRICE

```

### Advanced Search

```

/**
 * @var \Magento\Catalog\Api\ProductRepositoryI-
nterface
 */
private $productRepository;
/**
 * @var \Magento\Framework\Api\SearchCriteriaBu-
ilder
 */
private $searchCriteriaBuilder;
/**
 * @var \Magento\Framework\Api\FilterBuilder
 */

```



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### Advanced Search (cont)

```
private $filterBuilder;
/**
 * @var \Magento\Framework\Api\SortOrderFactory
 */
private $sortOrder;
/**
 * @param \Magento\Catalog\Api\ProductRepositoryInterface $productRepository
 * @param \Magento\Framework\Api\SearchCriteriaBuilder $searchCriteriaBuilder
 * @param \Magento\Framework\Api\FilterBuilder $filterBuilder
 * @param \Magento\Framework\Api\SortOrderFactory $sortOrder
 */
public function __construct(
    \Magento\Catalog\Api\ProductRepositoryInterface $productRepository,
    \Magento\Framework\Api\SearchCriteriaBuilder $searchCriteriaBuilder,
    \Magento\Framework\Api\FilterBuilder $filterBuilder,
    \Magento\Framework\Api\SortOrderFactory $sortOrder
) {
    $this->productRepository = $productRepository;
    $this->searchCriteriaBuilder = $searchCriteriaBuilder;
    $this->filterBuilder = $filterBuilder;
    $this->sortOrder = $sortOrder;
}
/**
 * Retrieves products to be sent
```

### Advanced Search (cont)

```
* @param array $excludedIds
* @param array $filterIds
* @param int $page
* @param int $pageSize
* @return ProductInterface[]
* @throws \Magento\Framework\Exception\InputException
*/
public function retrieve(
    array $excludedIds,
    array $filterIds,
    int $page = 1,
    int $pageSize = 100
) : array {
    $this->searchCriteriaBuilder->addFilter('type-id', [
        \Magento\Catalog\Model\Product\Type::TYPE_SIMPLE,
        \Magento\Downloadable\Model\Product\Type::TYPE_DOWNLOADABLE
    ], 'in');
    if (count($filterIds)) {
        $this->searchCriteriaBuilder->addFilter('entity_id', $filterIds, 'in');
    }
    if (count($excludedIds)) {
        $this->searchCriteriaBuilder->addFilter('entity_id', $excludedIds, 'nin');
    }
    $sortOrder = $this->sortOrder->setField('updated_at')
```



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### Advanced Search (cont)

```
->setDirection(\Magento\Framework\Api\Sort-  
Order::SORT_DESC);  
    $this->searchCriteriaBuilder->setSortOrders([-  
$sortOrder]);  
    $this->searchCriteriaBuilder->setCurrentPage(-  
$page);  
    $this->searchCriteriaBuilder->setPageSize($pa-  
geSize);  
    $searchCriteria = $this->searchCriteriaBuilder-  
>create();  
    return $this->productRepository->getList($sear-  
chCriteria)->getItems();  
}
```

### Useful Constants

```
\Magento\Framework\Api\SortOrder::SORT_ASC  
\Magento\Framework\Api\SortOrder::SORT_DESC
```

### Print Query String

```
$products = $this->productRepositoryInterface-  
>getList($searchCriteria)  
echo $products->getSelect()->assemble();
```



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