Technical Documentation

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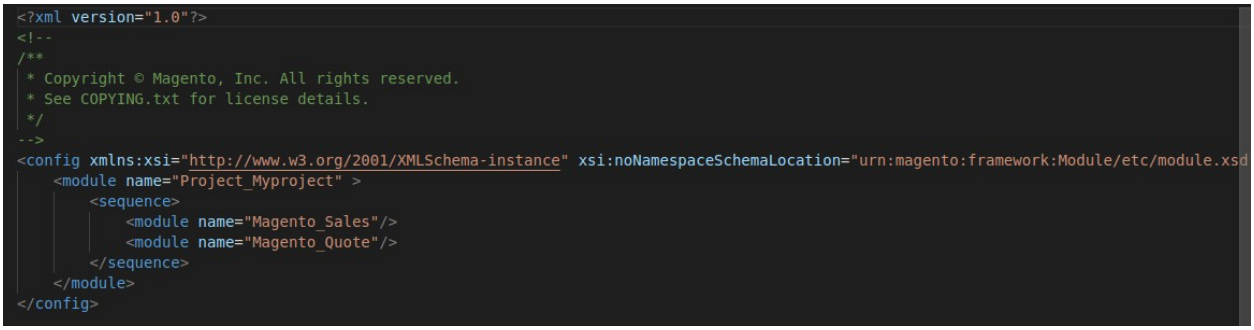
Creating Module:

In this project we have created a module called “Myproject” in the “Project” namespace. The path of the module is -app/code/Project/Myproject

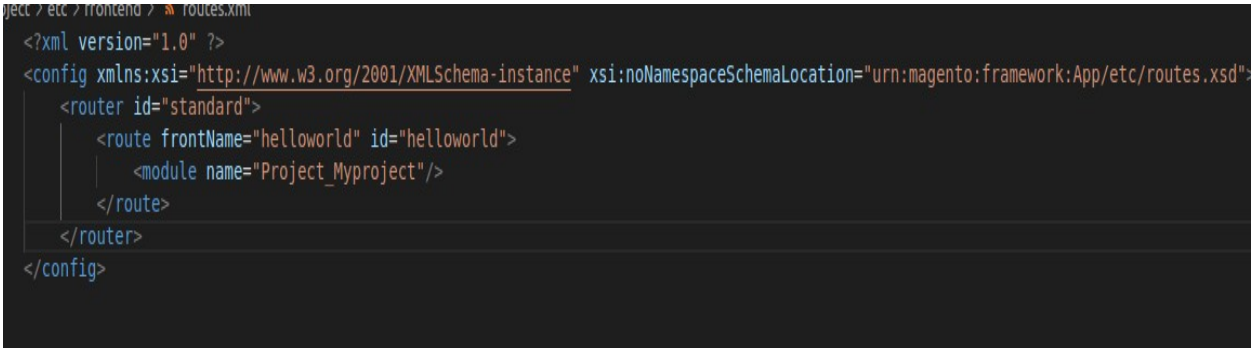
Below steps are used for creating a module-

- First we create registration.php for registering the module.

- Then we have to create module.xml inside etc folder -etc/module.xml



- Then we have to create the router for that in the we have to create router.xml in the etc folder-etc/frontend/routes.xml



- After routes.xml we have to create controller for controlling the routes inside the Controller folder..i.e. Controller/Index/Index.php

i

```php
<?php       You, 2 weeks ago • First commit …

namespace Project\Myproject\Controller\Index;

use \Magento\Framework\App\Action\HttpGetActionInterface;
use \Magento\Framework\View\Result\PageFactory;

class Index implements HttpGetActionInterface
{
    /**
     * @var \Magento\Framework\View\Result\PageFactory
     */
    protected $resultPageFactory;

    /**
     * @param PageFactory $resultPageFactory
     */
    public function __construct(PageFactory $resultPageFactory)
        $this->resultPageFactory = $resultPageFactory;
    }

    /**
     * Prints the information
     * @return Page
     */
    public function execute()
    {
        return $this->resultPageFactory->create();
    }
}
```

- Then we created the layout file.Layout files are responsible for defining the structure and content of page and blocks.
  I.e.app/code/vendor/modulename/view/frontend/layout

```xml
<?xml version="1.0"?>
<page xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" layout="2columns-left" xsi:noNamespaceSchemaLocation="urn:magento:framework:\
<head>
    <title>index</title>
</head>
<body>
    <referenceContainer name="content">
        <block class="Project\Myproject\Block\Article"
            name="articleData"
                template="Project_Myproject::view.phtml" />
    </referenceContainer>
</body>
</page>
```

- After we have created the view.phtml file inside the view/frontend/templates/view.phtml

```php
<h2><?php echo 'helloworld'; ?></h2>        You, 2 weeks ag
<h2><?php echo $block->getArticles(); ?></h2>
```

- After that we have to create article.php file.It is responsible for rendering specific part of a page,such as a product list,a navigation menu,or a search bar.
  Here is the path:app/code/Project/Myproject/Block/Article.php

```php
<?php       You, 2 weeks ago • First commit …
namespace Project\Myproject\Block;

use \Magento\Framework\View\Element\Template;

class Article extends Template
{
    /**
     * Constructor
     *
     * @param Context $context
     * @param array $data
     */
    public function __construct(
        \Magento\Backend\Block\Template\Context $context,
        array $data = []
    ){
        parent::__construct($context, $data);
     }

    /**
     * @return Post[]
     */
    public function getArticles()
    {
        return 'getArticles function of the Block class called successfully';
    }
}
?>
```

Creating admin theme:

We have to create new theme directory.Here is the path:app/design/adminhtml directory and create a new directory for our theme.

```
<?xml version="1.0"?><theme xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="urn:magento:framework:
<title>Embitel Admin Section</title>
<parent>Magento/backend</parent>
</theme>
```

Registration.php
path:app/design/adminhtml/Project/Admintheme/Registration.php

```
<?php
\Magento\Framework\Component\ComponentRegistrar::register(
\Magento\Framework\Component\ComponentRegistrar::THEME,
'adminhtml/Project/Admintheme',
__DIR__
);
```

Create one logo for admintheme:
Path:app/design/adminhtml/Project/Admintheme/Web/Images/logo.png

- Create di.xml in app/code/Project/Admintheme/etc/di.xml

```
<?xml version="1.0"?>
<config xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="urn:magento:framework:ObjectManager/etc/con
<type name="Magento\Theme\Model\View\Design">
<arguments>
<argument name="themes" xsi:type="array">
<item name="adminhtml" xsi:type="string">Project/Admintheme</item>
</argument>
</arguments>
</type>
</config>
```

Create admin_login.xml file
Here is the path:app/code/Project/Admintheme/view/adminhtml/layout/adminlogin.xml

It is used to modify the layout of the Magento admin login page.This file is used to modify the layout of the Magento_Backend module and can be overriden in custom admin themes.

```
You, 6 hours ago | 1 author (You)
<?xml version="1.0"?>      You, 6 hours ago • partially done code
<page xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" layout="admin-login" xsi:noNamespaceSchemaLocation="urn:magento:framework:Vie
<update handle="styles" />
<body>
<referenceBlock name="logo">
<arguments>
<argument name="logo_image_src" xsi:type="string">images/logo.png</argument>
</arguments>
  </referenceBlock>
</body>
</page>
```

Adding default.xml file:

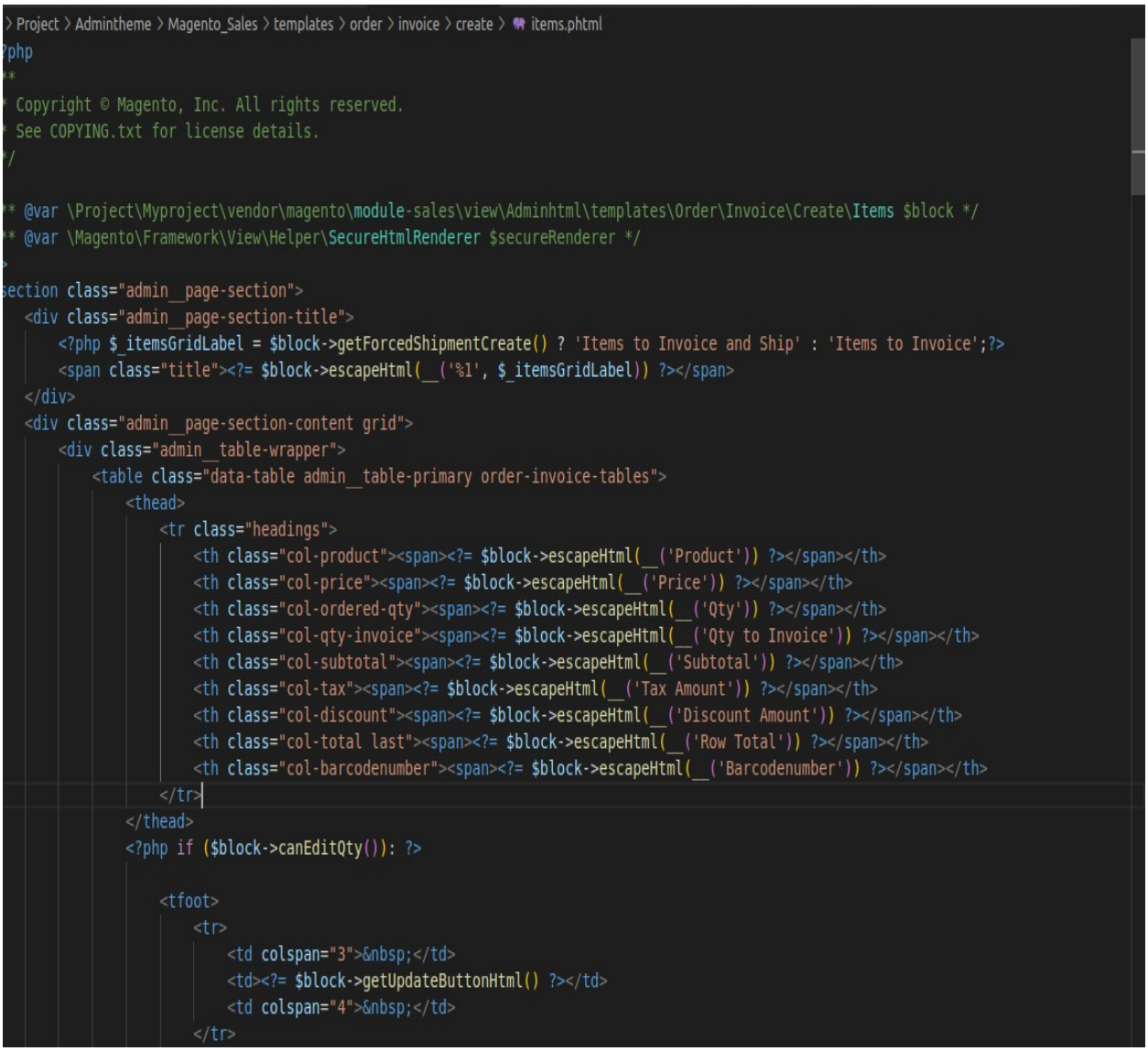
This layout file is used to customize the admin header section by adding a custom logo to the top left corner of the page.

```
You, 6 hours ago | 1 author (You)
<?xml version="1.0"?>
<page xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" layout="admin-1column" xsi:noNamespaceSchemaLocation="urn:magento:framewor
<body>
<referenceContainer name="header">
 <block class="Magento\Backend\Block\Page\Header" name="logo" before="-">
<arguments>
<argument name="show_part" xsi:type="string">logo</argument>
<argument name="edition" translate="true" xsi:type="string">Community Edition</argument>
<argument name="logo_image_src" xsi:type="string">images/logo.png</argument>
</arguments>
</block>
</referenceContainer>
</body>
</page>
```

Overriding the phtml file:

Overriding the core module from the Customer module,it exists in-vendor/magento/module-sales/view/adminhtml/templates/order/invoice/create/ items.php from this path we are overriding the customer module.
Path:app/design/adminhtml/Project/Admintheme/magento-sales/templates/order/ invoice/create/items.phtml

Using this we are rendering an invoice creation form in the magento2 admin panel.The form displays a list of items to be invoiced with details such as product name ,price,quantity etc.



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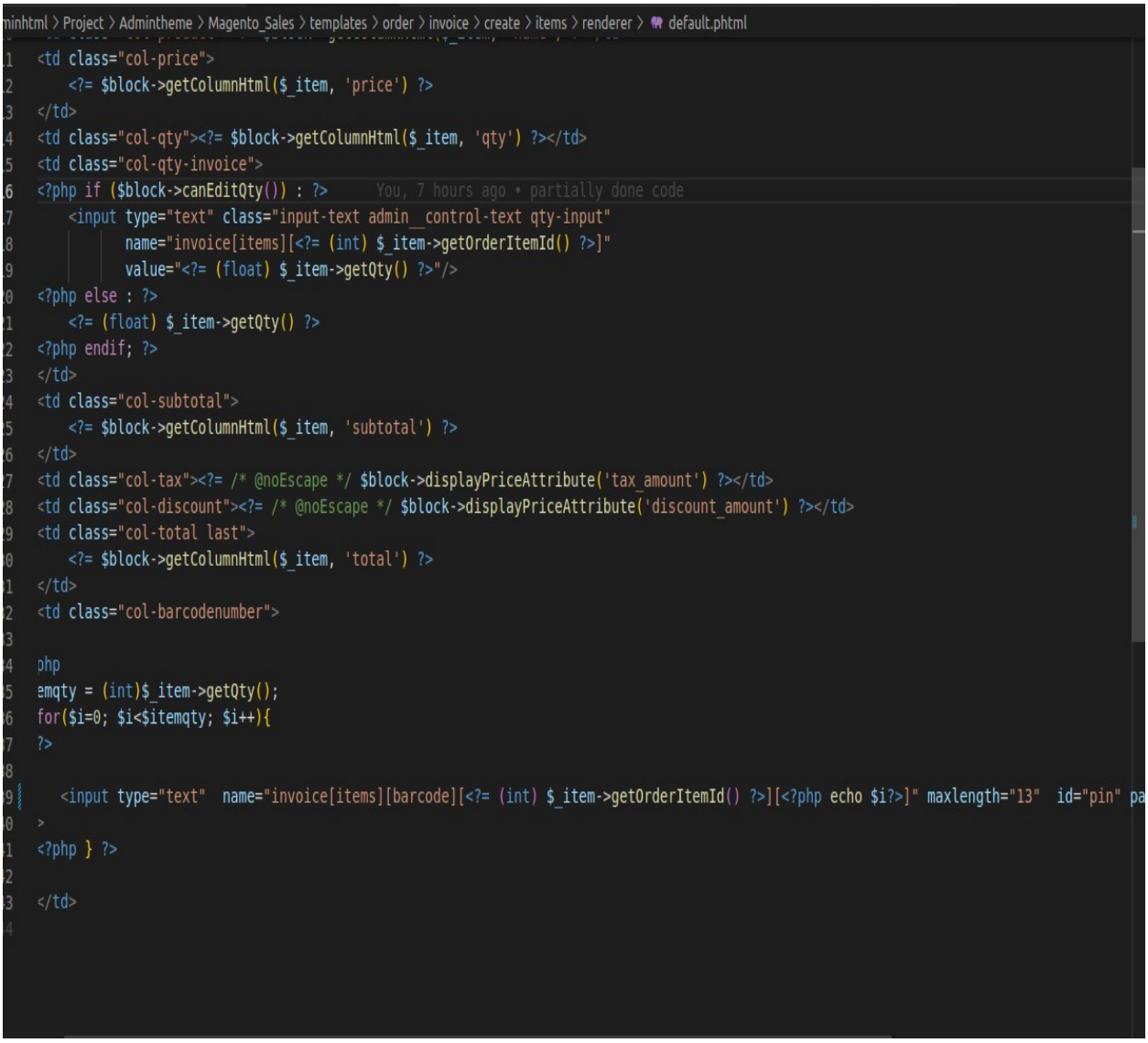
Path:app/design/adminhtml/Project/Admintheme/magento-sales/templates/order/ invoice/create/items/renderer/default.phtml

It is used to add a column for entering the barcode number with one input for each item in the order.

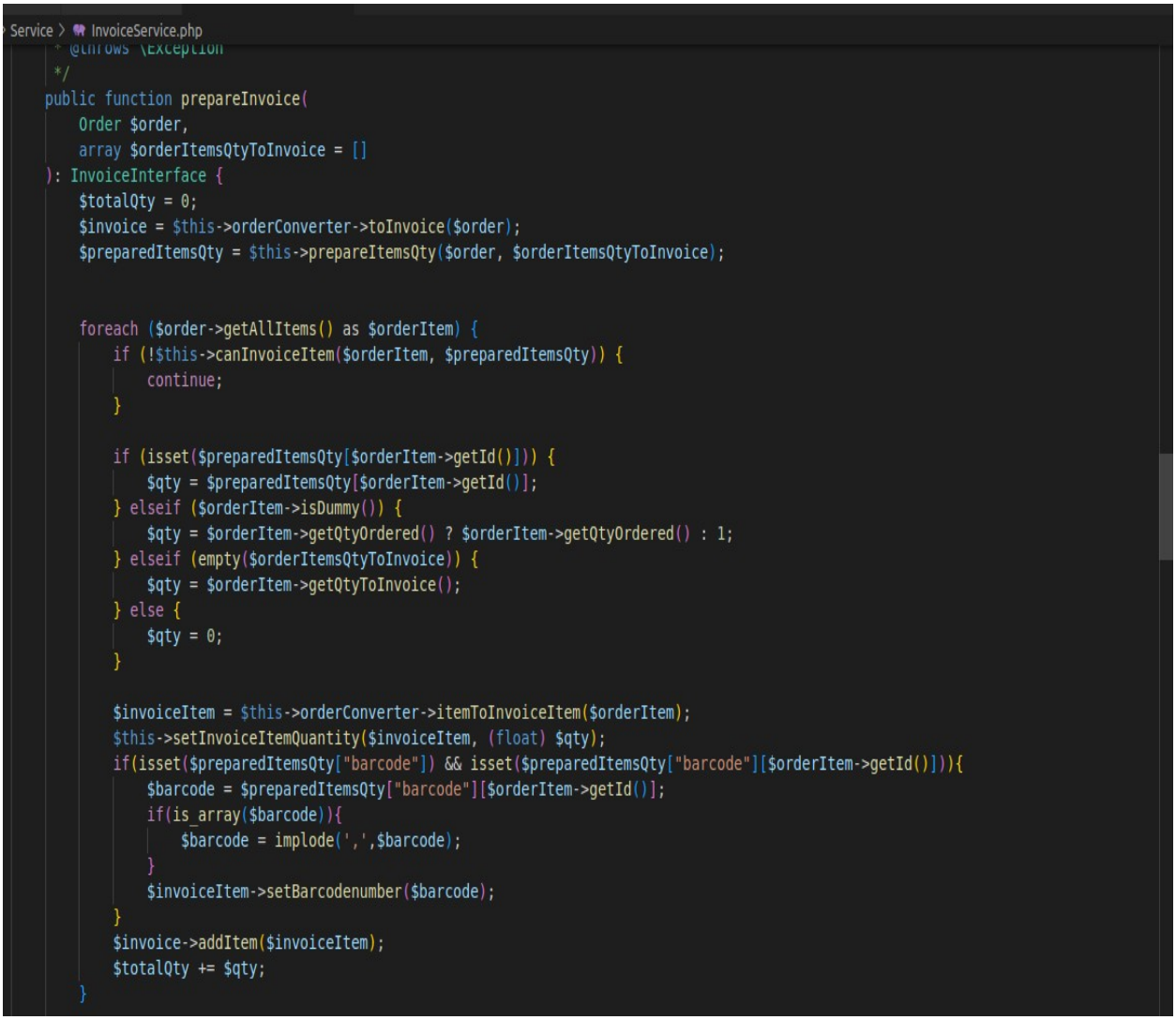


Creating Model for connecting the Database:

Overriding the php file:

Overriding the core module from the Customer module,it exists in-vendor/magento/module-sales/model/service/invoiceservice.php from this path we are overriding the customer module.
Path:app/code/Project/Myproject/model/service/invoiceservice.php

It is used to prepare an invoice for an order.



Overriding the php file:

Creating Model for connecting the Database:

Overriding the core module from the Customer module,it exists in-vendor/magento/module-sales/model/service/item.php from this path we are overriding the customer module.
Path:app/code/Project/Myproject/model/service/item.php

Order > Item.php

```php
<?php

namespace Project\Myproject\Model\Order;

class Item extends \Magento\Sales\Model\Order\Item
{
    public function getMrp()
    {
        return $this->getData("mrp");
    }

    public function setMrp($sku)
    {
        return $this->setData("mrp", $sku);
    }
}
```

Create db_schema.xml:

Path:app/code/project/myproject/etc/db_schema.xml

Adding the two fields that is Barcode and MRP in the sales_order_item and sales_invoice_item

Myproject > etc > db_schema.xml

```xml
<?xml version="1.0"?>
<!--
/**
 * Copyright © Magento, Inc. All rights reserved.
 * See COPYING.txt for license details.
 */
-->
<schema xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xsi:noNamespaceSchemaLocation="urn:magento:framework:Setup/Declaration/Schema/etc/schema.xsd">


    <table name="sales_order_item" resource="sales" engine="innodb" comment="Sales Flat Order Item">

        <column xsi:type="decimal" name="mrp" scale="4" precision="20" unsigned="false" nullable="true"
                comment="MRP"/>
          <column xsi:type="int" name="barcodenumber" unsigned="false" nullable="true"
                comment="Barcode"/>
    </table>


    <table name="sales_invoice_item" resource="sales" engine="innodb" comment="Sales Flat Invoice Item">

        <column xsi:type="decimal" name="mrp" scale="4" precision="20" unsigned="false" nullable="true"
                comment="MRP"/>
                <column xsi:type="int" name="barcodenumber" unsigned="false" nullable="true"
                comment="Barcode"/>


    </table>
```

Adding Observer:

Path:app/code/project/myproject/Observer/salesdata.php

```
> Myproject > Observer > SalesData.php
<?php
namespace Project\Myproject\Observer;

use Magento\Framework\Event\ObserverInterface;
use Magento\Framework\Event\Observer;
use Magento\Quote\Model\Quote\Item as QuoteItem;

class SalesData implements ObserverInterface
{
    public function execute(Observer $observer)
    {
        /** @var QuoteItem $quoteItem */
        $quoteItem = $observer->getEvent()->getData('quote_item');
        $product = $observer->getEvent()->getData('product');

        $customAttributeValue = $product->getData('mrp');
        $quoteItem->setData('mrp', $customAttributeValue);
    }
}
```

Events.xml:

sales_quote_item_set_product is the event name of the quote_item table

Path:app/code/Project/Myproject/etc/events.xml

```
> Myproject > etc > events.xml
<?xml version="1.0"?>
<config xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xsi:noNamespaceSchemaLocation="urn:magento:framework:Event/etc/events.xsd">
    <event name="sales_quote_item_set_product">
        <observer name="SalesData" instance="Project\Myproject\Observer\SalesData"/>
    </event>
</config>
```

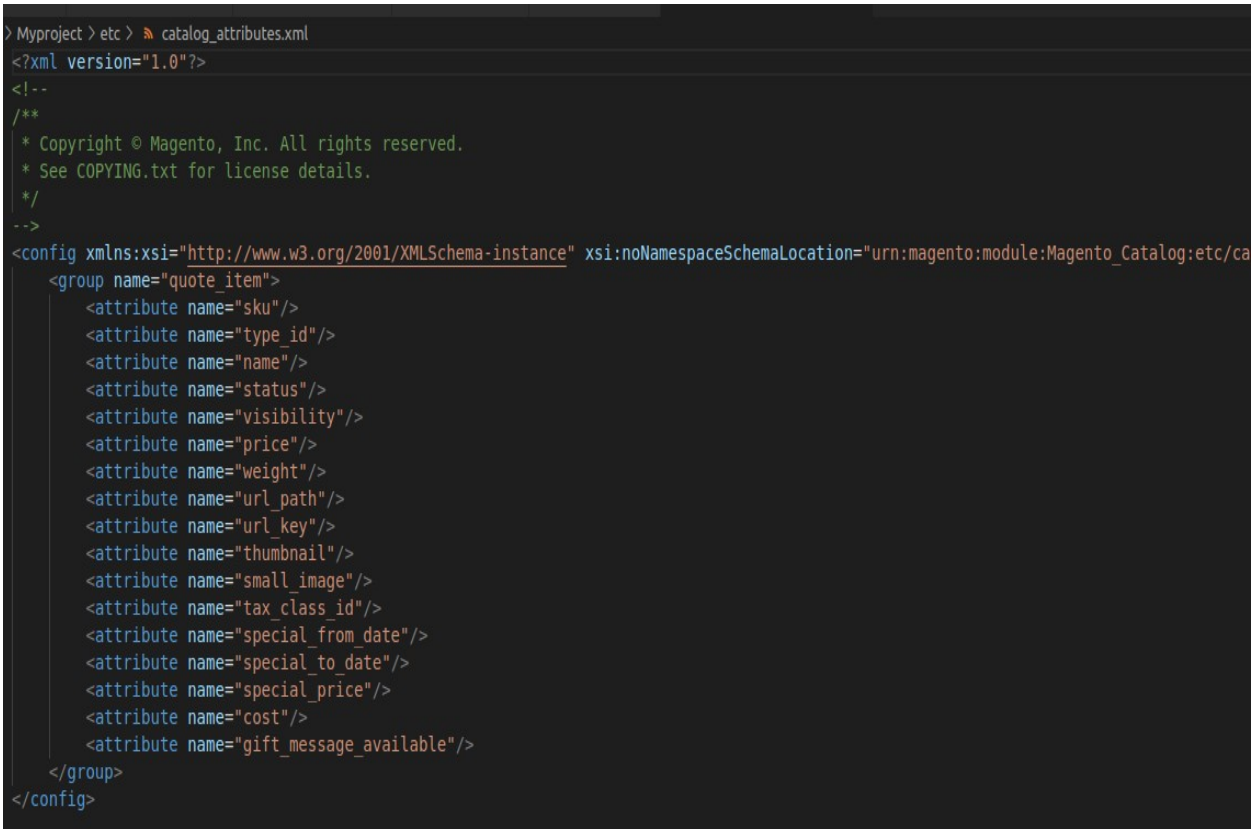
Create di.xml for overriding the php files

Path:app/code/project/myproject/etc/di.xml

Create catalog_attributes.xml file:

It is used to represents the attributes that are going to be copied from the product to quote_item table

Path:app/code/project/myproject/etc/catalog_attributes.xml



Creation of fieldset.xml file:

Fieldset defined in this file is used to map the MRP field from a quote item to an order item and from an order item to an invoice item.

Path:app/code/project/myproject/etc/fieldset.xml