Import Statement

```
use
Magento\Catalog\Api\ProductRepositoryInterface;
use Magent o\C ata log \Ap i\D ata \Pr odu ctI -
nte rfa ceF actory;
```

Constructor

```
/**
 * @var Produc tRe pos ito ryI nte rface
 */
protected $produ ctR epo sit ory Int erface;
/**
 * @var Produc tIn ter fac eFa ctory
 */
protected $produ ctI nte rfa ceF actory;
/**
 * @param Produc tRe pos ito ryI nte rface $produ -
ctR epo sit ory Int erface
 */
public function __cons truct(
        Pro duc tRe pos ito ryI nte rface $produ -
ctR epo sit ory Int erface,
        Pro duc tIn ter fac eFa ctory $produ ctI -
nte rfa ceF actory,
) {
        $th is- >pr odu ctR epo sit ory Int erface
= $produ ctR epo sit ory Int erface;
        $th is- >pr odu ctI nte rfa ceF actory =
$produ ctI nte rfa ceF actory;
}
```

Product Types

```
\Magento\Catalog\Model\Product\Type::TYPE_SIMPLE
\Magen to \Cat alo g\M ode l\P rod uct \Ty -
pe: :TY PE_ BUNDLE
\Magen to \Cat alo g\M ode l\P rod uct \Ty -
pe: :TY PE_ VIRTUAL
\Magen to \Dow nlo ada ble \Mo del \Pr odu ct -
\Typ e:: TYP E_D OWN LOA DABLE
\Magen to \Con fig ura ble Pro duc t\M ode l\P -
rod uct \Ty pe \Con fig ura ble ::T YPE _CODE
\Magen to \Gro upe dPr odu ct \Mod el \Pro duc -
t\T ype \Gr oup ed: :TY PE_CODE
```

Get info about product by product SKU

```
$product = $this->productRepositoryInterface-
>get($sku);
```

```
/**
* @param string $sku
```

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
        ->c reate()
        ->s etS ku( 'SKU');
// other required attributes
$product = $this- >pr odu ctR epo sit ory Int erf -
ace ->s ave ($p rod uct);
```

Update Existing Product

```
$product = $this->productRepositoryInterface-
>get('SKU');
$produ ct- >se tSt atu s( \Mag ent o\C ata log -
\Mo del \Pr odu ct \Att rib ute \So urc e\S tat -
us: :ST ATU S_D ISA BLED);
$updated = $this- >pr odu ctR epo sit ory Int erf -
ace ->s ave ($p rod uct);
```

Advanced Search Filter Group

```
* @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 = $this->productRepositoryInterface-
>getById($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
*/
```

```
/**
 * @var \Magen to \Cat alo g\A pi \Pro duc tRe -
pos ito ryI nte rface
 */
private $produ ctR epo sitory;
/**
 * @var \Magen to \Fra mew ork \Ap i\S ear chC -
rit eri aBu ilder
 */
private $searc hCr ite ria Bui lder;
/**
 * @var \Magen to \Fra mew ork \Ap i\F ilt erB -
uilder
 */
private $filte rBu ilder;
/**
 * @var \Magen to \Fra mew ork \Ap i\S ear ch -
\Fil ter Gro upB uilder
 */
private $filte rGr oup Bui lder;
/**
 * @var \Magen to \Fra mew ork \Ap i\S ort Ord -
erF actory
 */
private $sortO rder;
/**
 * @param \Magen to \Cat alo g\A pi \Pro duc tRe -
pos ito ryI nte rface $produ ctR epo sitory
 * @param \Magen to \Fra mew ork \Ap i\S ear chC -
rit eri aBu ilder $searc hCr ite ria Builder
 * @param \Magen to \Fra mew ork \Ap i\F ilt erB -
uilder $filte rBu ilder
 * @param \Magen to \Fra mew ork \Ap i\S ear ch -
\Fil ter Gro upB uilder $filte rGr oup Builder
 * @param \Magen to \Fra mew ork \Ap i\S ort Ord -
erF actory $sortOrder
 */
```


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Advanced Search Filter Group (cont)

```
> public function __construct(
    \Magento\Catalog\Api\ProductRepositoryInterface $productRepo-
sitory,
    \Magento\Framework\Api\SearchCriteriaBuilder $searchCriteria-
Builder,
    \Magento\Framework\Api\FilterBuilder $filterBuilder,
    \Magento\Framework\Api\Search\FilterGroupBuilder $filterGroup-
Builder,
    \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")
    ->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 Produc tRe pos ito ryI nte rface
 */
private $produ ctR epo sit ory Int erface;
/**
 * @var Search Cri ter iaB uilder
 */
private $searc hCr ite ria Bui lder;
/**
 * @param Produc tRe pos ito ryI nte rface $produ -
ctR epo sit ory Int erface
 * @param Search Cri ter iaB uilder $searc hCr -
ite ria Builder
 */
public function __cons truct(
        Pro duc tRe pos ito ryI nte rface $produ -
ctR epo sit ory Int erface,
        Sea rch Cri ter iaB uilder $searc hCr ite -
ria Builder
) {
        $th is- >pr odu ctR epo sitory = $produ -
ctR epo sit ory Int erface;
        $th is- >se arc hCr ite ria Builder =
$searc hCr ite ria Bui lder;
}
/**
 * Get products by ids
 * @param array $produ ctIds
 * @return Produc tIn ter face[]
 */
public function getPro duc ts( array $produ -
ctIds): array
{
        $th is- >se arc hCr ite ria Bui lde r-> -
add Fil ter ('e nti ty_id', $produ ctIds, 'in');
        $se arc hCr iteria = $this- >se arc hCr -
ite ria Bui lde r-> cre ate();
        $pr oducts = $this- >pr odu ctR epo sit -
ory Int erf ace ->g etL ist ($s ear chC rit eri -
a)- >ge tIt ems();
        $count = $produ cts ->g etT ota lCo unt();
        return $products;
}
```

Useful constants

```
\Magento\Catalog\Api\Data\ProductInterface::SKU
\Magen to \Cat alo g\A pi \Dat a\P rod uct Int -
erf ace ::NAME
\Magen to \Cat alo g\A pi \Dat a\P rod uct Int -
erf ace ::PRICE
\Magen to \Cat alo g\A pi \Dat a\P rod uct Int -
erf ace ::W EIGHT
\Magen to \Cat alo g\A pi \Dat a\P rod uct Int -
erf ace ::S TATUS
\Magen to \Cat alo g\A pi \Dat a\P rod uct Int -
erf ace ::V ISI BILITY
\Magen to \Cat alo g\A pi \Dat a\P rod uct Int -
erf ace ::A TTR IBU TE_ SET_ID
\Magen to \Cat alo g\A pi \Dat a\P rod uct Int -
erf ace ::T YPE_ID
\Magen to \Cat alo g\A pi \Dat a\P rod uct Int -
erf ace ::C REA TED_AT
\Magen to \Cat alo g\A pi \Dat a\P rod uct Int -
erf ace ::U PDA TED_AT
```


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Useful constants (cont)

> \Magento\Catalog\Api\Data\ProductInterface::MEDIA_GALLERY
\Magento\Catalog\Api\Data\ProductInterface::TIER_PRICE

Advanced Search

```
/**
 * @var \Magen to \Cat alo g\A pi \Pro duc tRe -
pos ito ryI nte rface
 */
private $produ ctR epo sitory;
/**
 * @var \Magen to \Fra mew ork \Ap i\S ear chC -
rit eri aBu ilder
 */
private $searc hCr ite ria Bui lder;
/**
 * @var \Magen to \Fra mew ork \Ap i\F ilt erB -
uilder
 */
private $filte rBu ilder;
/**
 * @var \Magen to \Fra mew ork \Ap i\S ort Ord -
erF actory
 */
private $sortO rder;
/**
 * @param \Magen to \Cat alo g\A pi \Pro duc tRe -
pos ito ryI nte rface $produ ctR epo sitory
 * @param \Magen to \Fra mew ork \Ap i\S ear chC -
rit eri aBu ilder $searc hCr ite ria Builder
 * @param \Magen to \Fra mew ork \Ap i\F ilt erB -
uilder $filte rBu ilder
 * @param \Magen to \Fra mew ork \Ap i\S ort Ord -
erF actory $sortOrder
 */
public function __cons truct(
        \Ma gen to \Cat alo g\A pi \Pro duc tRe -
pos ito ryI nte rface $produ ctR epo sitory,
        \Ma gen to \Fra mew ork \Ap i\S ear chC -
rit eri aBu ilder $searc hCr ite ria Bui lder,
        \Ma gen to \Fra mew ork \Ap i\F ilt erB -
uilder $filte rBu ilder,
        \Ma gen to \Fra mew ork \Ap i\S ort Ord -
erF actory $sortOrder
) {
        $th is- >pr odu ctR epo sitory = $produ -
ctR epo sitory;
        $th is- >se arc hCr ite ria Builder =
$searc hCr ite ria Bui lder;
        $th is- >fi lte rBu ilder = $filte rBu -
```

Advanced Search (cont)

```
>  * @throws \Magento\Framework\Exception\InputException
 */
public function retrieve(
    array $excludedIds,
    array $filterIds,
    int $page = 1,
    int $pageSize = 100
) : array {
    $this->searchCriteriaBuilder->addFilter('type_id', [
        \Magento\Catalog\Model\Product\Type::TYPE_SIMPLE,
        \Magento\Downloadable\Model\Product\Type::TYPE_DOWN-
LOADABLE
    ], 'in');
    if (count($filterIds)) {
        $this->searchCriteriaBuilder->addFilter('entity_id', $filterIds, 'in');
    }
    if (count($excludedIds)) {
        $this->searchCriteriaBuilder->addFilter('entity_id', $exclu-
dedIds, 'nin');
    }
    $sortOrder = $this->sortOrder->setField('updated_at')
        ->setDirection(\Magento\Framework\Api\SortOrder::SORT_-
DESC);
    $this->searchCriteriaBuilder->setSortOrders([$sortOrder]);
    $this->searchCriteriaBuilder->setCurrentPage($page);
    $this->searchCriteriaBuilder->setPageSize($pageSize);
    $searchCriteria = $this->searchCriteriaBuilder->create();
    return $this->productRepository->getList($searchCriteria)->getIt-
ems();
}
```

Useful Constants

```
\Magento\Framework\Api\SortOrder::SORT_ASC
\Magen to \Fra mew ork \Ap i\S ort Ord er: :SO -
RT_DESC
```

Print Query String

```
$products = $this->productRepositoryInterface-
>getList($searchCriteria)
echo $produ cts ->g etS ele ct( )-> ass emb le();
```

```
ilder;
        $th is- >so rtOrder = $sortO rder;
}
/**
 * Retrieves products to be sent
 * @param array $exclu dedIds
 * @param array $filterIds
 * @param int $page
 * @param int $pageSize
 * @return Produc tIn ter face[]
```

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Published 2nd April, 2020.
Last updated 2nd May, 2020.

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