课程按分类进行过滤显示

安装过滤插件

```
pip install django-filter
```

后端配置

```
# settings.py

INSTALLED_APPS = [
....
   'django_filters',
...
]

REST_FRAMEWORK = {
...
   # 过滤组件注册
   'DEFAULT_FILTER_BACKENDS': ('django_filters.rest_framework.DjangoFilterBackend',)
}
```

视图中设置允许进行过滤的字段

courses/views.py

```
from .models import Course
from .serializers import CourseSerializer
class CourseAPIView(ListAPIView):
    queryset = Course.objects.filter(status=0).order_by("-orders","-students")
    serializer_class = CourseSerializer
    # 设置过滤的字段
    filter_fields = ('course_category',)
```

客户端实现请求根据分类过滤显示课程

组件html代码:

```
<div class="filter">
    <!-- 注意,新增了一个空的div标签包裹分类的内容 -->
    <div @click="get_course">
        <el-row class="filter-el-row1">
        <el-col :span="2" class="filter-text">课程分类:</el-col>
        <el-col :span="2" :data-id="0" class="current">全部</el-col>
        <el-col :span="2" :data-id="item.id" v-for="item in cate_list">
{{item.name}}</el-col>
        </el-row>
        </div>
```

组件is代码:

```
methods:{
  addclass(ele,className){
   let class_array = ele.className.split(" ");
   // 判断元素本身是否已经有了一个同名的class,
                                         indexOf返回查询出来的成员的下标
   let index = class_array.indexOf(className);
   // 如果返回值是-1,则表示找不到同名的claass
   if(index==-1){
     ele.className+=" "+className
   }
  },
  removeclass(ele,className) {
   // 去除元素的class样式
   // 回头修复下bug,类似 <div class="col-2 current_activate ">
   ele.className = ele.className.replace("current","");
  get_course(event){
    // 给当前被点击的分类元素添加外框高亮
   let ele_list = event.target.parentElement.children;
   for(let i = 0;i<ele_list.length;i++){</pre>
     this.removeclass(ele_list[i],"current")
   }
   this.addclass(event.target, "current");
   // 获取标签元素的属性,分类ID
   let id = event.target.getAttribute("data-id");
   let url = "http://127.0.0.1:8000/courses/";
   // 如果分类ID不是0,则表示按分类显示课程
   if(id!=0){
       url+="?course_category="+id
   }
   this.$axios.get(url).then(response=>{
     this.course_list = response.data
   }).catch(error=>{
     console.log(error.response);
   })
  }
},
```

排序显示课程

后端提供排序课程的接口

把原来views.py中的CoursesAPIView新增两句代码:

```
from .models import Course
from .serializers import CourseSerializer
from rest_framework.filters import OrderingFilter
class CourseAPIView(ListAPIView):
    queryset = Course.objects.filter(status=0).order_by("-orders","-students")
    serializer_class = CourseSerializer
# 设置过滤的字段
filter_fields = ('course_category',)
filter_backends = [OrderingFilter]
    ordering_fields = ('id', 'students', 'price')
```

前端根据排序字段对应的课程顺序

组件html代码

```
<el-row class="filter-el-row2">
             <el-col :span="2" class="filter-text filter-text2">筛
      选:</el-col>
             <el-col :span="2" class="current"><span @click="orders('id','')">默认
</span></el-col>
             <el-col :span="2"><span @click="orders('students','')">人气</span></el-
col>
             <el-col :span="2">
               <span @click="orders('price','+')">价格</span>
               <div class="filter-price">
                 <span class="up" @click="orders('price','+')"</pre>
:class="filter_price==true?'active':'"><i class="el-icon-caret-top"></i></span>
                 <span class="down" @click="orders('price','-')"</pre>
:class="filter_price==false?'active':'"><i class="el-icon-caret-bottom"></i></span>
               </div>
             </el-col>
           </e1-row>
```

组件js代码;

```
methods:{
    orders(field,type){
      let url = "http://127.0.0.1:8000/courses/";
      if(field=='students'){
        url+="?ordering=-students";
    }else if(field="price"){
      if(type=="+"){
```

```
url+="?ordering=price";
}else{
    url+="?ordering=-price";
}

this.$axios.get(url).then(response=>{
    this.course_list = response.data
}).catch(error=>{
    console.log(error.response);
})
},
```

分页显示数据

```
from rest_framework.pagination import PageNumberPagination

class StandardPageNumberPagination(PageNumberPagination):
    page_size_query_param = 'page_size'
    max_page_size = 1

class CourseAPIView(ListAPIView):
    queryset = Course.objects.filter(status=0).order_by("-orders","-students")
# 设置过滤的字段
filter_fields = ('course_category',)
    serializer_class = CourseSerializer
    filter_backends = [OrderingFilter]
    ordering_fields = ('id', 'students', 'price', 'course_category')
    pagination_class = StandardPageNumberPagination
```

客户端请求后端发送数据

```
<template>
 <div class="courses">
     <Header :current_page="current_page"/>
     <div class="main">
         <div class="filter">
           <el-row class="filter-el-row1">
             <el-col :span="2" class="filter-text">课程分类:</el-col>
             <div @click="get_course">
             <el-col :span="2" :data-id="0" class="current">全部</el-col>
             <el-col :span="2" :data-id="item.id" v-for="item in cate_list">
{{item.name}}</el-col>
             </div>
           </e1-row>
           <el-row class="filter-el-row2">
             <el-col :span="2" class="filter-text filter-text2">筛
      选:</el-col>
```

```
<el-col :span="2" class="current"><span @click="orders('id','')">默认
</span></el-col>
             <el-col :span="2"><span @click="orders('students','')">人气</span></el-
col>
             <e1-co1 :span="2">
               <span @click="orders('price','+')">价格</span>
               <div class="filter-price">
                 <span class="up" @click="orders('price','+')"</pre>
:class="filter_price==true?'active':'"><i class="el-icon-caret-top"></i></span>
                <span class="down" @click="orders('price','-')"</pre>
:class="filter_price==false?'active':'"><i class="el-icon-caret-bottom"></i></span>
               </div>
             </el-col>
           </e1-row>
         </div>
         <div class="courses_list">
             <el-row v-for="course in course_list" class="course-item">
               <el-col :span="24" class="course-item-box">
                <el-row>
                  <el-col :span="12" class="course-item-left"><img</pre>
:src="course.course_img" alt=""></el-col>
                  <el-col :span="12" class="course-item-right">
                      <div class="course-title">
                        {{course.name}}
                        {{course.students}}人已加入学习
                      </div>
                      <div class="author">
                        {{course.teacher.name}}
{{course.teacher.title}}
                        共{{course.lessons}}课时
<span>/{{course.pub_lessons==course.lessons?"更新完成":course.pub_lessons}}</span>
                      </div>
                      <el-row class="course-content">
                          <el-col :span="12"><i class="el-icon-caret-right"></i>01 |
常用模块学习-模块的种类和... <span class="free">免费</span> </el-col>
                          <el-col :span="12"><i class="el-icon-caret-right"></i>02 |
常用模块学习-模块的种类和... <span class="free">免费</span> </el-col>
                          <el-col :span="12"><i class="el-icon-caret-right"></i>03 |
三元运算符... <span class="free">免费</span> </el-col>
                          <el-col :span="12"><i class="el-icon-caret-right"></i>04 |
常用模块学习-模块的种类和... <span class="free">免费</span> </el-col>
                      </el-row>
                      <div class="course-price">
                          <span class="discount">限时免费</span>
                            <span class="count">\footsymbol{\text{span}}
                            <span class="old_count">原价: \frac{\{\text{course.price}\}元</span>
                          <button class="buy">立即购买</button>
                      </div>
                  </el-col>
                 </e1-row>
               </el-col>
```

```
</el-row>
          </div>
        <el-pagination
          @current-change="handleCurrentChange"
          background
          layout="prev, pager, next"
          :page-size="page_size"
          :total="total">
        </el-pagination>
      </div>
      <Footer/>
 </div>
</template>
<script>
 import Header from "./common/Header"
 import Footer from "./common/Footer"
  export default {
    name: "Courses",
    data(){
      return {
       current_page:1,
       filter_price:false,
       cate_list:[], // 课程分类列表
        course_list:[], // 专题课程列表
       page_size:1, // 默认每一页显示的数据量
       total: 10,
     }
   },
    components:{
     Header,
      Footer,
    },
   methods:{
      handleCurrentChange(val){
       // 名字必须固定
       let url = "http://127.0.0.1:8000/courses/";
       url+="?page="+val+"&page_size="+this.page_size;
        this.$axios.get(url).then(response=>{
          this.course_list = response.data.results;
          this.curser_page_cout =response.data.count
       }).catch(error=>{
          console.log(error.response);
       })
      },
      orders(field, type) {
        let url = "http://127.0.0.1:8000/courses/";
       if(field=='students'){
          url+="?ordering=-students";
       }else if(field="price"){
          if(type=="+"){
            url+="?ordering=price";
         }else{
```

```
url+="?ordering=-price";
     }
   }
   this.$axios.get(url).then(response=>{
     this.course_list = response.data
   }).catch(error=>{
     console.log(error.response);
   })
  },
  addclass(ele,className){
   let class_array = ele.className.split(" ");
   // 判断元素本身是否已经有了一个同名的class, indexof返回查询出来的成员的下标
   let index = class_array.indexOf(className);
   // 如果返回值是-1,则表示找不到同名的claass
   if(index==-1){
     ele.className+=" "+className
   }
  },
  removeclass(ele,className) {
   // 去除元素的class样式
   // 回头修复下bug,类似 <div class="col-2 current_activate ">
   ele.className = ele.className.replace("current","");
  },
  get_course(event){
   // 给当前被点击的分类元素添加外框高亮
   let ele_list = event.target.parentElement.children;
   for(let i = 0;i<ele_list.length;i++){</pre>
     this.removeclass(ele_list[i],"current")
   this.addclass(event.target, "current");
   // 获取标签元素的属性,分类ID
   let id = event.target.getAttribute("data-id");
   let url = "http://127.0.0.1:8000/courses/";
   // 如果分类ID不是0,则表示按分类显示课程
   if(id!=0){
       url+="?course_category="+id
   }
   this.$axios.get(url).then(response=>{
     this.course_list = response.data
   }).catch(error=>{
     console.log(error.response);
   })
  }
},
created(){
  this.\axios.get(\http://127.0.0.1:8000/courses/cate/\).then(response=>{
   this.cate_list = response.data
  }).catch(error=>{
   console.log(error.response);
  });
```

```
// 获取课程信息
      this.$axios.get(`http://127.0.0.1:8000/courses/?
page=${this.current_page}&page_size=${this.page_size}`).then(response=>{
        this.course_list = response.data.results
        this.total = response.data.count
      }).catch(error=>{
        console.log(error.response);
      });
   }
  }
</script>
<style scoped>
.courses{
 padding-top: 80px;
.main{
   width: 1100px;
   height: auto;
   margin: 0 auto;
    padding-top: 35px;
}
.main .filter{
   width: 100%;
   height: auto;
    margin-bottom: 35px;
    padding: 25px 0px 25px 0px;
    background: #fff;
    border-radius: 4px;
   box-shadow: 0 2px 4px 0 #f0f0f0;
}
.filter .el-col{
  text-align: center;
  padding: 6px 0px;
  line-height: 16px;
  margin-left: 14px;
  position: relative;
  transition: all .3s ease;
  cursor: pointer;
  color: #4a4a4a;
}
.filter-el-row1{
  padding-bottom: 18px;
  margin-bottom: 17px;
}
.filter .filter-text{
 text-align: right;
 font-size: 16px;
 color: #888;
}
.filter .filter-text2{
```

```
.filter .filter-el-row1 .current{
    color: #ffc210;
    border: 1px solid #ffc210!important;
    border-radius: 30px;
.filter .filter-el-row2 .current{
    color: #ffc210;
}
.filter-price{
  display:inline-block;
 vertical-align: middle;
.filter-price .up, .filter-price .down{
  display: block;
 line-height: 8px;
 font-size: 13px;
 margin: -4px;
 color: #d8d8d8;
}
.current .filter-price .active{
 color: #ffc210;
.course-item{
  margin-bottom: 35px;
}
.course-item .course-item-box{
   padding: 20px 30px 20px 20px;
.course-item{
     box-shadow: 2px 3px 16px rgba(0,0,0,.1);
    transition: all .2s ease;
.course-item .course-item-left{
   width: 423px;
   height: 210px;
   margin-right: 30px;
}
.course-title{
  overflow: hidden;/* 在父元素中使用可以清除子元素的浮动影响 */
}
.course-title .box-title{
 font-size: 26px;
 color: #333333;
  float: left;
 margin-bottom: 8px;
}
.course-title .box-number{
    font-size: 14px;
    color: #9b9b9b;
    font-family: PingFangSC-Light;
    float: right;
    padding-top: 12px;
```

```
.course-item-right{
 width: 56.6%;
}
.author{
    font-size: 14px;
    color: #9b9b9b;
    margin-bottom: 14px;
    padding-bottom: 14px;
   overflow: hidden;
}
.author .box-author{
 float:left;
}
.author .lession{
 float: right;
}
.course-content .el-icon-caret-right{
 border: 1px solid #000;
 border-radius: 50%;
 margin-right: 6px;
}
.course-content .el-col{
 font-size: 14px;
 color: #666;
 width: 50%;
 margin-bottom: 15px;
 cursor: pointer;
.course-content .el-col:hover{
 color: #ffc210;
}
.course-content .el-col:hover .el-icon-caret-right,.course-content .el-col:hover .free{
 border-color: #ffc210;
 color: #ffc210;
}
.course-content .el-col .free{
   width: 34px;
   height: 20px;
    color: #fd7b4d;
   margin-left: 10px;
   border: 1px solid #fd7b4d;
   border-radius: 2px;
    text-align: center;
    font-size: 13px;
   white-space: nowrap;
}
.course-price{
 overflow: hidden;
.course-price .course-price-left{
 float: left;
}
```

```
.course-price .discount{
   padding: 6px 10px;
   display: inline-block;
    font-size: 16px;
   color: #fff;
   text-align: center;
   margin-right: 8px;
   background: #fa6240;
   border: 1px solid #fa6240;
   border-radius: 10px 0 10px 0;
}
.course-price .course-price-left{
 line-height: 22px;
}
.course-price .count{
   font-size: 24px;
   color: #fa6240;
.course-price .old_count{
   font-size: 14px;
   color: #9b9b9b;
   text-decoration: line-through;
   margin-left: 10px;
.course-price .buy{
 float: right;
 width: 120px;
 height: 38px;
 font-size: 16px;
 border-radius: 3px;
 border: 1px solid #fd7b4d;
 background: transparent;/* 透明 */
 color: #fa6240;
 cursor: pointer;
 transition: all .2s ease-in-out;/* css3新版本的样式中支持支持 jQuery里面的动画预设效果 */
 /* all表示当前元素的所有样式 .2s表示改变样式完成的时间 ease-in-out */
}
.course-price .buy:hover{
   color: #fff;
   background: #ffc210;
   border: 1px solid #ffc210;
}
</style>
```

客户端的课程列表显示当前课程的章节信息

```
# 对于显示课程以外的一些附加信息,需要在序列化器进行序列化器的时候调整.

from .models import Course
class CourseSerializer(serializers.ModelSerializer):
    # 这里调用的序列化器,必须事先在前面已经声明好的,否则报错
    teacher = TeacherSerializer()
    # 课程和课程章节的外键,因为需要获取具体的数据而不是ID,所以我们需要自定义序列化器
    coursechapters=CourseChaptersSerializer(many=True)
    class Meta:
        model= Course
        fields =
        ("coursechapters","id","name","course_img","students","lessons","pub_lessons","price","
        teacher")
```

前端显示课程章节信息

显示当前课程所属的价格

价格策略模型

价格服务类型名称: 限时免费,限时折扣,限时减免,积分抵扣,满减

公式: 服务价格

 限时免费
 原价-原价

 限时折扣
 原价*0.8

 限时减免
 原价-减免价

积分抵扣 原价-(积分计算后换算价格) 满减 原价-(满减计算后换算价格)

模型代码:

```
from django.db import models
# Create your models here.
class CourseCategory(models.Model):
   课程分类
   .....
   name = models.CharField(max_length=64, unique=True, verbose_name="分类名称")
   orders = models.IntegerField(verbose_name="课程排序",null=True)
   is_show = models.BooleanField(default=True, verbose_name="是否上线")
   is_delete = models.BooleanField(default=False, verbose_name="逻辑删除")
   class Meta:
       db_table = "ly_course_category"
       verbose_name = "课程分类"
       verbose_name_plural = "课程分类"
   def __str__(self):
       return "%s" % self.name
class Course(models.Model):
   .....
   专题课程
   course_type = (
       (0, '付费'),
       (1, 'VIP专享'),
       (2, '学位课程')
   )
   level_choices = (
       (0, '初级'),
       (1, '中级'),
       (2, '高级')
   )
   status_choices = (
       (0, '上线'),
       (1, '下线'),
       (2, '预上线')
   )
   name = models.CharField(max_length=128, verbose_name="课程名称")
   course_img = models.ImageField(max_length=255, verbose_name="封面图片", blank=True,
null=True)
   course_type = models.SmallIntegerField(choices=course_type, verbose_name="付费类型")
    # 使用这个字段的原因
   brief = models.TextField(max_length=2048, verbose_name="课程概述", null=True,
blank=True)
   level = models.SmallIntegerField(choices=level_choices, default=1, verbose_name="难
度等级划分")
   pub_date = models.DateField(verbose_name="发布日期", auto_now_add=True)
   period = models.IntegerField(verbose_name="建议学习周期(day)", default=7)
   orders = models.IntegerField(verbose_name="课程排序")
```

```
attachment_path = models.FileField(max_length=128, verbose_name="课件路径",
blank=True, null=True)
    status = models.SmallIntegerField(choices=status_choices, default=0,
verbose_name="课程状态")
   course_category = models.ForeignKey("CourseCategory", on_delete=models.CASCADE,
null=True, blank=True, verbose_name="课程分类")
   students = models.IntegerField(verbose_name="学习人数",default = 0)
   lessons = models.IntegerField(verbose_name="总课时数量",default = 0)
   pub_lessons = models.IntegerField(verbose_name="课时更新数量",default = 0)
   price = models.DecimalField(max_digits=6,decimal_places=2, verbose_name="课程原
价", default=0)
   teacher = models.ForeignKey("Teacher",on_delete=models.DO_NOTHING, null=True,
blank=True, verbose_name="授课老师")
   price_service_type =
models.ForeignKey("PriceServiceType",on_delete=models.DO_NOTHING, null=True,
blank=True, verbose_name="价格服务")
   class Meta:
       db_table = "ly_course"
       verbose_name = "专题课程"
       verbose_name_plural = "专题课程"
   def __str__(self):
       return "%s" % self.name
   # 自定义显示字段
   # def cate_name(self):
         return self.course_category.name
class Teacher(models.Model):
   """讲师、导师表"""
   role_choices = (
       (0, '讲师'),
       (1, '导师'),
   name = models.CharField(max_length=32, verbose_name="讲师title")
    role = models.SmallIntegerField(choices=role_choices, default=0, verbose_name="讲师
身份")
   title = models.CharField(max_length=64, verbose_name="职位、职称")
   signature = models.CharField(max_length=255, help_text="导师签名", blank=True,
null=True)
   image = models.ImageField(blank=True,verbose_name = "讲师封面")
   brief = models.TextField(max_length=1024, verbose_name="讲师描述")
   class Meta:
       db_table = "ly_teacher"
       verbose_name = "讲师导师"
       verbose_name_plural = "讲师导师"
   def __str__(self):
       return "%s" % self.name
class CourseChapter(models.Model):
```

```
"""课程音节"""
   course = models.ForeignKey("Course", related_name='coursechapters',
on_delete=models.CASCADE, verbose_name="课程名称")
   chapter = models.SmallIntegerField(verbose_name="第几章", default=1)
   name = models.CharField(max_length=128, verbose_name="章节标题")
    summary = models.TextField(verbose_name="章节介绍", blank=True, null=True)
   pub_date = models.DateField(verbose_name="发布日期", auto_now_add=True)
    class Meta:
       db_table = "ly_course_chapter"
       verbose_name = "课程章节"
       verbose_name_plural = "课程章节"
   def __str__(self):
       return "%s:(第%s章)%s" % (self.course, self.chapter, self.name)
class CourseLesson(models.Model):
   """课程课时"""
    section_type_choices = (
       (0, '文档'),
       (1, '练习'),
       (2, '视频')
   )
   chapter = models.ForeignKey("CourseChapter", related_name='coursesections',
on_delete=models.CASCADE,verbose_name="课程章节")
   name = models.CharField(max_length=128,verbose_name = "课时标题")
   orders = models.PositiveSmallIntegerField(verbose_name="课时排序")
    section_type = models.SmallIntegerField(default=2, choices=section_type_choices,
verbose_name="课时种类")
    section_link = models.CharField(max_length=255, blank=True, null=True,
verbose_name="课时链接", help_text = "若是video, 填vid,若是文档, 填link")
    duration = models.CharField(verbose_name="视频时长", blank=True, null=True,
max_length=32) # 仅在前端展示使用
    pub_date = models.DateTimeField(verbose_name="发布时间", auto_now_add=True)
   free_trail = models.BooleanField(verbose_name="是否可试看", default=False)
   class Meta:
       db_table = "ly_course_lesson"
       verbose_name = "课程课时"
       verbose_name_plural = "课程课时"
   def __str__(self):
       return "%s-%s" % (self.chapter, self.name)
class PriceServiceType(models.Model):
    """价格服务类型"""
   name = models.CharField(max_length=32, verbose_name="服务名称")
   class Meta:
       db_table = "ly_price_service_type"
       verbose_name = "价格服务"
```

```
verbose_name_plural = "价格服务"
   def __str__(self):
      return "%s" % (self.name)
class PriceService(models.Model):
   """价格服务策略"""
   services_type = models.ForeignKey("PriceServiceType", related_name='priceservices',
on_delete=models.CASCADE,verbose_name="服务名称")
   condition = models.IntegerField(verbose_name="满足优惠的价格条件")
   号开头表示折扣价,例如*0.82表示八二折; <br>$号开头表示积分兑换,例如$50表示可以兑换50积分")
   start_time = models.DateTimeField(verbose_name="优惠策略的开始时间")
   end_time = models.DateTimeField(verbose_name="优惠策略的结束时间")
   class Meta:
      db_table = "ly_price_service"
      verbose_name = "价格服务策略"
      verbose_name_plural = "价格服务策略"
   def __str__(self):
      return "价格服务:%s,优惠条件:%s,优惠值:%s" %
(self.services_type.name, self.condition, self.sale)
```

序列化器,代码:

```
from rest_framework import serializers
from .models import CourseCategory
class CourseCategorySerializer(serializers.ModelSerializer):
   class Meta:
       model = CourseCategory
       fields = ("id","name")
# 开发中一个序列化器 A 中需要同时序列化其他模型 B 的数据返回给客户端,那么直接通过外键默认只会返回主键ID
# 所以我们可以通过再创建一个模型B的序列化器,对模型B的数据进行序列化
# 在序列化器A中直接把模型B的序列化器调用作为字段值来声明即可.
from .models import Teacher
class TeacherSerializer(serializers.ModelSerializer):
   class Meta:
       model = Teacher
       fields = ("id","name","title")
from .models import CourseChapter
class CourseChaptersSerializer(serializers.ModelSerializer):
   class Meta:
       model= CourseChapter
       fields = ("id","chapter","name")
from .models import PriceService
class PriceServicesSerializer(serializers.ModelSerializer):
   """价格服务策略序列化器"""
```

```
class Meta:
       model = PriceService
       fields = ("condition", "sale", "start_time", "end_time")
from .models import PriceServiceType
class PriceServiceType(serializers.ModelSerializer):
   """价格服务类型序列化器"""
   priceservices = PriceServicesSerializer(many=True)
   class Meta:
       model = PriceServiceType
       # priceservices 价格策略
       fields = ("id","name","priceservices")
from .models import Course
class CourseSerializer(serializers.ModelSerializer):
   # 这里调用的序列化器,必须事先在前面已经声明好的,否则报错
   teacher = TeacherSerializer()
   # 课程和课程章节的外键,因为需要获取具体的数据而不是ID,所以我们需要自定义序列化器
   coursechapters=CourseChaptersSerializer(many=True)
   price_service_type=PriceServiceType()
   class Meta:
       model= Course
       fields =
("coursechapters", "id", "name", "course_img", "students", "lessons", "pub_lessons", "price", "
teacher","price_service_type")
```

adminx.py

```
from .models import PriceServiceType
class PriceServiceTypeModelAdmin(object):
    """价格服务类型模型管理类"""
    pass
xadmin.site.register(PriceServiceType, PriceServiceTypeModelAdmin)

from .models import PriceService
class PriceServiceModelAdmin(object):
    """价格服务策略模型管理类"""
    pass
xadmin.site.register(PriceService, PriceServiceModelAdmin)
```

前端请求数据

```
<el-row class="filter-el-row1">
             <el-col :span="2" class="filter-text">课程分类:</el-col>
             <div @click="get_course">
            <el-col :span="2" :data-id="0" class="current">全部</el-col>
            <el-col :span="2" :data-id="item.id" v-for="item in cate_list">
{{item.name}}</el-col>
            </div>
           </el-row>
           <el-row class="filter-el-row2">
             <el-col :span="2" class="filter-text filter-text2">筛
      选:</el-col>
            <el-col :span="2" class="current"><span @click="orders('id','')">默认
</span></el-col>
            <el-col :span="2"><span @click="orders('students','')">人气</span></el-
col>
            <el-col :span="2">
              <span @click="orders('price','+')">价格</span>
              <div class="filter-price">
                <span class="up" @click="orders('price','+')"</pre>
:class="filter_price==true?'active':'"><i class="el-icon-caret-top"></i></span>
                <span class="down" @click="orders('price','-')"</pre>
:class="filter_price==false?'active':'"><i class="el-icon-caret-bottom"></i></span>
              </div>
            </el-col>
           </el-row>
         </div>
         <div class="courses_list">
             <el-row v-for="course in course_list" class="course-item">
              <el-col :span="24" class="course-item-box">
                <el-row>
                  <el-col :span="12" class="course-item-left"><img</pre>
:src="course.course_img" alt=""></el-col>
                  <el-col :span="12" class="course-item-right">
                      <div class="course-title">
                        {{course.name}}
                        {{course.students}}人已加入学习
                      </div>
                      <div class="author">
                       {{course.teacher.name}}
{{course.teacher.title}}
                        共{{course.lessons}}课时
<span>/{{course.pub_lessons==course.lessons?"更新完成":course.pub_lessons+'课时'}}</span>
</div>
                      <el-row class="course-content">
                         <el-col v-for="chapters in course.coursechapters"
:span="12"><i class="el-icon-caret-right"></i>
{{chapters.chapter<10?"0"+chapters.chapter:chapters.chapter}} | {{chapters.name}} <span
class="free">免费</span> </el-col>
                      </e1-row>
                      <div class="course-price">
                        <span v-if="course.price_service_type">
```

```
<span class="discount">
{{course.price_service_type.name}}</span>
                                 <span class="count">¥{{get_price(course)}}</span>
                                 <span class="old_count">原价: \{{course.price}}元
</span>
                             </span>
                             <span v-else class="count">¥{{course.price}}</span>
                         <button class="buy">立即购买</button>
                       </div>
                   </el-col>
                 </el-row>
               </e1-co1>
             </el-row>
         </div>
       <el-pagination
         @current-change="handleCurrentChange"
         background
         layout="prev, pager, next"
         :page-size="page_size"
         :total="total">
       </el-pagination>
     </div>
     <Footer/>
 </div>
</template>
<script>
 import Header from "./common/Header"
 import Footer from "./common/Footer"
 export default {
   name: "Courses",
   data(){
     return {
       current_page:1,
       filter_price:false,
       cate_list:[], // 课程分类列表
       course_list:[], // 专题课程列表
       page_size:1, // 默认每一页显示的数据量
       total: 10,
     }
   },
   components:{
     Header,
     Footer,
   },
   methods:{
     // 计算价格
     get_price(course){
       let price = 0;
       course.price = parseInt(course.price);
       // 根据不同的价格服务,计算对应的价格
       let st = course.price_service_type; // 价格服务类型
```

```
if(st != null && st.priceservices){ // 是否有设置了价格服务,没有设置价格服务的课程,服务
为值null
           if(st.priceservices[0].condition>0){
             // 1. 优惠条件值大于0,则属于满减
             let list = st.priceservices; // 满减策略
             // 进行满减价格计算
             var real_sale = 0; // 保存满足条件的优惠值
             for(let i = 0;i<list.length;i++){</pre>
               list[i].condition = parseInt(list[i].condition);
               list[i].sale = parseInt(list[i].sale);
               if( course.price >= list[i].condition ){
                 // 后端返回的数字也是字符串,所以需要转换
                 if(real_sale<=list[i].sale){</pre>
                   real_sale = list[i].sale;
                 }
               }
             }
             console.log(real_sale);
             price = course.price - real_sale;
           }else{
             // 优惠条件值为0,则表示是限时折扣或者限时免费
             if(st.priceservices[0].sale=="-1"){
               // 2. 限时免费
               price = 0;
             }else{
               // 3. 限时折扣
               // 把优惠值sale中的*去掉
               let sale = st.priceservices[0].sale.replace("*","");
               price = course.price * parseFloat(sale)
             }
           }
       }else{
         price = course.price;
       return price.toFixed(2);
     },
     handleCurrentChange(val){
       // 名字必须固定
       let url = "http://127.0.0.1:8000/courses/";
       url+="?page="+val+"&page_size="+this.page_size;
       this.$axios.get(url).then(response=>{
         this.course_list = response.data.results;
         this.curser_page_cout =response.data.count
       }).catch(error=>{
         console.log(error.response);
       })
     }.
     orders(field, type) {
       let url = "http://127.0.0.1:8000/courses/";
       if(field=='students'){
         url+="?ordering=-students";
```

```
}else if(field="price"){
      if(type=="+"){
       url+="?ordering=price";
     }else{
       url+="?ordering=-price";
   }
   this.$axios.get(url).then(response=>{
     this.course_list = response.data
   }).catch(error=>{
      console.log(error.response);
   })
  }.
  addclass(ele,className){
   let class_array = ele.className.split(" ");
   // 判断元素本身是否已经有了一个同名的class,
                                         indexOf返回查询出来的成员的下标
   let index = class_array.indexOf(className);
   // 如果返回值是-1,则表示找不到同名的claass
   if(index==-1){
      ele.className+=" "+className
   }
  },
  removeclass(ele, className) {
   // 去除元素的class样式
   // 回头修复下bug,类似 <div class="col-2 current_activate ">
   ele.className = ele.className.replace("current","");
  },
  get_course(event){
   // 给当前被点击的分类元素添加外框高亮
   let ele_list = event.target.parentElement.children;
   for(let i = 0;i<ele_list.length;i++){</pre>
     this.removeclass(ele_list[i],"current")
   }
   this.addclass(event.target, "current");
   // 获取标签元素的属性,分类ID
   let id = event.target.getAttribute("data-id");
   let url = "http://127.0.0.1:8000/courses/";
   // 如果分类ID不是0,则表示按分类显示课程
   if(id!=0){
       url+="?course_category="+id
   this.$axios.get(url).then(response=>{
     this.course_list = response.data
   }).catch(error=>{
      console.log(error.response);
   })
  }
},
created(){
  // 获取课程分类信息
  this.\axios.get(\http://127.0.0.1:8000/courses/cate/\).then(response=>{
   this.cate_list = response.data
  }).catch(error=>{
```

```
console.log(error.response);
      });
      // 获取课程信息
      this.$axios.get(`http://127.0.0.1:8000/courses/?
page=${this.current_page}&page_size=${this.page_size}`).then(response=>{
        this.course_list = response.data.results
        this.total = response.data.count
      }).catch(error=>{
        console.log(error.response);
      });
   }
  }
</script>
<style scoped>
.courses{
  padding-top: 80px;
}
.main{
    width: 1100px;
   height: auto;
   margin: 0 auto;
   padding-top: 35px;
.main .filter{
   width: 100%;
   height: auto;
    margin-bottom: 35px;
    padding: 25px 0px 25px 0px;
    background: #fff;
    border-radius: 4px;
    box-shadow: 0 2px 4px 0 #f0f0f0;
}
.filter .el-col{
 text-align: center;
  padding: 6px 0px;
  line-height: 16px;
  margin-left: 14px;
  position: relative;
  transition: all .3s ease;
  cursor: pointer;
  color: #4a4a4a;
}
.filter-el-row1{
  padding-bottom: 18px;
 margin-bottom: 17px;
}
.filter .filter-text{
 text-align: right;
```

```
font-size: 16px;
 color: #888;
}
.filter .filter-text2{
}
.filter .filter-el-row1 .current{
    color: #ffc210;
    border: 1px solid #ffc210!important;
   border-radius: 30px;
}
.filter .filter-el-row2 .current{
    color: #ffc210;
.filter-price{
  display:inline-block;
 vertical-align: middle;
}
.filter-price .up, .filter-price .down{
 display: block;
 line-height: 8px;
 font-size: 13px;
 margin: -4px;
 color: #d8d8d8;
}
.current .filter-price .active{
 color: #ffc210;
}
.course-item{
 margin-bottom: 35px;
.course-item .course-item-box{
   padding: 20px 30px 20px 20px;
}
.course-item{
     box-shadow: 2px 3px 16px rgba(0,0,0,.1);
    transition: all .2s ease;
}
.course-item .course-item-left{
   width: 423px;
   height: 210px;
   margin-right: 30px;
}
.course-title{
 overflow: hidden;/* 在父元素中使用可以清除子元素的浮动影响 */
.course-title .box-title{
  font-size: 26px;
 color: #333333;
 float: left;
 margin-bottom: 8px;
}
.course-title .box-number{
    font-size: 14px;
```

```
color: #9b9b9b;
    font-family: PingFangSC-Light;
    float: right;
    padding-top: 12px;
.course-item-right{
 width: 56.6%;
}
.author{
   font-size: 14px;
    color: #9b9b9b;
   margin-bottom: 14px;
    padding-bottom: 14px;
   overflow: hidden;
.author .box-author{
 float:left;
.author .lession{
  float: right;
.course-content .el-icon-caret-right{
 border: 1px solid #000;
 border-radius: 50%;
 margin-right: 6px;
}
.course-content .el-col{
 font-size: 14px;
 color: #666;
 width: 50%;
 margin-bottom: 15px;
 cursor: pointer;
}
.course-content .el-col:hover{
 color: #ffc210;
}
.course-content .el-col:hover .el-icon-caret-right,.course-content .el-col:hover .free{
 border-color: #ffc210;
 color: #ffc210;
.course-content .el-col .free{
   width: 34px;
   height: 20px;
    color: #fd7b4d;
    margin-left: 10px;
   border: 1px solid #fd7b4d;
    border-radius: 2px;
    text-align: center;
    font-size: 13px;
   white-space: nowrap;
}
.course-price{
 overflow: hidden;
```

```
.course-price .course-price-left{
 float: left;
}
.course-price .discount{
    padding: 6px 10px;
   display: inline-block;
    font-size: 16px;
    color: #fff;
    text-align: center;
   margin-right: 8px;
   background: #fa6240;
   border: 1px solid #fa6240;
   border-radius: 10px 0 10px 0;
.course-price .course-price-left{
 line-height: 22px;
.course-price .count{
    font-size: 24px;
   color: #fa6240;
}
.course-price .old_count{
   font-size: 14px;
    color: #9b9b9b;
   margin-left: 10px;
   text-decoration: line-through;
}
.course-price .buy{
 float: right;
 width: 120px;
 height: 38px;
 font-size: 16px;
 border-radius: 3px;
 border: 1px solid #fd7b4d;
 background: transparent;/* 透明 */
 color: #fa6240;
 cursor: pointer;
 transition: all .2s ease-in-out;/* css3新版本的样式中支持支持 jQuery里面的动画预设效果 */
 /* all表示当前元素的所有样式 .2s表示改变样式完成的时间 ease-in-out */
}
.course-price .buy:hover{
    color: #fff;
   background: #ffc210;
   border: 1px solid #ffc210;
}
</style>
```