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using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.Mvc;
using JerryWebMVC.Models;
using System.IO;

namespace JerryWebMVC.Controllers
{
    public class ScienceController : Controller
    {
        //
        // GET: /Science/
        public ScienceController()
        {
            ViewData["Title"] = "water transit problem";
            ViewData["PageRef"] = "science";
            ViewData["SubPageRef"] = "";
        }

        public ActionResult Index()
        {
            return View();
        }

        public ActionResult WaterProcess()
        {
            WaterModel model = new WaterModel();
            return View(model);
        }

        public ActionResult GetMatrixFile()
        {
            WaterModel model = new WaterModel();
            model.Mode = "GetFile";
            return View("WaterProcess",model);
        }

        public ActionResult GetAllSelect()
        {

            WaterModel model = new WaterModel();
            TempData["NumType"] = "allnum";
            model.Mode = "Select";
            return View("WaterProcess", model);
        }

        public ActionResult GetPosSelect()
        {

            WaterModel model = new WaterModel();
            TempData["NumType"] = "posnum";
            model.Mode = "Select";
            return View("WaterProcess", model);
        }



        [AcceptVerbs(HttpVerbs.Post)]
        public ActionResult FileUpload(HttpPostedFileBase uploadFile)
        {
            WaterModel model = new WaterModel();

            if (uploadFile.ContentLength > 0)
            {
                string filePath = Path.Combine(HttpContext.Server.MapPath("../Content/
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    upload"),
                                                Path.GetFileName(uploadFile.FileName));
                uploadFile.SaveAs(filePath);



                if (model.CheckRunFile(filePath))
                {
                    model.Mode = "Matrix";
                    return View("WaterProcess", model);

                }
                else
                {

                    model.Mode = "GetFile";
                    return View("WaterProcess",model);
                }
            }
            model.Err = "File is empty";
            model.Mode = "GetFile";
            return View("WaterProcess", model);
        }

        public ActionResult RunMatrix(string rownum, string colnum, string numtype)
        {
            WaterModel newmodel = new WaterModel();
            newmodel.AutoWaterTransit(int.Parse(rownum), int.Parse( colnum), (numtype ==  ↙
    "allnum"));
            ViewData["Mode"] = "Matrix";
            return View("WaterProcess", newmodel);
        }


        //public ActionResult LoadMatrix()
        //{
        //    ViewData["Title"] = "water transit problem";
        //    ViewData["PageRef"] = "science";
        //    ViewData["SubPageRef"] = "";
        //    WaterModel model = new WaterModel();
        //    model.AutoWaterTransit(5, 12,false);
        //    return View("WaterProcess", model);

        //}

        public ActionResult GetMatrix(WaterModel model)
        {

            if (model.Mode == "GetFile")
            {

                return View("GetFile",model);
            };
            if (model.Mode == "Matrix")
            {
                return View("Matrix", model);
            };
            if (model.Mode == "Select")
            {
                return View("SelectRowColumn", model);
            }

             return null;

        }

        public ActionResult MatrixResults(WaterModel model)
```

```
        {
            if (model.TransitResult == "EMPTY")
            {
                return null;
            }
            else
            {
                return View(model);
            }
        }


    }
}
```