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// STAR-CCM+ macro: remesh_makro.java
package macro;

import java.util.*;

import star.common.*;
import star.base.neo.*;
import star.vis.*;
import star.meshing.*;

public class remesh_makro extends StarMacro {

    public void execute() {
        execute0();
    }

    private void execute0() {

        Simulation simulation_0 =
            getActiveSimulation();

        for (int i=1; i<100; i++)
        {
            simulation_0.getSimulationIterator().run(10);
            // Delete Extracted surface and Remeshed surface
            SurfaceRep surfaceRep_2 =
                ((SurfaceRep) simulation_0.getRepresentationManager().getObject("Extracted Surface"));

            SurfaceRep surfaceRep_3 =
                ((SurfaceRep) simulation_0.getRepresentationManager().getObject("Remeshed Surface"));

            simulation_0.getRepresentationManager().removeObjects(surfaceRep_2, surfaceRep_3);

            // Generate and export surfaces and featured curves

            FvRepresentation fvRepresentation_0 =
                ((FvRepresentation) simulation_0.getRepresentationManager().getObject("Volume Mesh"));

            Region region_0 =
                simulation_0.getRegionManager().getRegion("1");

            fvRepresentation_0.extractBoundarySurface(new NeoObjectVector(new Object[] {region_0}));

            SurfaceRep surfaceRep_4 =
                ((SurfaceRep) simulation_0.getRepresentationManager().getObject("Extracted Surface"));

            Boundary boundary_11 =
                region_0.getBoundaryManager().getBoundary("Valve2");

            Boundary boundary_8 =
                region_0.getBoundaryManager().getBoundary("3");

            Boundary boundary_5 =
                region_0.getBoundaryManager().getBoundary("Unnamed 21");

            Boundary boundary_4 =
                region_0.getBoundaryManager().getBoundary("Symmetry");
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Boundary boundary_13 =
    region_0.getBoundaryManager().getBoundary("INLET");

Boundary boundary_15 =
    region_0.getBoundaryManager().getBoundary("Unnamed 12");

Boundary boundary_16 =
    region_0.getBoundaryManager().getBoundary("Unnamed 14");

Boundary boundary_6 =
    region_0.getBoundaryManager().getBoundary("Unnamed 7");

Boundary boundary_17 =
    region_0.getBoundaryManager().getBoundary("Unnamed 26");

Boundary boundary_18 =
    region_0.getBoundaryManager().getBoundary("Unnamed 25");

Boundary boundary_1 =
    region_0.getBoundaryManager().getBoundary("Unnamed 9");

Boundary boundary_0 =
    region_0.getBoundaryManager().getBoundary("Piston");

Boundary boundary_12 =
    region_0.getBoundaryManager().getBoundary("Piston_FLOATING");

Boundary boundary_19 =
    region_0.getBoundaryManager().getBoundary("Unnamed 8");

Boundary boundary_20 =
    region_0.getBoundaryManager().getBoundary("Unnamed 22");

Boundary boundary_21 =
    region_0.getBoundaryManager().getBoundary("OUTLET");

Boundary boundary_22 =
    region_0.getBoundaryManager().getBoundary("Unnamed 13");

Boundary boundary_7 =
    region_0.getBoundaryManager().getBoundary("2");

Boundary boundary_23 =
    region_0.getBoundaryManager().getBoundary("Unnamed 4");

Boundary boundary_14 =
    region_0.getBoundaryManager().getBoundary("Valve2_FLOATING");

Boundary boundary_10 =
    region_0.getBoundaryManager().getBoundary("5");

Boundary boundary_9 =
    region_0.getBoundaryManager().getBoundary("4");

Boundary boundary_3 =
    region_0.getBoundaryManager().getBoundary("1");
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Boundary boundary_24 =
    region_0.getBoundaryManager().getBoundary("Unnamed 11");

Boundary boundary_25 =
    region_0.getBoundaryManager().getBoundary("Unnamed 6");

Boundary boundary_26 =
    region_0.getBoundaryManager().getBoundary("Unnamed 10");

Boundary boundary_27 =
    region_0.getBoundaryManager().getBoundary("Unnamed 24");

Boundary boundary_2 =
    region_0.getBoundaryManager().getBoundary("Unnamed 5");

FeatureCurve featureCurve_1 =
    surfaceRep_4.createFeatureEdgesOnBoundaries(new NeoObjectVector(new Object[] {
        boundary_11, boundary_8, boundary_5, boundary_4, boundary_13, boundary_15, boundary_16,
        boundary_6, boundary_17, boundary_18, boundary_1, boundary_0, boundary_12, boundary_19
    }, boundary_20, boundary_21, boundary_22, boundary_7, boundary_23, boundary_14,
    boundary_10, boundary_9, boundary_3, boundary_24, boundary_25, boundary_26, boundary_27
    , boundary_2}), true, true, true, true, true, true, 31.0, false);

/*Scene scene_1 =
    simulation_0.getSceneManager().getScene("Mesh Scene 1");

PartDisplay partDisplay_18 =
    scene_1.getDisplayManager().createPartDisplay("Feature Curve", -1, 0);

partDisplay_18.setSurface(true);

partDisplay_18.setMesh(false);

partDisplay_18.setLineWidth(2.0);

partDisplay_18.getParts().addObjects(featureCurve_1);*/

// MESH

MeshPipelineController meshPipelineController_0 =
    simulation_0.get(MeshPipelineController.class);

meshPipelineController_0.generateVolumeMesh();
} // end for
}
}
```