# 乐字节教育高级架构课程

正所谓"**授人以鱼不如授人以渔**"，你们想要的 Java 学习资料来啦！

不管你是学生，还是已经步入职场的同行，希望你们都要珍惜眼前的学习机

会，奋斗没有终点，知识永不过时。

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乐字节晓啡

乐字节官方交流群

# 商品分类-列表页

## 分析页面结构

页面三级之间并无直接关系，而是由html、css页面样式实现了分级样式。

页面结构三个普通tr，不同等级的tr缩进值（左边距）不同。

```html
第一级<td align="left" style="padding-left:5em"></td>
第二级<td align="left" style="padding-left:10em"></td>
第三级<td align="left" style="padding-left:15em"></td>
```

后台只需要获取每一级的商品列表内容返回页面循环处理展示即可

## 后台代码实现

### shop-manager-pojo添加VO对象

GoodsCategoryVo.java

```java
package com.xxxx.manager.vo;

import java.io.Serializable;
import java.util.List;

/**
 * @author zhoubin
 * @since 1.0.0
 */
public class GoodsCategoryVo implements Serializable {

    /**
     *商品下级分类列表
     */
    private List<GoodsCategoryVo> children;
    /**
     * 商品分类id
     */
    private Short id;

    /**
     * 商品分类名称
     */
    private String name;

    /**
     * 手机端显示的商品分类名
     */
    private String mobileName;
```

```java
    /**
     * 父id
     */
    private Short parentId;

    /**
     * 家族图谱
     */
    private String parentIdPath;

    /**
     * 等级
     */
    private Byte level;

    /**
     * 顺序排序
     */
    private Byte sortOrder;

    /**
     * 是否显示
     */
    private Byte isShow;

    /**
     * 分类图片
     */
    private String image;

    /**
     * 是否推荐为热门分类
     */
    private Byte isHot;

    /**
     * 分类分组默认0
     */
    private Byte catGroup;

    /**
     * 分佣比例
     */
    private Byte commissionRate;

    /**
     * t_goods_category
     */
    private static final long serialVersionUID = 1L;

    public List<GoodsCategoryVo> getChildren() {
        return children;
```

```java
    }

    public void setChildren(List<GoodsCategoryVo> children) {
        this.children = children;
    }

    public Short getId() {
        return id;
    }

    public void setId(Short id) {
        this.id = id;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name == null ? null : name.trim();
    }

    public String getMobileName() {
        return mobileName;
    }

    public void setMobileName(String mobileName) {
        this.mobileName = mobileName == null ? null : mobileName.trim();
    }

    public Short getParentId() {
        return parentId;
    }

    public void setParentId(Short parentId) {
        this.parentId = parentId;
    }

    public String getParentIdPath() {
        return parentIdPath;
    }

    public void setParentIdPath(String parentIdPath) {
        this.parentIdPath = parentIdPath == null ? null : parentIdPath.trim();
    }

    public Byte getLevel() {
        return level;
    }

    public void setLevel(Byte level) {
        this.level = level;
    }
```

```java
public Byte getSortOrder() {
    return sortOrder;
}

public void setSortOrder(Byte sortOrder) {
    this.sortOrder = sortOrder;
}

public Byte getIsShow() {
    return isShow;
}

public void setIsShow(Byte isShow) {
    this.isShow = isShow;
}

public String getImage() {
    return image;
}

public void setImage(String image) {
    this.image = image == null ? null : image.trim();
}

public Byte getIsHot() {
    return isHot;
}

public void setIsHot(Byte isHot) {
    this.isHot = isHot;
}

public Byte getCatGroup() {
    return catGroup;
}

public void setCatGroup(Byte catGroup) {
    this.catGroup = catGroup;
}

public Byte getCommissionRate() {
    return commissionRate;
}

public void setCommissionRate(Byte commissionRate) {
    this.commissionRate = commissionRate;
}

@Override
public String toString() {
    StringBuilder sb = new StringBuilder();
    sb.append(getClass().getSimpleName());
```

```java
            sb.append(" [");
            sb.append("Hash = ").append(hashCode());
            sb.append(", id=").append(id);
            sb.append(", name=").append(name);
            sb.append(", mobileName=").append(mobileName);
            sb.append(", parentId=").append(parentId);
            sb.append(", parentIdPath=").append(parentIdPath);
            sb.append(", level=").append(level);
            sb.append(", sortOrder=").append(sortOrder);
            sb.append(", isShow=").append(isShow);
            sb.append(", image=").append(image);
            sb.append(", isHot=").append(isHot);
            sb.append(", catGroup=").append(catGroup);
            sb.append(", commissionRate=").append(commissionRate);
            sb.append("]");
            return sb.toString();
    }
}
```

## Service服务层

GoodsCategoryService.java

```java
/**
 * 商品分类-列表
 * @return
 */
List<GoodsCategoryVo> selectCategoryListForView();
```

GoodsCategoryServiceImpl.java

```java
/**
 * 商品分类-列表
 * @return
 */
@Override
public List<GoodsCategoryVo> selectCategoryListForView() {
    //创建查询对象
    GoodsCategoryExample example = new GoodsCategoryExample();
    //where条件 parentId=0 and level = 1
    example.createCriteria().andParentIdEqualTo((short) 0).andLevelEqualTo((byte) 1);
    //查询一级分类
    List<GoodsCategory> gcList01 = goodsCategoryMapper.selectByExample(example);
    //处理一级分类查询下级分类
    List<GoodsCategoryVo> gcvList01 = new ArrayList<>();
    for (GoodsCategory gc01 : gcList01) {
        //将GoodsCategory对象转成GoodsCategoryVo对象
        GoodsCategoryVo gcv01 = new GoodsCategoryVo();
        BeanUtils.copyProperties(gc01,gcv01);
    // 清空查询对象
        example.clear();
    //设置查询参数
```

```java
        example.createCriteria().andParentIdEqualTo(gcv01.getId()).andLevelEqualTo((byte) 2);
        //查询二级分类
        List<GoodsCategory> gcList02 = goodsCategoryMapper.selectByExample(example);
        //处理二级分类查询下级分类
        List<GoodsCategoryVo> gcvList02 = new ArrayList<>();
        for (GoodsCategoryVo gc02 : gcvList02) {
            //将GoodsCategory对象转成GoodsCategoryVo对象
            GoodsCategoryVo gcv02 = new GoodsCategoryVo();
            BeanUtils.copyProperties(gc02,gcv02);
            // 清空查询对象
            example.clear();
            //设置查询参数
            example.createCriteria().andParentIdEqualTo(gcv02.getId()).andLevelEqualTo((byte)
3);
            //查询三级分类
            List<GoodsCategory> gcList03 = goodsCategoryMapper.selectByExample(example);
        // 处理三级分类添加至二级二级分类vo对象
            List<GoodsCategoryVo> gcvList03 = new ArrayList<>();
            for (GoodsCategory gc03 : gcList03) {
                //将GoodsCategory对象转成GoodsCategoryVo对象
                GoodsCategoryVo gcv03 = new GoodsCategoryVo();
                BeanUtils.copyProperties(gc03,gcv03);
                //将对象添加至三级分类vo对象List
                gcvList03.add(gcv03);
            }
        // 将三级分类List添加至二级分类
            gcv02.setChildren(gcvList03);
        // 讲对象添加至二级分类Vo对象List
            gcvList02.add(gcv02);
        }
    // 将二级分类List添加至一级分类
        gcv01.setChildren(gcvList02);
    // 将对象添加至一级分类Vo对象List
        gcvList01.add(gcv01);
    }

    //====================JDK8新特性====================
    //创建查询对象
    // GoodsCategoryExample example = new GoodsCategoryExample();
    // //查询所有的商品分类list
    // List<GoodsCategory> list = goodsCategoryMapper.selectByExample(example);
    // //将List<GoodsCategory>转成List<GoodsCategoryVo>
    // List<GoodsCategoryVo> gcvList = list.stream().map(e -> {
    //   GoodsCategoryVo gcv = new GoodsCategoryVo();
    //   BeanUtils.copyProperties(e, gcv);
    //   return gcv;
    // }).collect(Collectors.toList());
    // /**
    //  * 将List<GoodsCategoryVo>转成Map<parentId,List<GoodsCategoryVo>>
    //  * 按parentId分组, key为parentId, value为parentId对应的List
    //  */
    // Map<Short, List<GoodsCategoryVo>> map =
    //       gcvList.stream().collect(Collectors.groupingBy(GoodsCategoryVo::getParentId));
```

```java
    // /**
    //  * 循环，将childrenList赋值
    //  */
    // gcvList.forEach(e -> e.setChildrenList(map.get(e.getId())));
    // /**
    //  * 拦截器，返回Level为1的List，也就是顶级分类
    //  */
    // List<GoodsCategoryVo> gcvList01 = gcvList.stream().filter(e -> 1 ==
e.getLevel()).collect(Collectors.toList
    // ());
    //====================JDK8新特性========================

    return gcvList01;
}
```

## Service服务层的测试类

GoodsCategoryServiceITest.java

```java
package com.xxxx.manager;

import com.xxxx.manager.service.GoodsCategoryService;
import com.xxxx.manager.vo.GoodsCategoryVo;
import org.junit.jupiter.api.Test;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.test.context.SpringBootTest;

import java.util.List;

/**
 * 商品分类服务测试类
 *
 * @author zhoubin
 * @since 1.0.0
 */
@SpringBootTest(classes = ManagerApplication.class)
public class GoodsCategoryServiceTest {

    @Autowired
    private GoodsCategoryService goodsCategoryService;

    @Test
    public void testSelectCategoryListForView(){
        List<GoodsCategoryVo> gcvList = goodsCategoryService.selectCategoryListForView();
        System.out.println(gcvList);
    }
}
```

## Controller控制层

GoodsController.java

```java
/**
 * 商品分类-列表-页面跳转
 *
 * @return
 */
@RequestMapping("category/list")
public String categoryList(Model model) {
    List<GoodsCategoryVo> gcvList = goodsCategoryService.selectCategoryListForView();
    model.addAttribute("gcvList",gcvList);
    return "goods/category/category-list";
}
```

## ftl页面

category-list.ftl 的 `<div class="box-body"></div>` 中的所有内容

```html
<div class="box-body">
    <div class="row">
        <div class="col-sm-12">
            <table id="list-table" class="table table-bordered table-striped dataTable" role="grid"
                    aria-describedby="example1_info">
                <thead>
                <tr role="row">
                    <th valign="middle">分类ID</th>
                    <th valign="middle">分类名称</th>
                    <th valign="middle">手机显示名称</th>
                    <th valign="middle">是否推荐</th>
                    <th valign="middle">是否显示</th>
                    <th valign="middle">分组</th>
                    <th valign="middle">排序</th>
                    <th valign="middle">操作</th>
                </tr>
                </thead>
                <tbody>
                <#list gcvList as gcv01>
                    <tr role="row" align="center" class="1" id="1_1">
                        <td>${gcv01.id}</td>
                        <td align="left" style="padding-left:5em">
                        <span class="glyphicon glyphicon-plus btn-warning"
                                style="padding:2px; font-size:12px;" id="icon_1_1" aria-hidden="false"
                                onclick="rowClicked(this)"></span>  <span>${gcv01.name}</span>
                        </td>
                        <td><span>${gcv01.mobileName}</span></td>
                        <td>
                            <img width="20" height="20" src="${ctx}/images/yes.png"
onclick="changeTableVal('goods_category','id','1','is_hot',this)"/>
                        </td>
                        <td>
```

```html
                            <img width="20" height="20" src="${ctx}/images/yes.png"

onclick="changeTableVal('goods_category','id','1','is_show',this)"/>
                        </td>
                        <td>
                            <input type="text"

onchange="updateSort('goods_category','id','1','cat_group',this)"
                                onkeyup="this.value=this.value.replace(/[^\d]/g,'')"
                                onpaste="this.value=this.value.replace(/[^\d]/g,'')"
size="4"
                                value="${gcv01.catGroup}" class="input-sm"/>
                        </td>
                        <td>
                            <input type="text"

onchange="updateSort('goods_category','id','1','sort_order',this)"
                                onkeyup="this.value=this.value.replace(/[^\d]/g,'')"
                                onpaste="this.value=this.value.replace(/[^\d]/g,'')"
size="4"
                                value="${gcv01.sortOrder}" class="input-sm"/>
                        </td>
                        <td>
                            <a class="btn btn-primary" href="商品分类-编辑.html"><i class="fa
fa-pencil"></i></a>
                            <a class="btn btn-danger"

href="javascript:del_fun('/index/Admin/Goods/delGoodsCategory/id/1');"><i
                                class="fa fa-trash-o"></i></a>
                        </td>
                    </tr>
                    <#list gcv01.children as gcv02>
                        <tr role="row" align="center" class="2" id="2_12"
style="display:none">
                            <td>${gcv02.id}</td>
                            <td align="left" style="padding-left:10em">
                        <span class="glyphicon glyphicon-plus btn-warning"
                            style="padding:2px; font-size:12px;" id="icon_2_12"
                            aria-hidden="false" onclick="rowClicked(this)"></span> 
                            <span>${gcv02.name}</span>
                        </td>
                        <td><span>${gcv02.mobileName}</span></td>
                        <td>
                            <img width="20" height="20" src="${ctx}/images/cancel.png"

onclick="changeTableVal('goods_category','id','12','is_hot',this)"/>
                        </td>
                        <td>
                            <img width="20" height="20" src="${ctx}/images/yes.png"

onclick="changeTableVal('goods_category','id','12','is_show',this)"/>
                        </td>
                        <td>
```

```html
                                        <input type="text"

onchange="updateSort('goods_category','id','12','cat_group',this)"
                                            onkeyup="this.value=this.value.replace(/[^\d]/g,'')"
                                            onpaste="this.value=this.value.replace(/[^\d]/g,'')"
size="4"

                                            value="${gcv02.catGroup}" class="input-sm"/>
                                    </td>
                                    <td>
                                        <input type="text"

onchange="updateSort('goods_category','id','12','sort_order',this)"
                                            onkeyup="this.value=this.value.replace(/[^\d]/g,'')"
                                            onpaste="this.value=this.value.replace(/[^\d]/g,'')"
size="4"

                                            value="${gcv02.sortOrder}" class="input-sm"/>
                                    </td>
                                    <td>
                                        <a class="btn btn-primary"
                                            href="/index/Admin/Goods/addEditCategory/id/12"><i
                                                class="fa fa-pencil"></i></a>
                                        <a class="btn btn-danger"

href="javascript:del_fun('/index/Admin/Goods/delGoodsCategory/id/12');"><i
                                                class="fa fa-trash-o"></i></a>
                                    </td>
                                </tr>
                                <#list gcv02.children as gcv03>
                                    <tr role="row" align="center" class="3" id="3_100"
style="display:none">
                                        <td>${gcv03.id}</td>
                                        <td align="left" style="padding-left:15em">
                                            <span>${gcv03.name}</span>
                                        </td>
                                        <td><span>${gcv03.mobileName}</span></td>
                                        <td>
                                            <img width="20" height="20"
src="${ctx}/images/cancel.png"

onclick="changeTableVal('goods_category','id','100','is_hot',this)"/>
                                        </td>
                                        <td>
                                            <img width="20" height="20" src="${ctx}/images/yes.png"

onclick="changeTableVal('goods_category','id','100','is_show',this)"/>
                                        </td>
                                        <td>
                                            <input type="text"

onchange="updateSort('goods_category','id','100','cat_group',this)"

onkeyup="this.value=this.value.replace(/[^\d]/g,'')"
```

```html
                                        onpaste="this.value=this.value.replace(/[^\d]/g,'')" size="4"
                                                        value="${gcv03.catGroup}" class="input-sm"/>
                                    </td>
                                    <td>
                                        <input type="text"

onchange="updateSort('goods_category','id','100','sort_order',this)"

onkeyup="this.value=this.value.replace(/[^\d]/g,'')"

onpaste="this.value=this.value.replace(/[^\d]/g,'')" size="4"
                                                        value="${gcv03.sortOrder}" class="input-sm"/>
                                    </td>
                                    <td>
                                        <a class="btn btn-primary"
href="/index/Admin/Goods/addEditCategory/id/100"><i
                                                class="fa fa-pencil"></i></a>
                                        <a class="btn btn-danger"

href="javascript:del_fun('/index/Admin/Goods/delGoodsCategory/id/100');"><i
                                                class="fa fa-trash-o"></i></a>
                                    </td>
                                </tr>
                            </#list>
                        </#list>
                    </#list>
                    </tbody>
                </table>
            </div>
        </div>
        <div class="row">
            <div class="col-sm-5">
                <div class="dataTables_info" id="example1_info" role="status" aria-
live="polite">分页
                </div>
            </div>
        </div>
    </div>
</div>
```