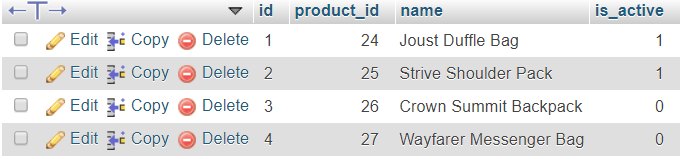
In this code snippet, we will see how to run SQL query using model. We will write a query for select, insert, update, delete operations, different Where clause operators like IN, LIKE, =, != etc, ORDER BY clause, GROUP BY clause and different JOINS.

Magento 2 recommended the use of the model to do SQL operation. So it is very important that your custom module should define the model class. As an example here we are using model class Codextblog\Test\Model\Test and database table called ‘test’.

Below is the screenshot of ‘test’ database table fields with demo rows

magento2\_database\_table

**Note:** For the demonstrated purpose we have used Objectmanager. We never recommend the direct use of ObjectManager.One should always use a constructor method to [instant an object](http://www.codextblog.com/magento-2/instantiate-model-magento-2/).

**Select, Insert, Update and Delete operations**

**Select query**

|  |  |  |  |
| --- | --- | --- | --- |
| 1  2  3  4  5  6  7 |  |  | <?php  $testquery = $objectManager->create('Codextblog\Test\Model\Test');  $collection = $testquery->getCollection();    /\*  SELECT `main\_table`.\* FROM `test` AS `main\_table`  \*/ |

**Insert query**

|  |  |
| --- | --- |
| 1  2  3  4  5 | <?php  $data = array('product\_id'=>24,'name'=>'Addidas Backpack','is\_active'=>'1');  $testquery= $objectManager->create('Codextblog\Test\Model\Test');  $testquery->setData($data);  $testquery->save(); |

**Update query**

|  |  |
| --- | --- |
|  | <?php  $data = array('product\_id'=>24,'name'=>'Black Addidas Backpack','is\_active'=>'1');  $id = 5;  $testquery= $objectManager->create('Codextblog\Test\Model\Test')->load($id);  $testquery->addData($data);  $testquery->setId($id)->save(); |

**Delete query**

|  |  |
| --- | --- |
|  | <?php  $id = 5;  $testquery = $objectManager->create('Codextblog\Test\Model\Test')  ->setId($id)->delete(); |
|  |  |

**Where Clause**

**eqaul to**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8 | $testquery = $objectManager->create('Codextblog\Test\Model\Test')               ->getCollection()               ->addFieldToFilter('is\_active',1);  );    /\*  SELECT `main\_table`.\* FROM `test` AS `main\_table` WHERE (`is\_active` = 1)  \*/ |

**not eqaul to**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8 | $testquery = $objectManager->create('Codextblog\Test\Model\Test')               ->getCollection()               ->addFieldToFilter('is\_active',array('neq' => 1);  );    /\*  SELECT `main\_table`.\* FROM `test` AS `main\_table` WHERE (`is\_active` != 1)  \*/ |

**LIKE**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7 | $testquery = $objectManager->create('Codextblog\Test\Model\Test')               ->getCollection()               ->addFieldToFilter('name',array('like' => '%Bag%'));  );  /\*  SELECT `main\_table`.\* FROM `test` AS `main\_table` WHERE (`name` LIKE '%Bag%')  \*/ |

**IN**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7 | $testquery = $objectManager->create('Codextblog\Test\Model\Test')               ->getCollection()               ->addFieldToFilter('product\_id',array('in' => array('24','25')));  );  /\*  SELECT `main\_table`.\* FROM `test` AS `main\_table` WHERE (`id` IN('24','25'))  \*/ |

**ORDER By**

**ORDER BY ASCENDING**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10 | <?php  $testquery = $objectManager->create('Codextblog\Test\Model\Test')               ->getCollection()               ->addFieldToFilter('is\_active',1);  $testquery->getSelect()            ->order('product\_id');    /\*  SELECT `main\_table`.\* FROM `test` AS `main\_table` WHERE (`is\_active` = 1) ORDER BY `product\_id` ASC  \*/ |

**ORDER BY DESCENDING**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10 | <?php  $testquery = $objectManager->create('Codextblog\Test\Model\Test')               ->getCollection()               ->addFieldToFilter('is\_active',1);  $testquery->getSelect()            ->order('product\_id' .' '. \Magento\Framework\DB\Select::SQL\_DESC);    /\*  SELECT `main\_table`.\* FROM `test` AS `main\_table` WHERE (`is\_active` = 1) ORDER BY `product\_id` DESC  \*/ |

**GROUP By**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10 | <?php  $testquery = $objectManager->create('Codextblog\Test\Model\Test')               ->getCollection()               ->addFieldToFilter('is\_active',1);  $testquery->getSelect()            ->group('product\_id');    /\*  SELECT `main\_table`.\* FROM `test` AS `main\_table` WHERE (`is\_active` = 1) GROUP BY `product\_id`  \*/ |

**JOINS**

**Inner Join**

|  |  |
| --- | --- |
|  | <?php  $testquery= $objectManager->create('Codextblog\Test\Model\Test')  ->getCollection();  $testquery ->getSelect()             ->join('sales\_order\_item as item','main\_table.product\_id = item.product\_id',array('\*'));    /\*  SELECT `main\_table`.\*, `item`.\* FROM `test` AS `main\_table` JOIN `sales\_flat\_order\_item` AS `item` ON main\_table.product\_id = item.product\_id  \*/ |
|  |  |

**Left Join**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8 | <?php  $testquery= $objectManager->create('Codextblog\Test\Model\Test')->getCollection();  $testquery ->getSelect()             ->joinLeft('sales\_order\_item as item','main\_table.product\_id = item.product\_id',array('\*'));    /\*  SELECT `main\_table`.\*, `item`.\* FROM `test` AS `main\_table` LEFT JOIN `sales\_flat\_order\_item` AS `item` ON main\_table.product\_id = item.product\_id  \*/ |

**Right Join**

|  |  |  |
| --- | --- | --- |
| 1  2  3  4  5  6  7  8 |  | <?php  $testquery= $objectManager->create('Codextblog\Test\Model\Test')->getCollection();  $testquery ->getSelect()             ->joinRight('sales\_order\_item as item','main\_table.product\_id = item.product\_id',array('\*'));    /\*  SELECT `main\_table`.\*, `item`.\* FROM `test` AS `main\_table` RIGHT JOIN `sales\_flat\_order\_item` AS `item` ON main\_table.product\_id = item.product\_id  \*/ |