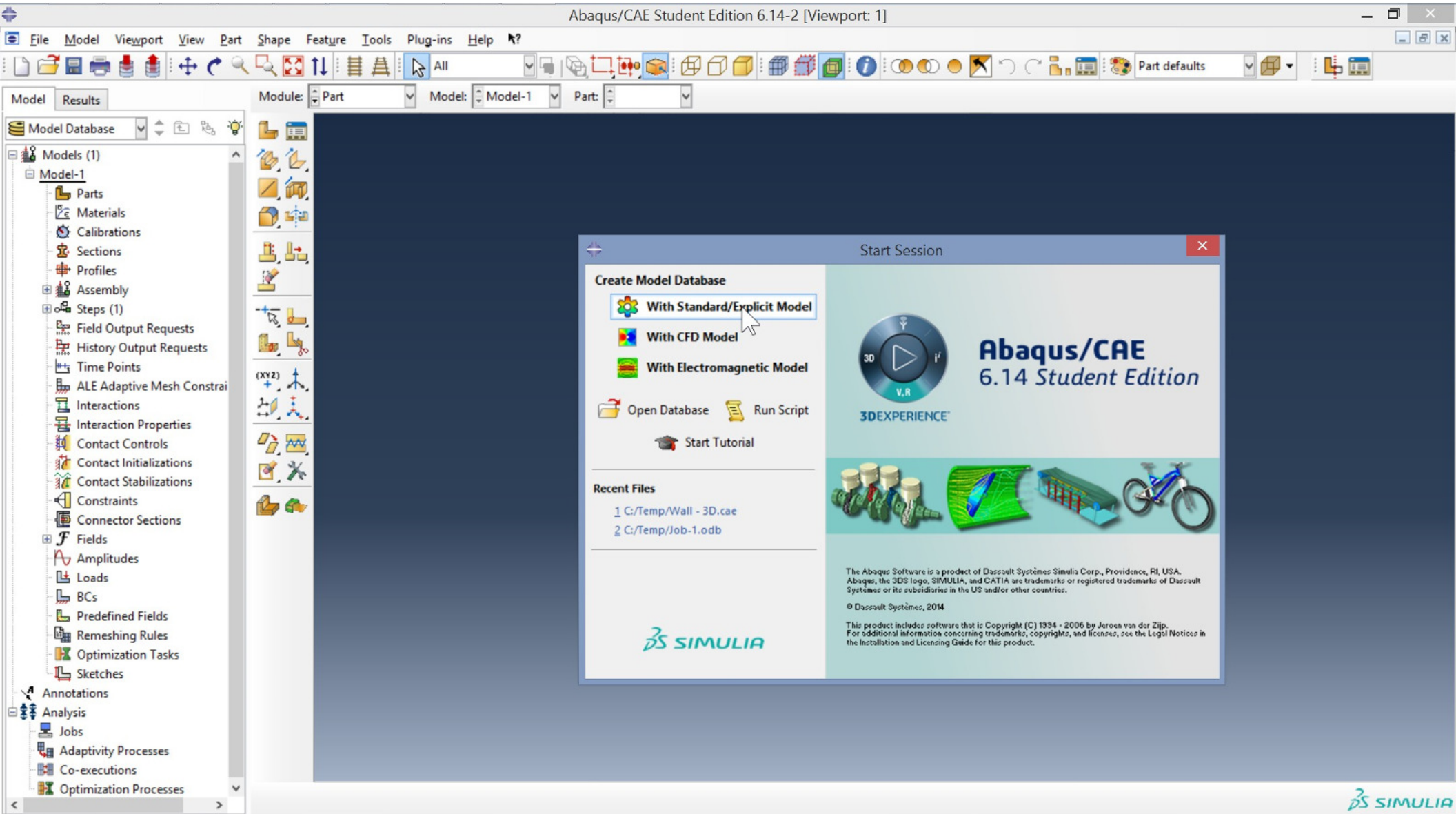


Concrete column with hydration heat load, immersed in ice water



Model Database

Module: Part Model: Model-1 Part:

Create Part

Name: the-part

Modeling Space

3D 2D Planar Axisymmetric

Type

Deformable

Discrete rigid

Analytical rigid

Eulerian

Options

None available

Base Feature

Shape

Solid

Shell

Wire

Point

Type

Extrusion

Revolution

Sweep

Approximate size: 5.4

Continue... Cancel

Remeshing Rules

Optimization Tasks

Sketches

Annotations

Analysis

Jobs

Adaptivity Processes

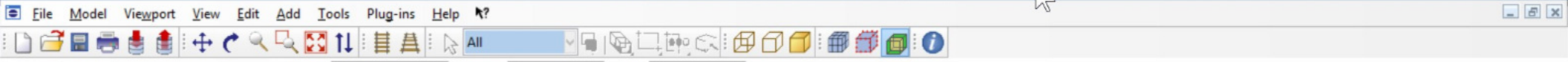
Co-executions

Optimization Processes

Fill out the Create Part dialog

create a part

A new model database has been created.
The model "Model-1" has been created.



- Model Database
- Models (1)
 - Model-1
 - Parts
 - Materials
 - Calibrations
 - Sections
 - Profiles
 - Assembly
 - Steps (1)
 - Field Output Requests
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constrai
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
 - Fields
 - Amplitudes
 - Loads
 - BCs
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches
 - Annotations
 - Analysis
 - Jobs
 - Adaptivity Processes
 - Co-executions
 - Optimization Processes

Module: Part Model: Model-1 Part:

x:0., y:0.85

input center location

Pick a center point for the circle--or enter X,Y: 0,0

The main viewport area is a blue grid. A coordinate system (X, Y, Z) is shown in the bottom left. A red square is placed at the origin (0,0). A vertical dashed blue line is drawn at x=0.0, and a horizontal dashed blue line is drawn at y=0.85. The text 'x:0., y:0.85' is displayed in the top left of the grid. An orange arrow points to the origin with the text 'input center location'. At the bottom of the viewport, there is a text input field that says 'Pick a center point for the circle--or enter X,Y: 0,0'. The Simulia logo is in the bottom right corner.

A new model database has been created.
The model "Model-1" has been created.



- Model Database
- Models (1)
 - Model-1
 - Parts
 - Materials
 - Calibrations
 - Sections
 - Profiles
 - Assembly
 - Steps (1)
 - Field Output Requests
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constrai
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
 - Fields
 - Amplitudes
 - Loads
 - BCs
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches
 - Annotations
 - Analysis
 - Jobs
 - Adaptivity Processes
 - Co-executions
 - Optimization Processes

Module: Part Model: Model-1 Part:

x:-0.95, y:0.3

The viewport displays a blue grid with a red circle. A mouse cursor is positioned on the circle's perimeter. A coordinate system is visible in the bottom-left corner with X, Y, and Z axes. Another coordinate system is shown in the top-right corner. A text box at the bottom of the viewport contains the text "Pick a perimeter point for the circle--or enter X,Y: 2.5,0".

and one more point on the circle (radius 2.5)

Pick a perimeter point for the circle--or enter X,Y: 2.5,0

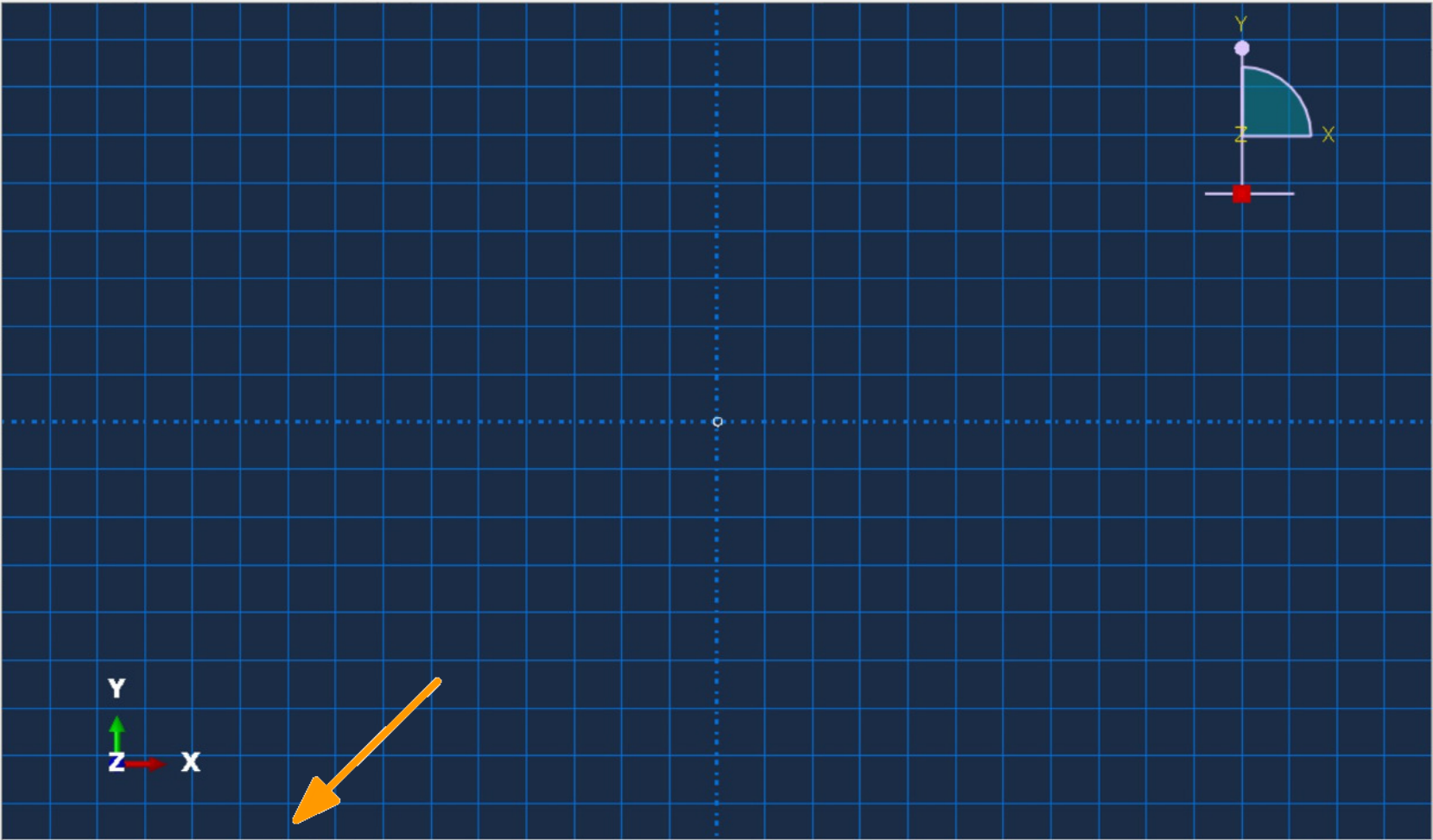
A new model database has been created.
The model "Model-1" has been created.



Model Database

- Models (1)
 - Model-1
 - Parts
 - Materials
 - Calibrations
 - Sections
 - Profiles
 - Assembly
 - Steps (1)
 - Field Output Requests
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constrai
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
 - Fields
 - Amplitudes
 - Loads
 - BCs
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches
 - Annotations
 - Analysis
 - Jobs
 - Adaptivity Processes
 - Co-executions
 - Optimization Processes

Module: Part Model: Model-1 Part:



Sketch the section for the solid extrusion Done



A new model database has been created.
The model "Model-1" has been created.



Model Database

- Models (1)
 - Model-1
 - Parts

Module: Part Model: Model-1 Part: Part

Edit Base Extrusion

End Condition

Type: Blind

Depth: 1.0

Options

Note: Twist and draft cannot be specified together.

Include twist, pitch: 0 (Dist/Rev)

Include draft, angle: 0 (Degrees)

OK Cancel

Y
Z X

Y
Z X

Fill out the Edit Base Extrusion dialog

SIMULIA

A new model database has been created.
The model "Model-1" has been created.

>>>

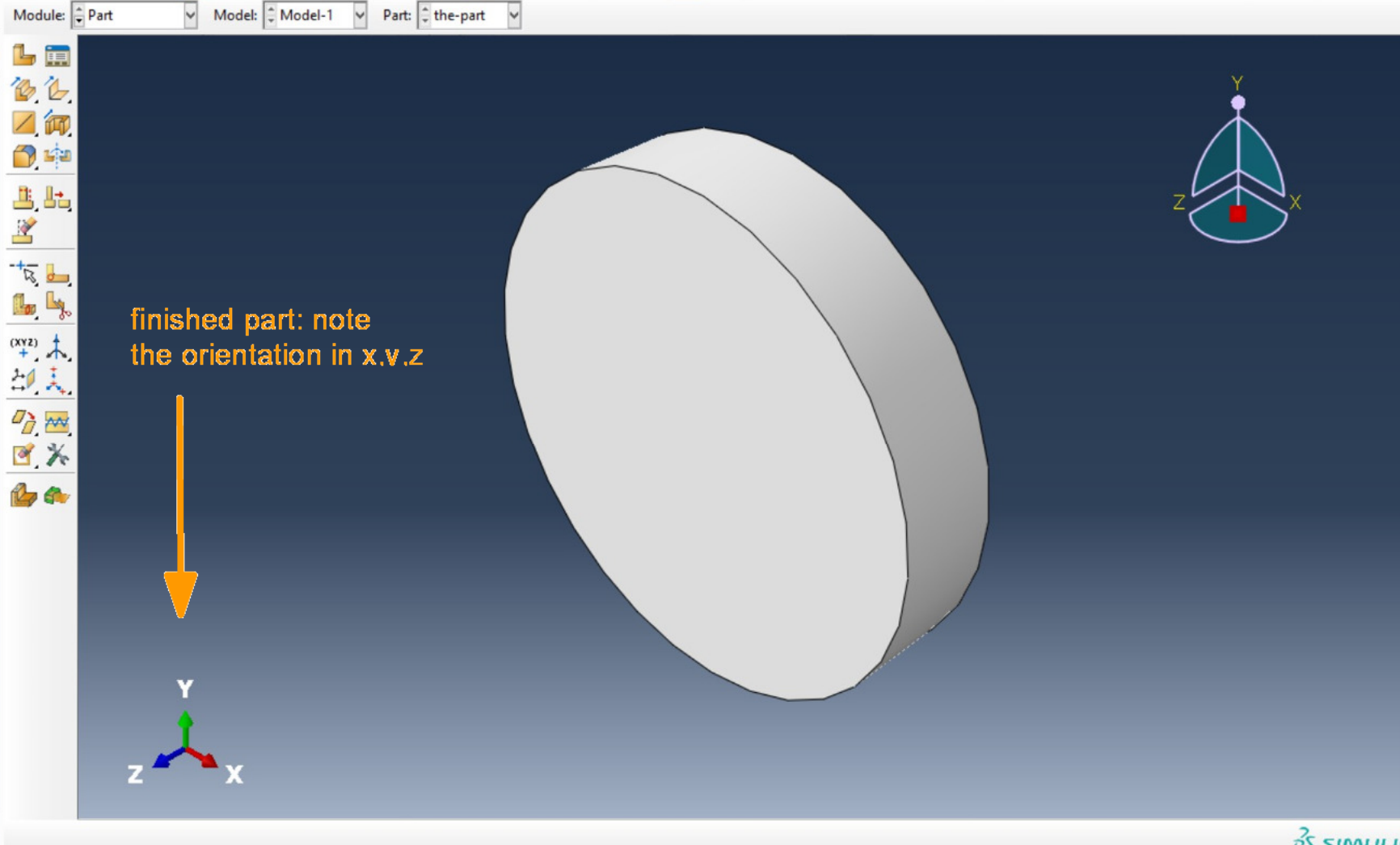
The image displays the Abaqus/CAE interface. The main viewport shows a blue grid with a coordinate system (X, Y, Z) and a green quarter-circle sketch. A dialog box titled 'Edit Base Extrusion' is open, showing 'Type: Blind' and 'Depth: 1.0'. An orange arrow points from the text 'thickness of the "slice"' to the 'Depth' field. The left sidebar shows a tree view of the model structure, including 'Model-1' and 'Parts'. The bottom status bar contains a message: 'A new model database has been created. The model "Model-1" has been created.' and a 'Fill out the Edit Base Extrusion dialog' button. The Simulia logo is in the bottom right corner.

thickness of the "slice"

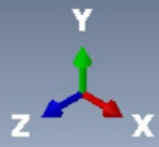
A new model database has been created.
The model "Model-1" has been created.

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - Materials
 - Calibrations
 - Sections
 - Profiles
 - Assembly
 - Steps (1)
 - Field Output Requests
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constrai
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Controls^{ns}
 - Contact Stabilizations
 - Constraints
 - Connector Sections
 - Fields
 - Amplitudes
 - Loads
 - BCs
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches
 - Annotations
 - Analysis
 - Jobs
 - Adaptivity Processes
 - Co-executions
 - Optimization Processes



finished part: note the orientation in x.v.z



A new model database has been created.
The model "Model-1" has been created.



Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - Materials

Edit Material

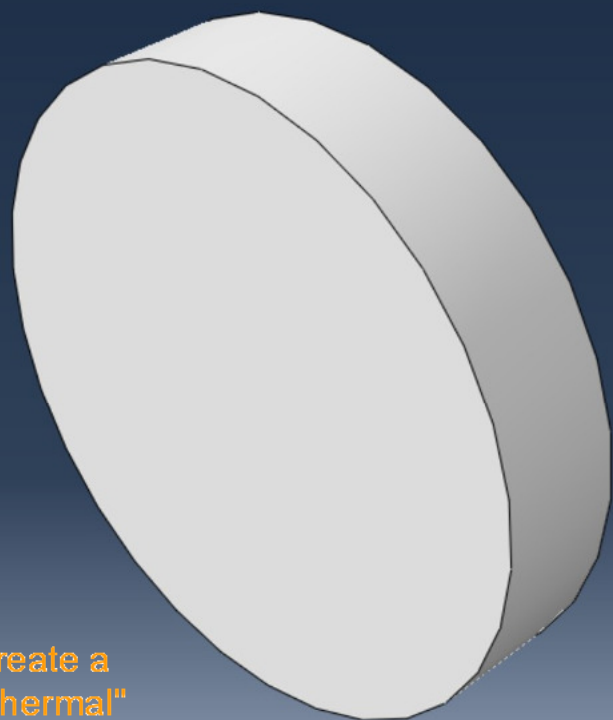
Name: the-material

Description:

Material Behaviors

General Mechanical **Thermal** Electrical/Magnetic Other

OK Cancel



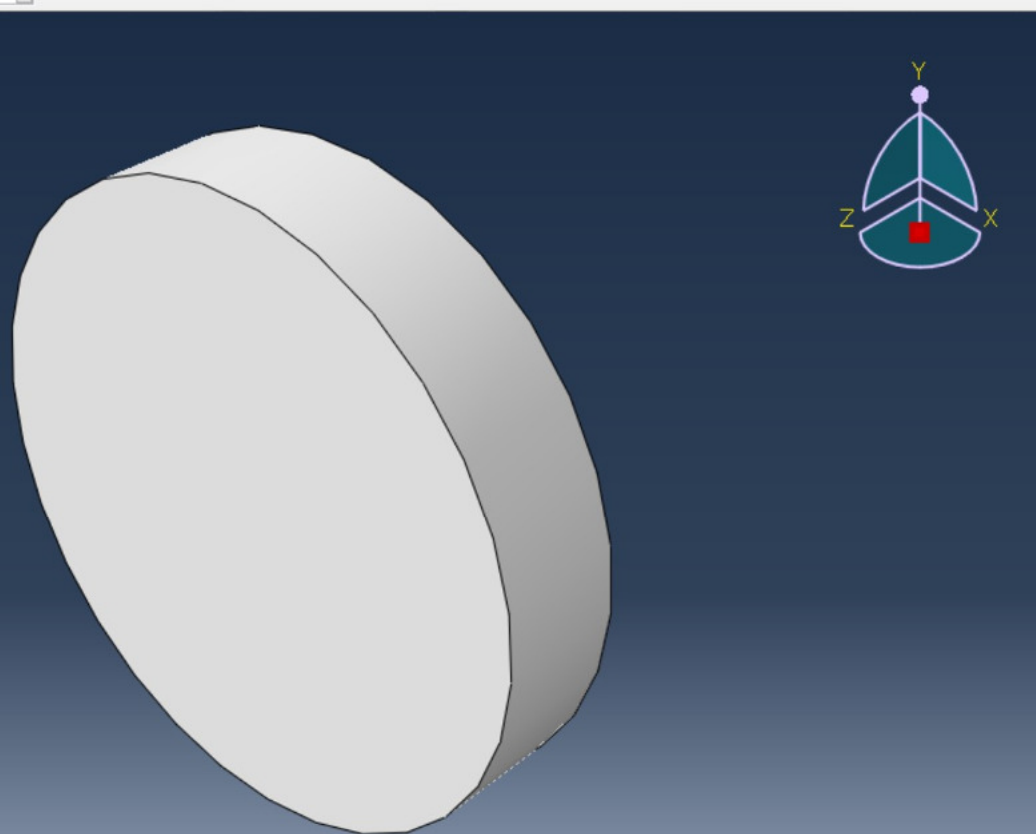
create a "thermal" material

Model Results Material Library

Module: Property Model: Model-1 Part: the-part

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - Materials



conductivity 1.8

Edit Material

Name: the-material

Description:

Material Behaviors

- Conductivity

General Mechanical Thermal Electrical/Magnetic Other

Conductivity

Type: Isotropic

Use temperature-dependent data

Number of field variables: 0

Data

Conductivity	
1	1.8

OK Cancel

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - Materials (1)
 - Calibrations
 - Sections

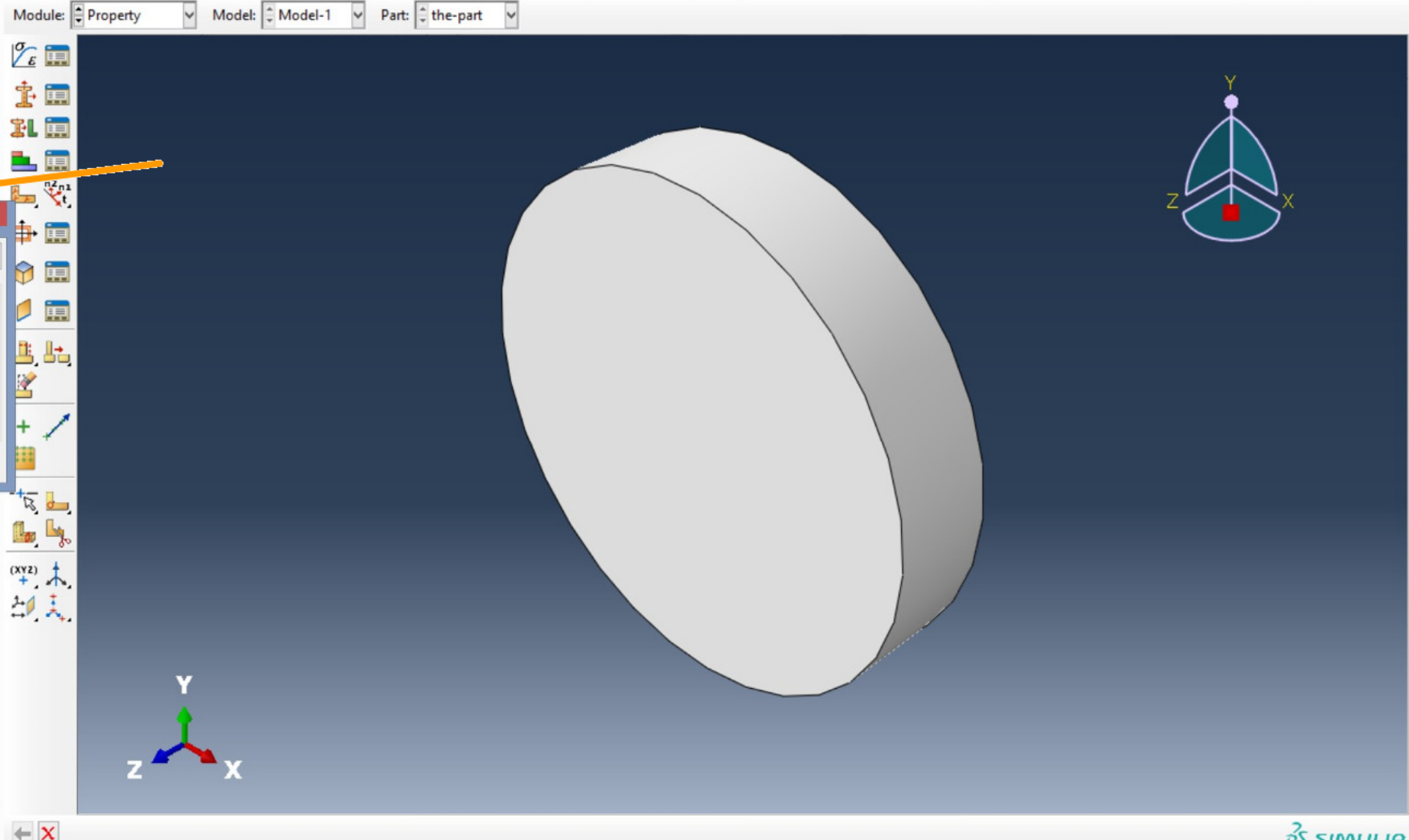
Create Section

Name: the-section

Category	Type
<input checked="" type="radio"/> Solid	Homogeneous
<input type="radio"/> Shell	Generalized plane strain
<input type="radio"/> Beam	Eulerian
<input type="radio"/> Fluid	Composite
<input type="radio"/> Other	

Continue... Cancel

- Connector Sections
- Fields
 - Amplitudes
 - Loads
 - BCs
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches
- Annotations
- Analysis
 - Jobs
 - Adaptivity Processes
 - Co-executions
 - Optimization Processes



A new model database has been created.
The model "Model-1" has been created.

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - Materials (1)
 - Calibrations
 - Sections
 - Profiles

Property

- Contact Stabilities
- Constraints
- Connector Sections
- Fields
 - Amplitudes
 - Loads
 - BCs
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches
- Annotations
- Analysis
 - Jobs
 - Adaptivity Processes
 - Co-executions
 - Optimization Processes

Edit Section

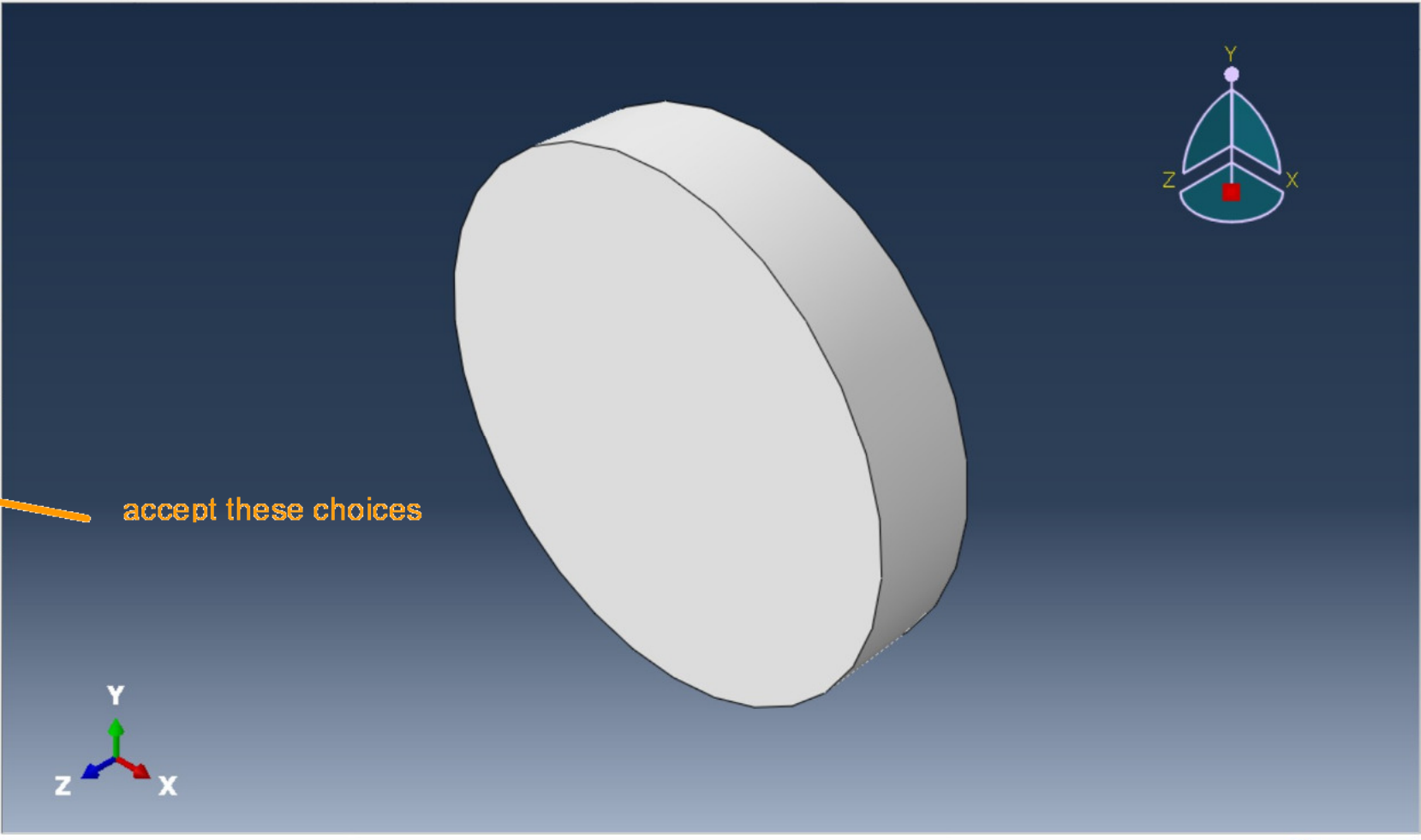
Name: the-section

Type: Solid, Homogeneous

Material: the-material

Plane stress/strain thickness: 1

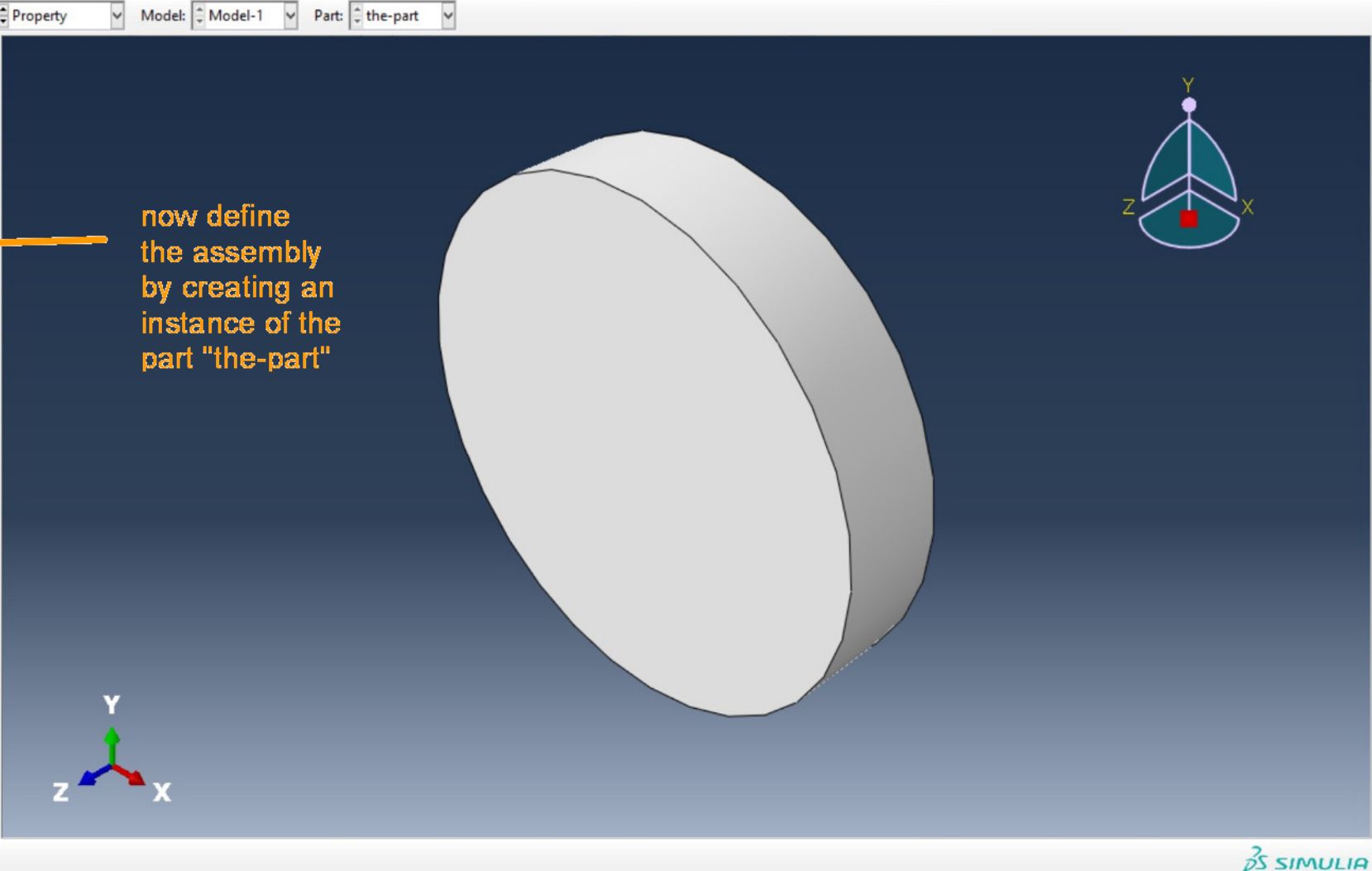
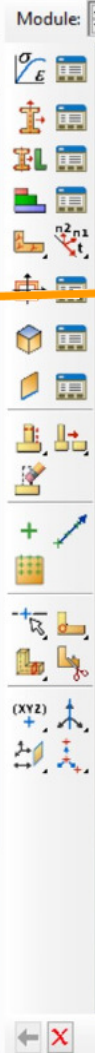
OK Cancel



accept these choices

A new model database has been created.
The model "Model-1" has been created.

- Model Database
- Models (1)
 - Model-1
 - Parts (1)
 - Materials (1)
 - Calibrations
 - Sections (1)
 - Profiles
 - Assembly
 - Instances
 - Position Constraints
 - Features
 - Sets
 - Surfaces
 - Connector Assignments
 - Engineering Features
 - Steps (1)
 - Field Output Requests
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constrai
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
 - Fields
 - Amplitudes
 - Loads
 - BCs
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks



now define the assembly by creating an instance of the part "the-part"



A new model database has been created.
The model "Model-1" has been created.

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - Materials (1)
 - Calibrations
 - Sections (1)
 - Profiles
 - Assembly
 - Instances

Module: Assembly Model: Model-1 Step: Initial

Y
Z X

Y
Z X

Create Instance

Create instances from:
 Parts Models

Parts

- the-part

Instance Type
 Dependent (mesh on part)
 Independent (mesh on instance)

Note: To change a Dependent instance's mesh, you must edit its part's mesh.

Auto-offset from other instances

OK Apply Cancel

BCs

- Predefined Fields
- Remeshing Rules
- Optimization Tasks

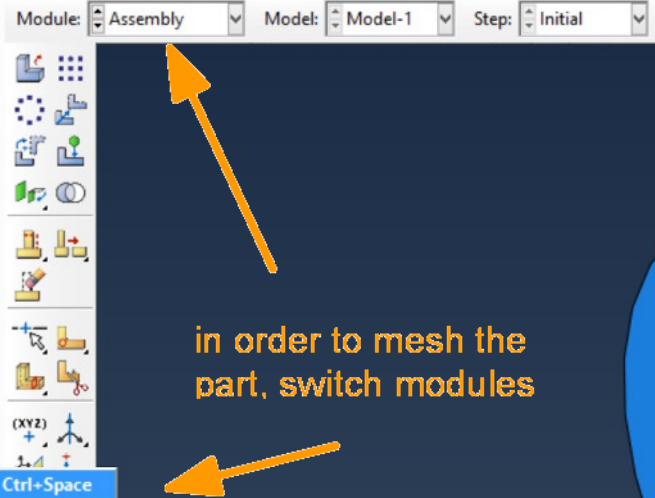
Select the parts/models to instance from the dialog

A new model database has been created.
The model "Model-1" has been created.

Model Database

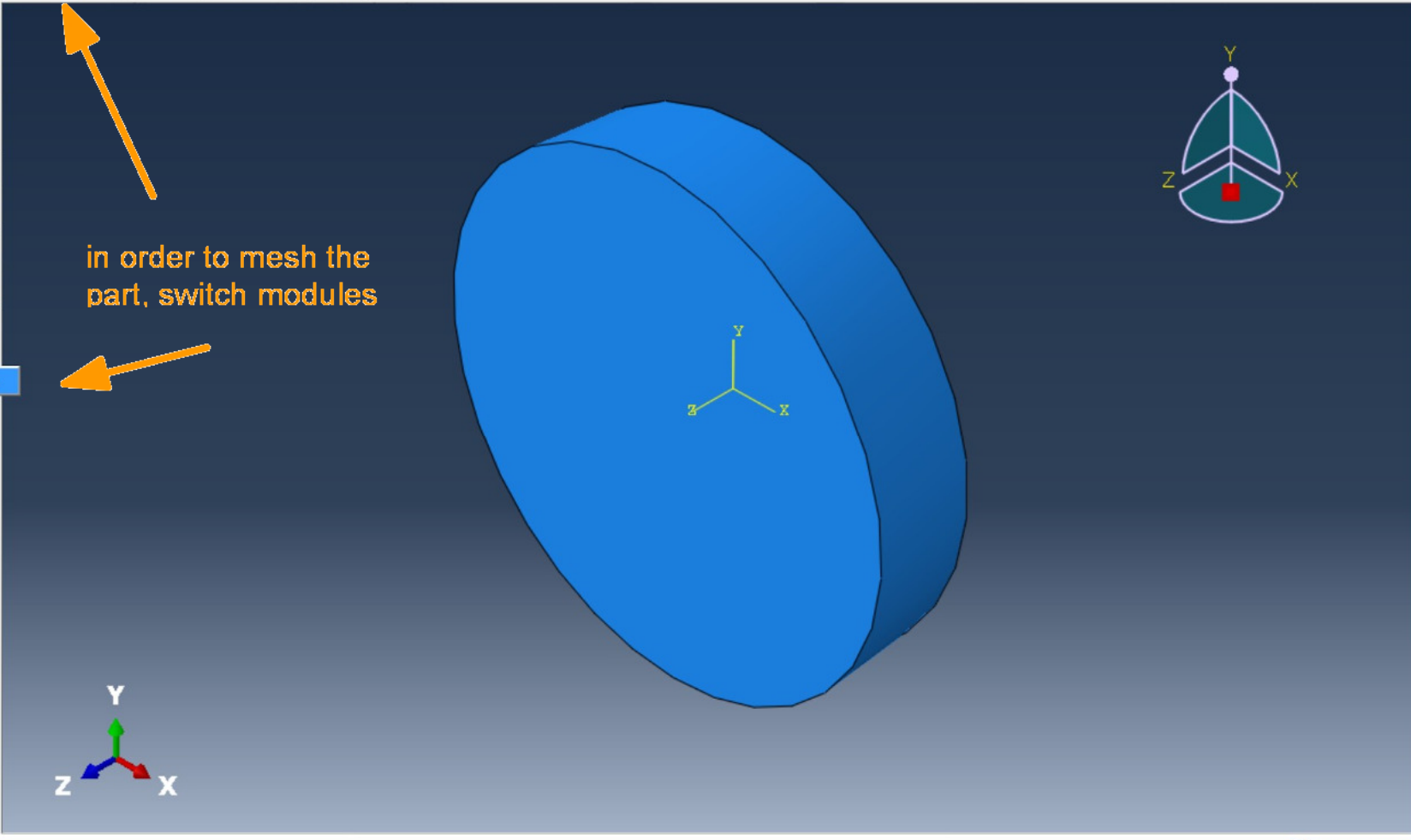
- Models (1)
 - Model-1
 - Parts (1)
 - the-part
 - Features (1)
 - Sets
 - Surfaces
 - Skins
 - Stringers
 - Section Assignments
 - Orientations
 - Composite Layups
 - Engineering Features
 - Mesh (Element)
- Materials
- Calibrations
- Sections (1)
- Profiles
- Assembly
- Steps (1)
 - Field Output Requests
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constrai
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
- Fields
- Amplitudes
- Loads

Module: Assembly Model: Model-1 Step: Initial



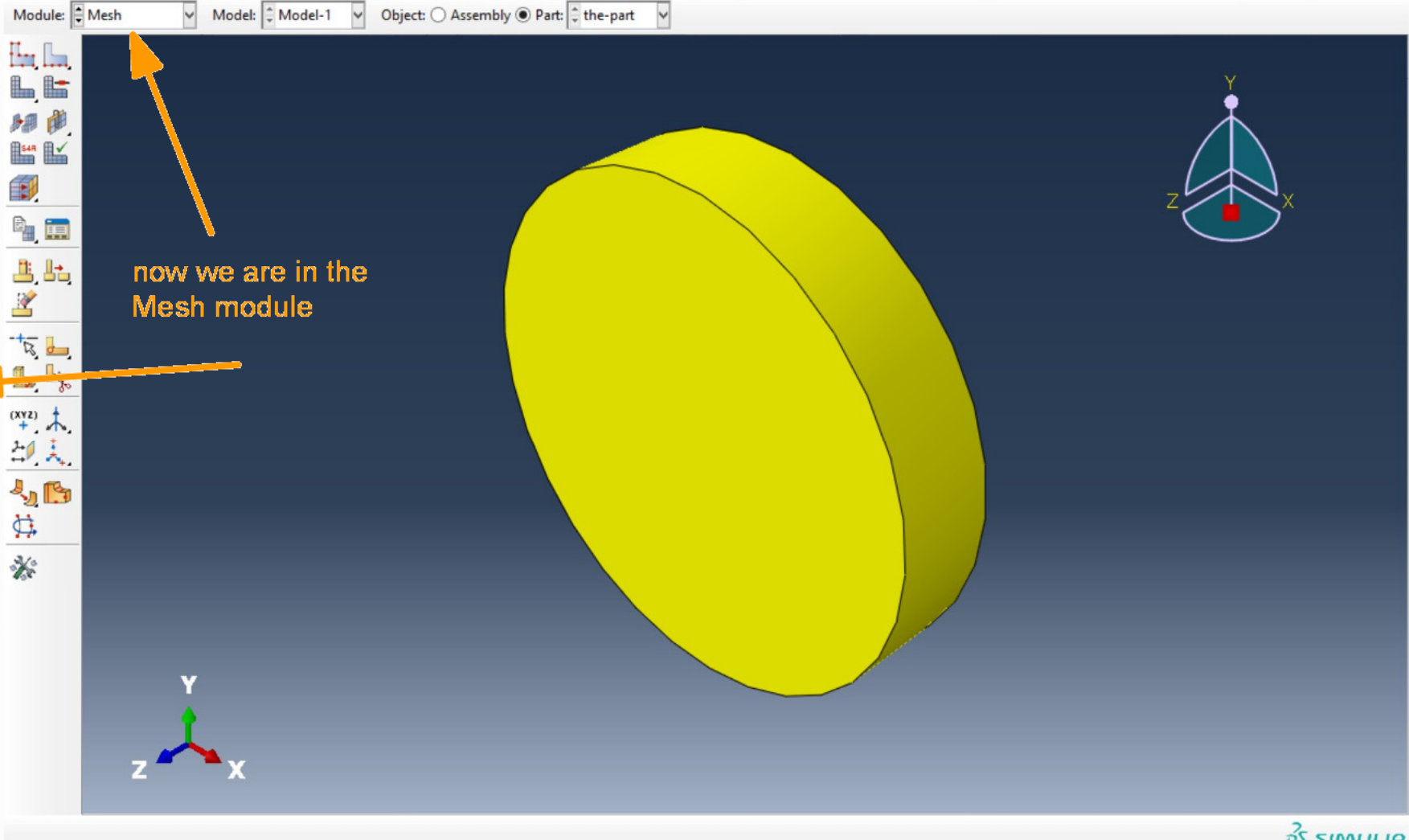
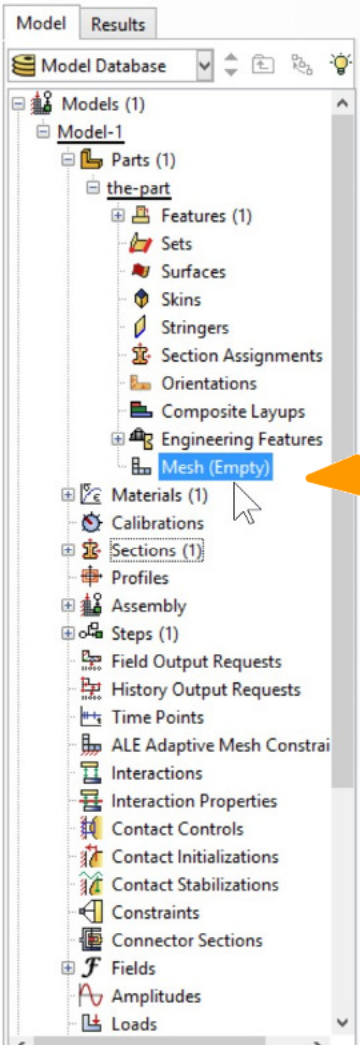
in order to mesh the part, switch modules

Switch Context Ctrl+Space

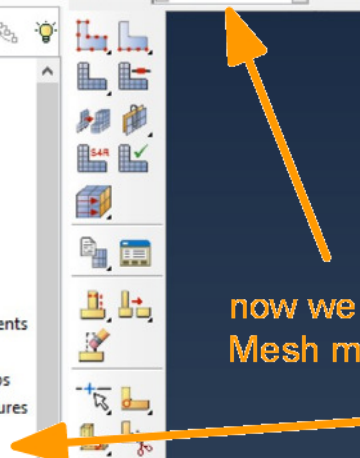


A new model database has been created.
The model "Model-1" has been created.





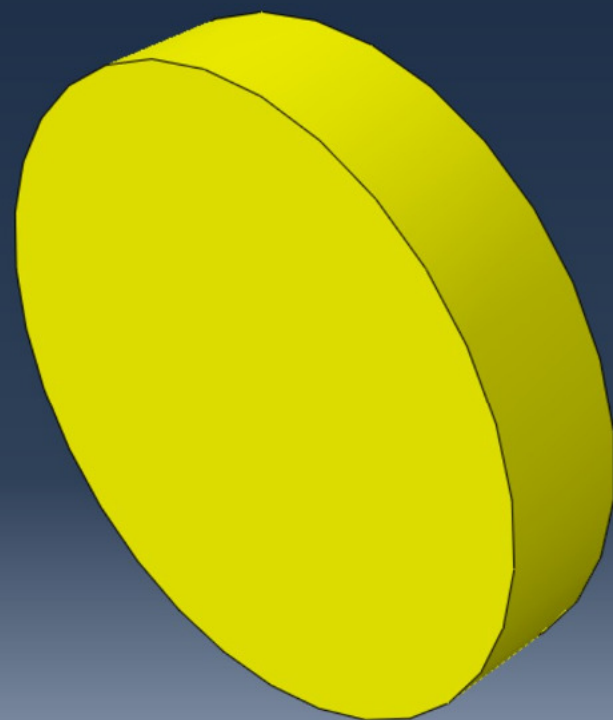
now we are in the Mesh module



Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - the-part
 - Features (1)
 - Sets
 - Surfaces
 - Skins
 - Stringers
 - Section Assignments
 - Orientations
 - Composite Layups
 - Engineering Features
 - Mesh (Empty)

Module: Mesh Model: Model-1 Object: Assembly Part: the-part



one element through the thickness

Global Seeds

Sizing Controls

Approximate global size: 1.0

Curvature control

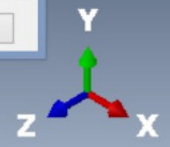
Maximum deviation factor (0.0 < h/L < 1.0): 0.1
(Approximate number of elements per circle: 8)

Minimum size control

By fraction of global size (0.0 < min < 1.0) 0.1

By absolute value (0.0 < min < global size) 0.071

OK Apply Defaults Cancel



Set the data using the Global Seeds dialog

A new model database has been created.
The model "Model-1" has been created.

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - the-part

define mesh controls:
tetrahedral elements
are desired

Mesh Controls

Element Shape

Hex Hex-dominated Tet Wedge

Technique

As is Free Structured Sweep Bottom-up Multiple

Algorithm

Use default algorithm

Non-standard interior element growth

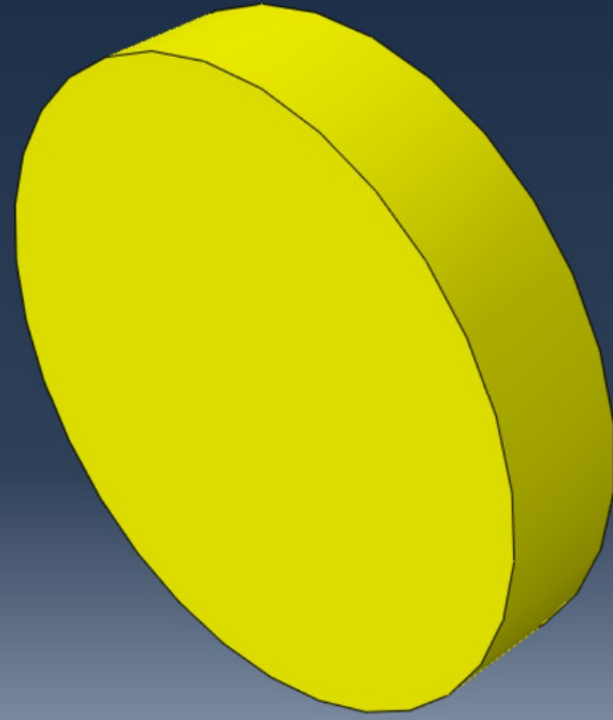
Slow 1.050 1.05 Fast

Growth rate

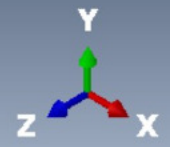
Use mapped tri meshing on bounding faces where appropriate

Insert boundary layer Assign Controls...

OK Defaults Cancel



- ALL
- Adaptive Mesh Constrai
- Interactions
- Interaction Properties
- Contact Controls
- Contact Initializations
- Contact Stabilizations
- Constraints
- Connector Sections
- Fields
- Amplitudes
- Loads



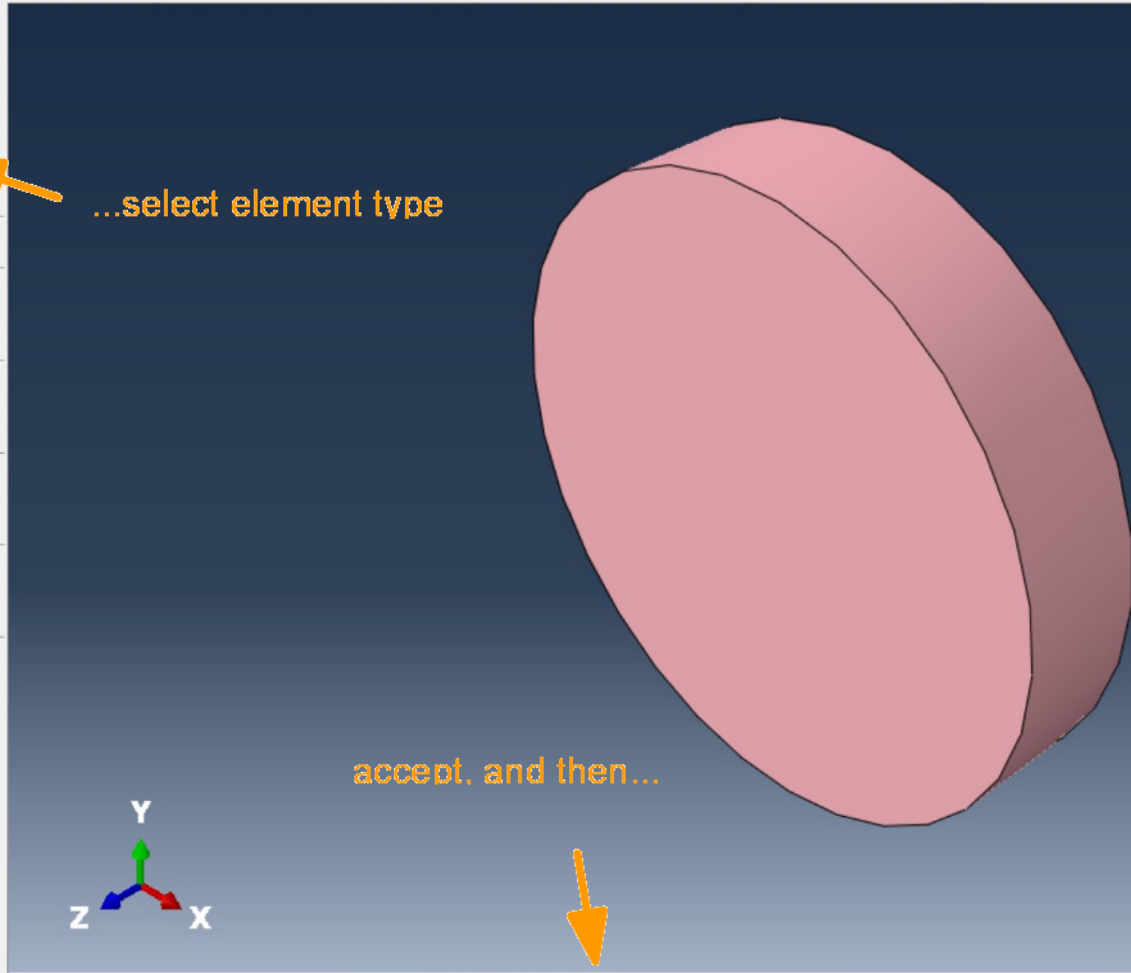
Set the data using the Mesh Controls dialog

A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - the-part
 - Features (1)
 - Sets
 - Surfaces
 - Skins
 - Stringers
 - Section Assignments
 - Orientations
 - Composite Layups
 - Engineering Features
 - Mesh (Empty)
- Materials (1)
- Calibrations
- Sections (1)
- Profiles
- Assembly
- Steps (1)
 - Field Output Requests
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constrai
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
- Fields
 - Amplitudes
 - Loads

Meshing tool icons including tetrahedron, hexahedron, and other element types.



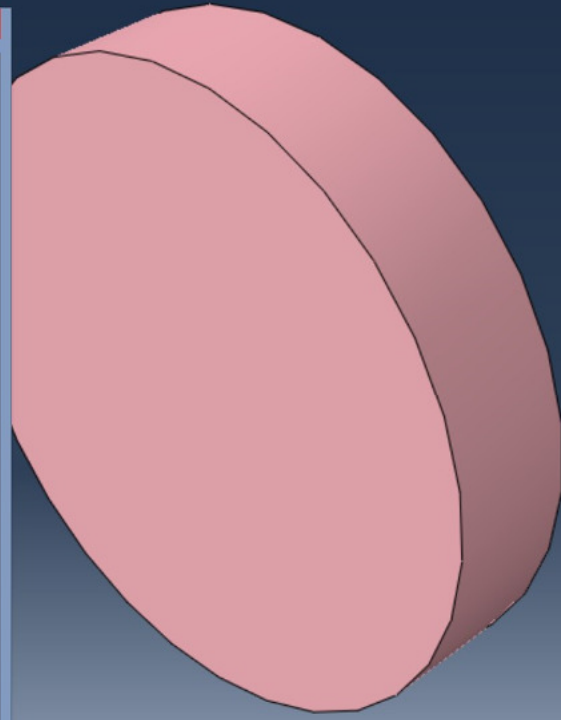
...select element type

accept, and then...

Select the entities to assign mesh controls by regions Done

A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.

the element type choices in this example;



Element Type

Element Library: Standard Explicit

Geometric Order: Linear Quadratic

Family: Heat Transfer (selected), Piezoelectric, Pore Fluid/Stress, Thermal Electric

Hex Wedge Tet (selected)

Element Controls: There are no applicable element controls for these settings.

DC3D4: A 4-node linear heat transfer tetrahedron.

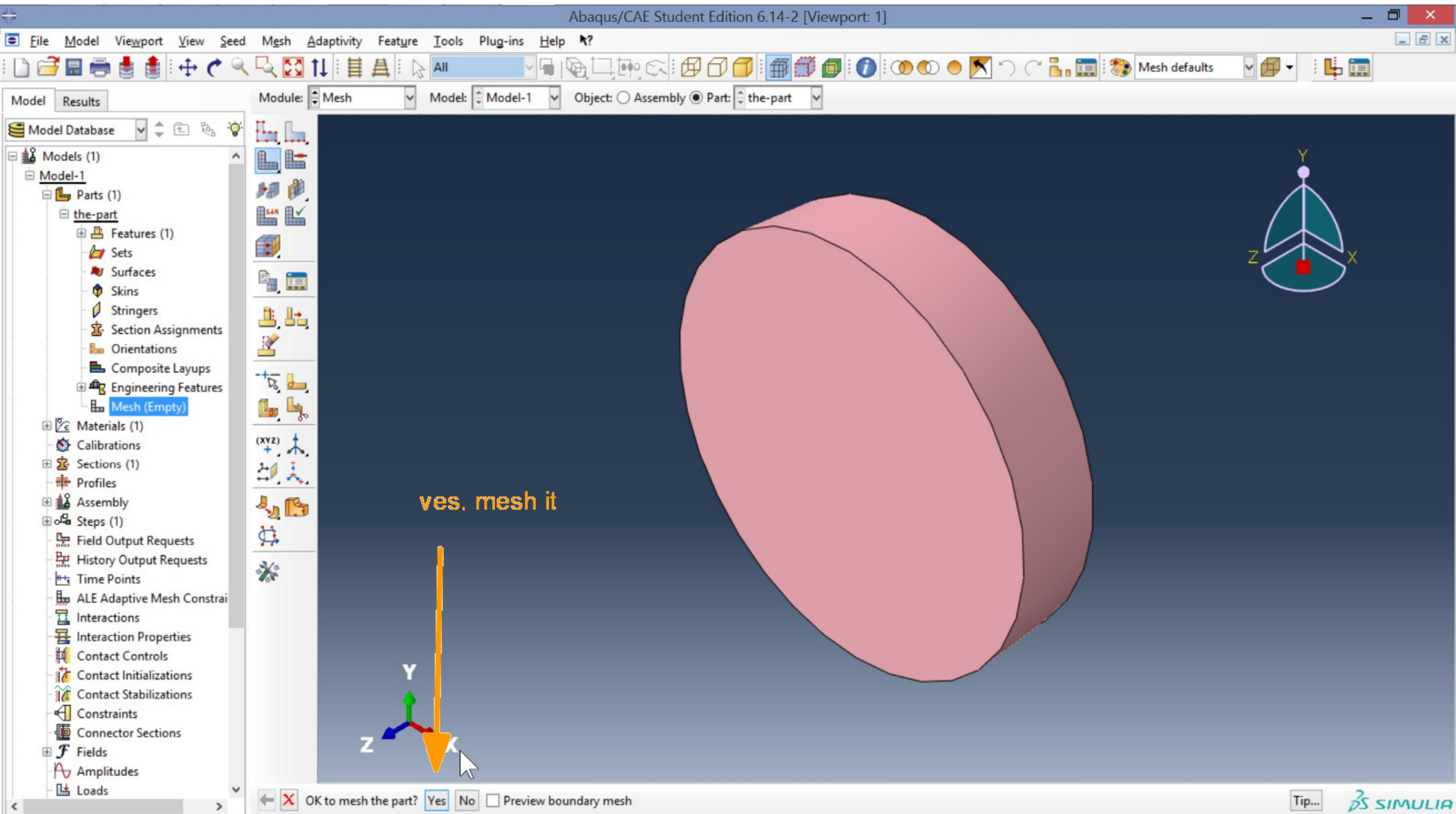
Note: To select an element shape for meshing, select "Mesh->Controls" from the main menu bar.

OK Defaults Cancel

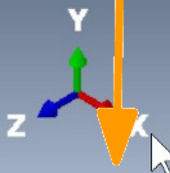
four node tetrahedra

Set the data using the Element Type dialog

A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.



yes, mesh it



OK to mesh the part? Preview boundary mesh

Tip... SIMULIA

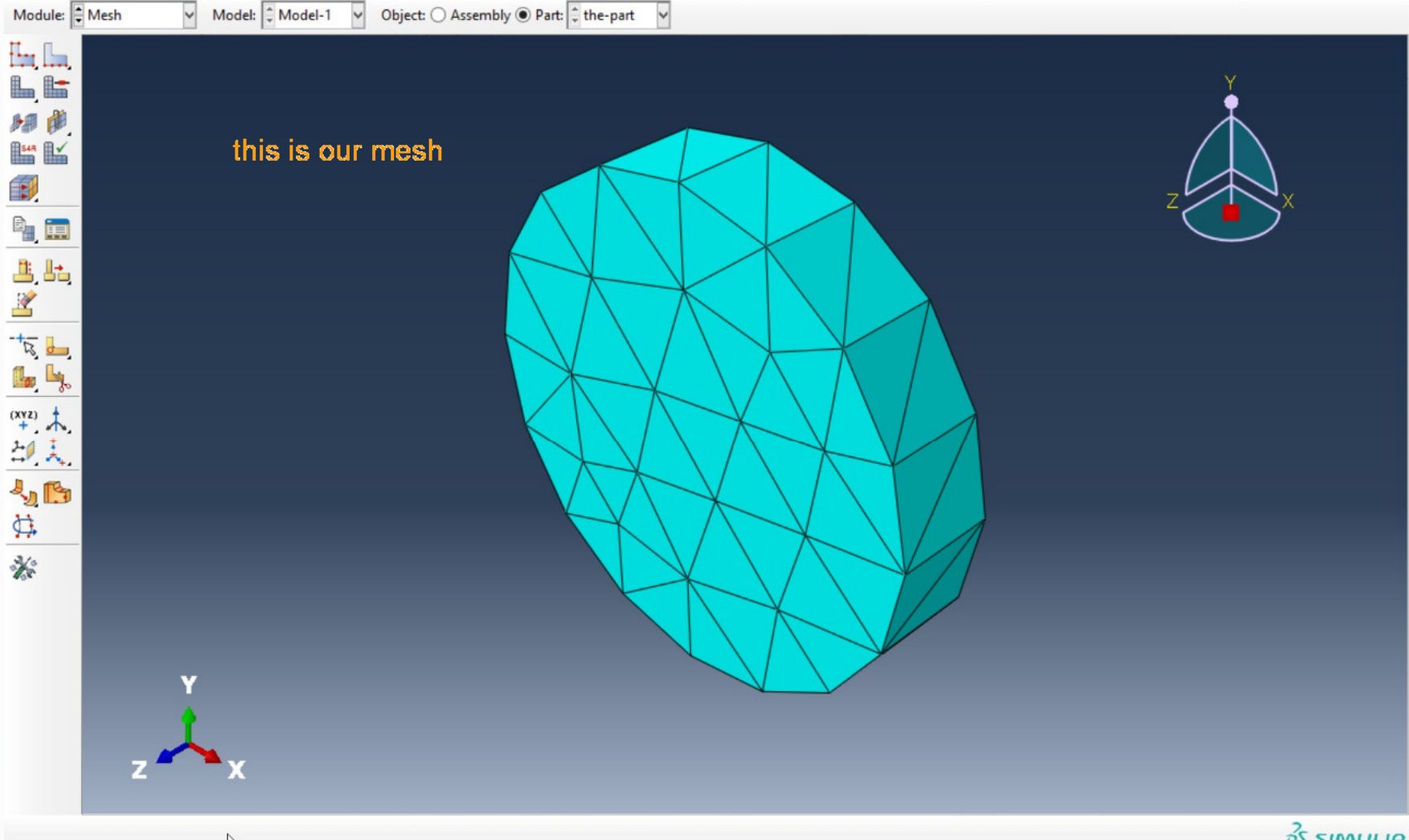
A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.



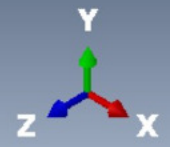
the element type will be changed next

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - the-part
 - Features (1)
 - Sets
 - Surfaces
 - Skins
 - Stringers
 - Section Assignments
 - Orientations
 - Composite Layups
 - Engineering Features
 - Mesh
- Materials (1)
- Calibrations
- Sections (1)
- Profiles
- Assembly
- Steps (1)
 - Field Output Requests
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constrai
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
- Fields
 - Amplitudes
 - Loads



this is our mesh



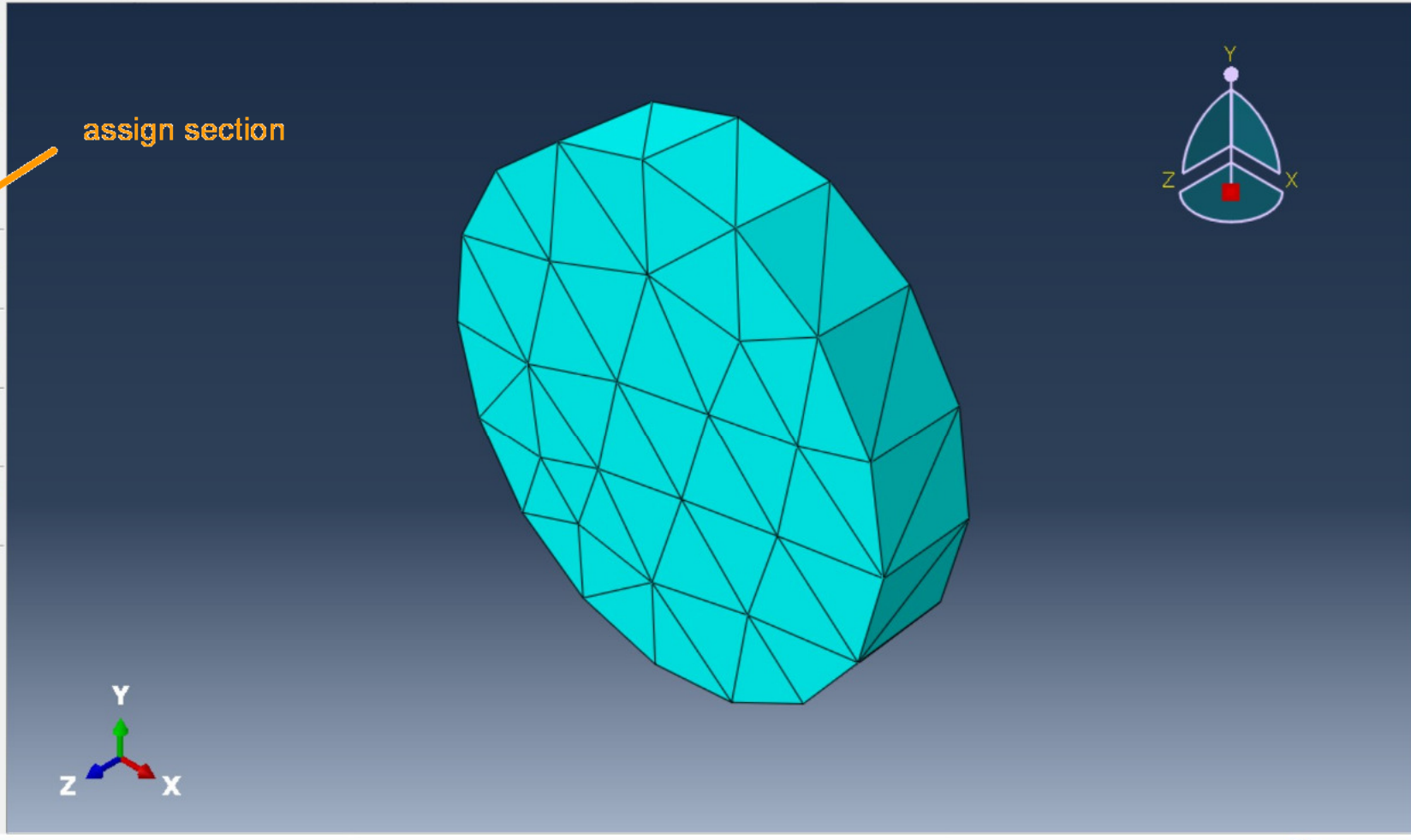
A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part



Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - the-part
 - Features (1)
 - Sets
 - Surfaces
 - Skins
 - Stringers
 - Section Assignments
 - Orientations
 - Composite Layups
 - Engineering Features
 - Mesh
- Materials (1)
- Calibrations
- Sections (1)
- Profiles
- Assembly
- Steps (1)
- Field Output Requests
- History Output Requests
- Time Points
- ALE Adaptive Mesh Constraints
- Interactions
- Interaction Properties
- Contact Controls
- Contact Initializations
- Contact Stabilizations
- Constraints
- Connector Sections
- Fields
- Amplitudes
- Loads

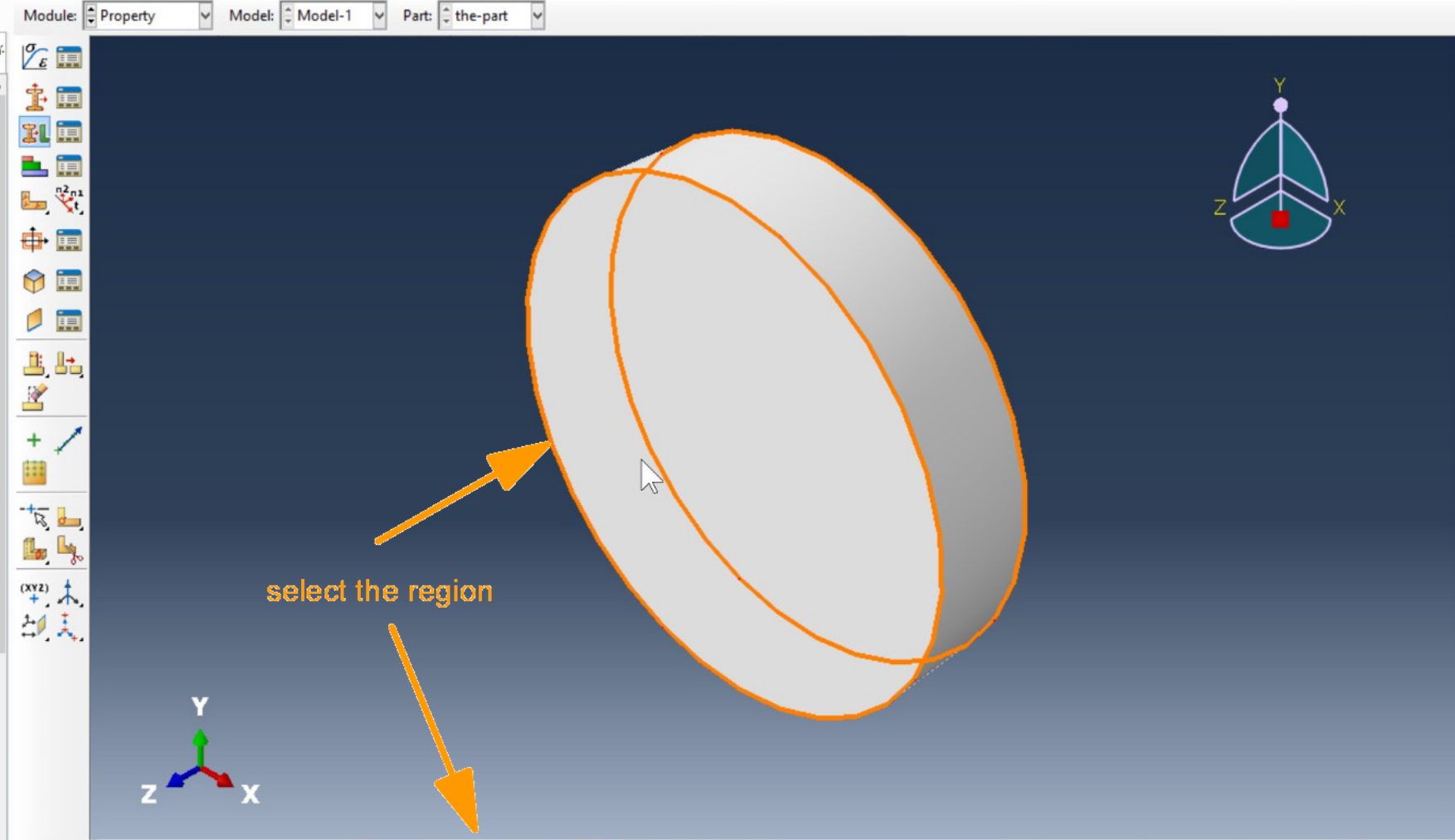
assign section



A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - the-part
 - Features (1)
 - Sets
 - Surfaces
 - Skins
 - Stringers
 - Section Assignments
 - Orientations
 - Composite Layups
 - Engineering Features
 - Mesh
- Materials (1)
- Calibrations
- Sections (1)
- Profiles
- Assembly
- Steps (1)
- Field Output Requests
- History Output Requests
- Time Points
- ALE Adaptive Mesh Constraints
- Interactions
- Interaction Properties
- Contact Controls
- Contact Initializations
- Contact Stabilizations
- Constraints
- Connector Sections
- Fields
- Amplitudes
- Loads



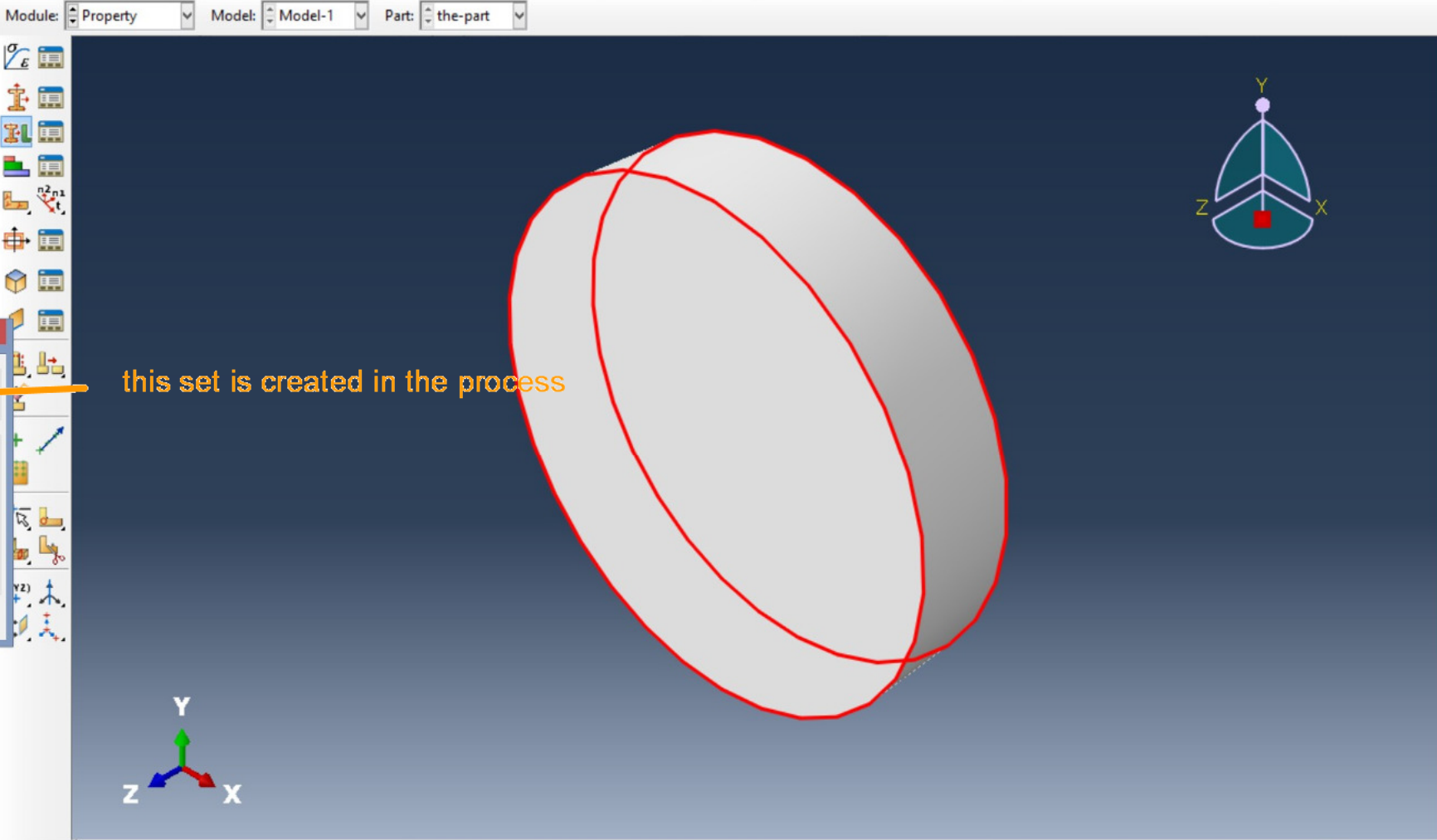
Select the regions to be assigned a section (Create set: Set-4) Done

Sets... SIMULIA

A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - the-part
 - Features (1)
 - Sets
 - Surfaces
 - Skins
 - Stringers
 - Section Assignments



this set is created in the process

Edit Section Assignment

Region
Region: Set-4

Section
Section: the-section

Note: List contains only sections applicable to the selected regions.

Type: Solid, Homogeneous

Material: the-material

OK Cancel

- Interaction Properties
- Contact Controls
- Contact Initializations
- Contact Stabilizations
- Constraints
- Connector Sections
- Fields
- Amplitudes
- Loads

Fill out the Edit Section Assignment dialog

A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - the-part
 - Features (1)
 - Sets (1)
 - Surfaces
 - Skins
 - Stringers
 - Section Assignments (1)
 - Orientations
 - Composite Layups
 - Engineering Features
 - Mesh

Materials (1)

Calibrations

Sections (1)

Profiles

Assembly

Steps (1)

- Switch Context Ctrl+Space
- Create**
- Filter... F2
- Set As Root
- Expand All Under
- Collapse All Under

Interaction Properties

Contact Controls

Contact Initializations

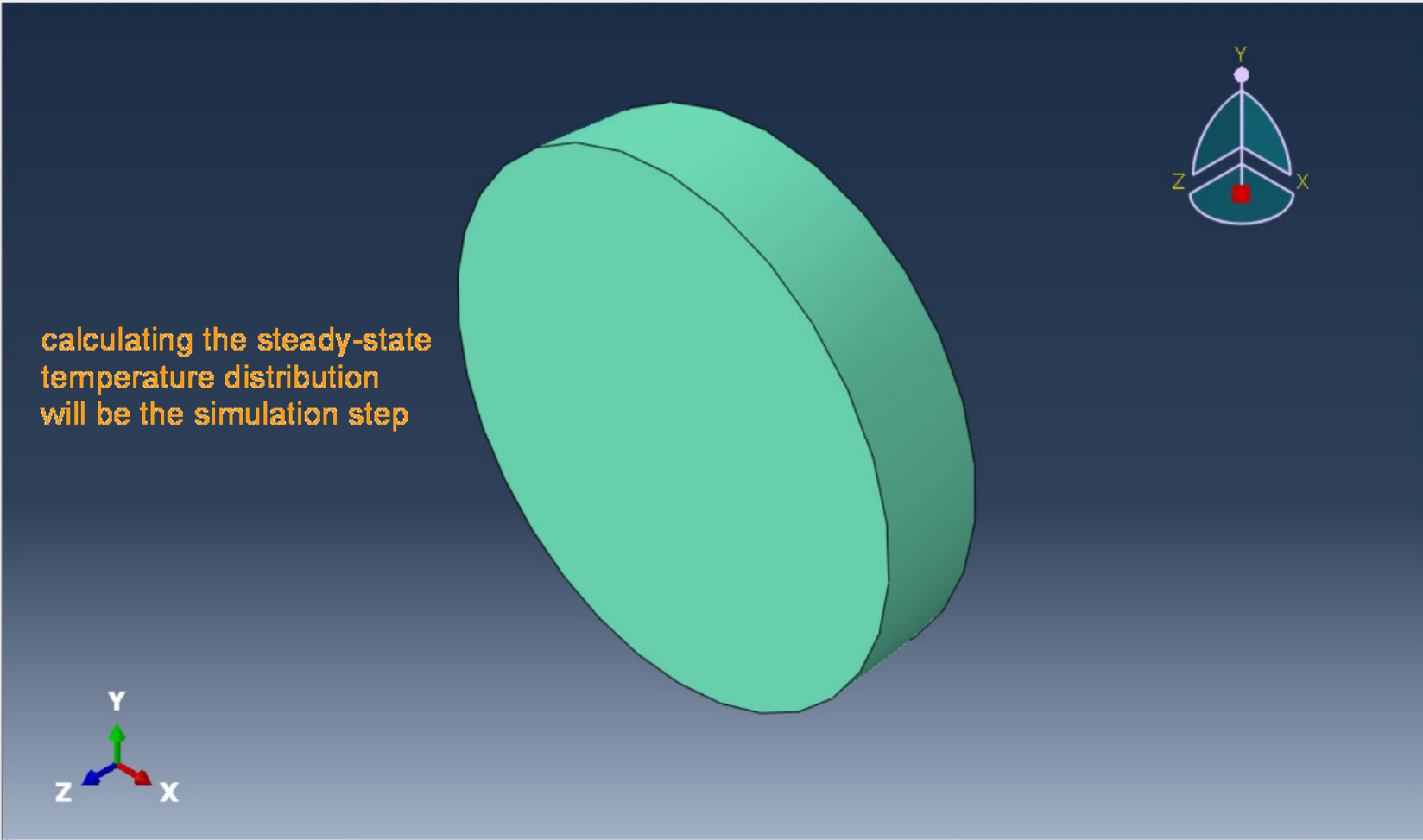
Contact Stabilizations

Constraints

Connector Sections

Fields

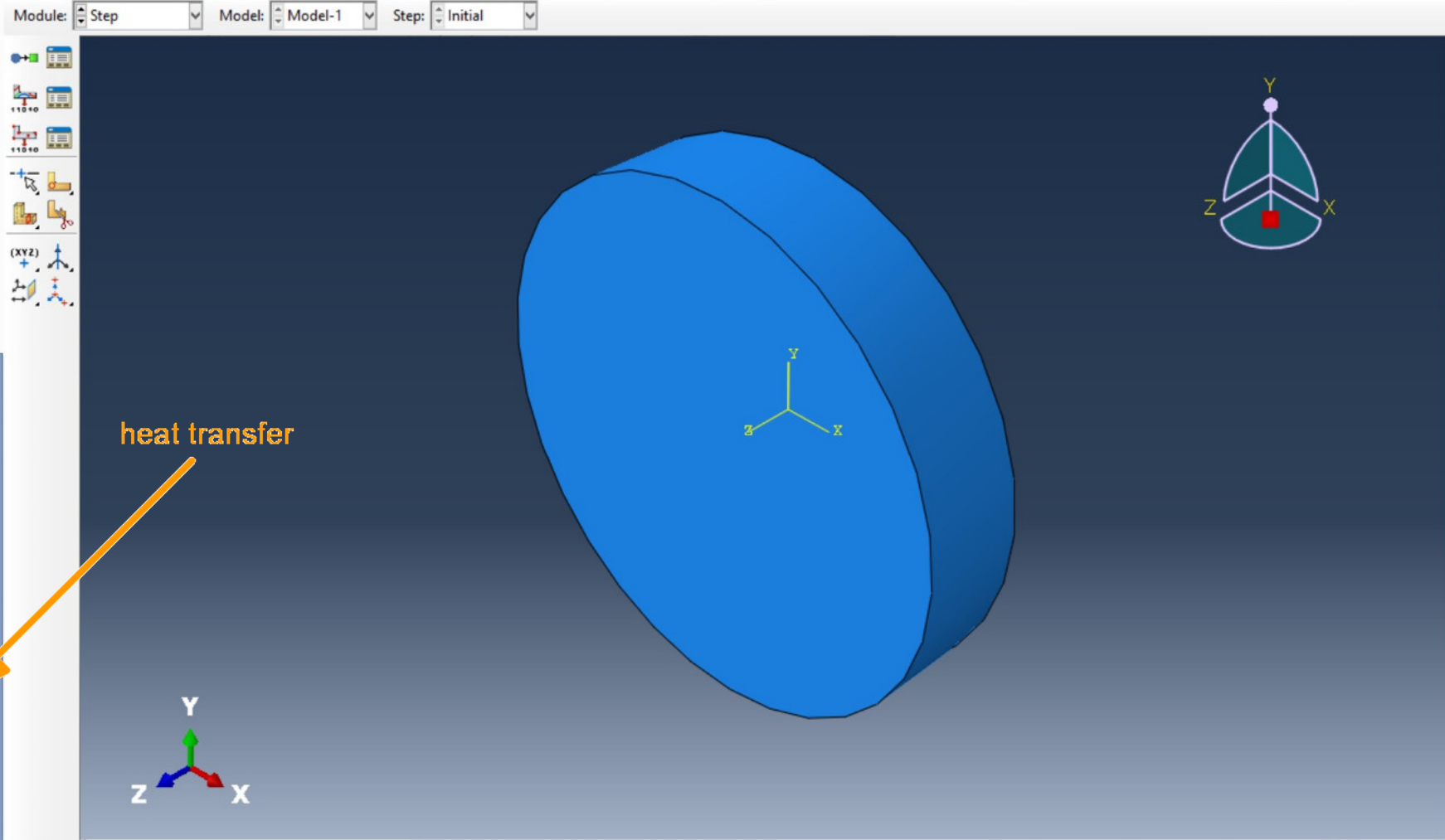
Amplitudes



A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part

Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - the-part
 - Features (1)
 - Sets (1)
 - Surfaces
 - Skins
 - Stringers
 - Section Assignments (1)
 - Orientations
 - Composite Layups



Create Step

Name: the-step

Insert new step after

- Initial

Procedure type: General

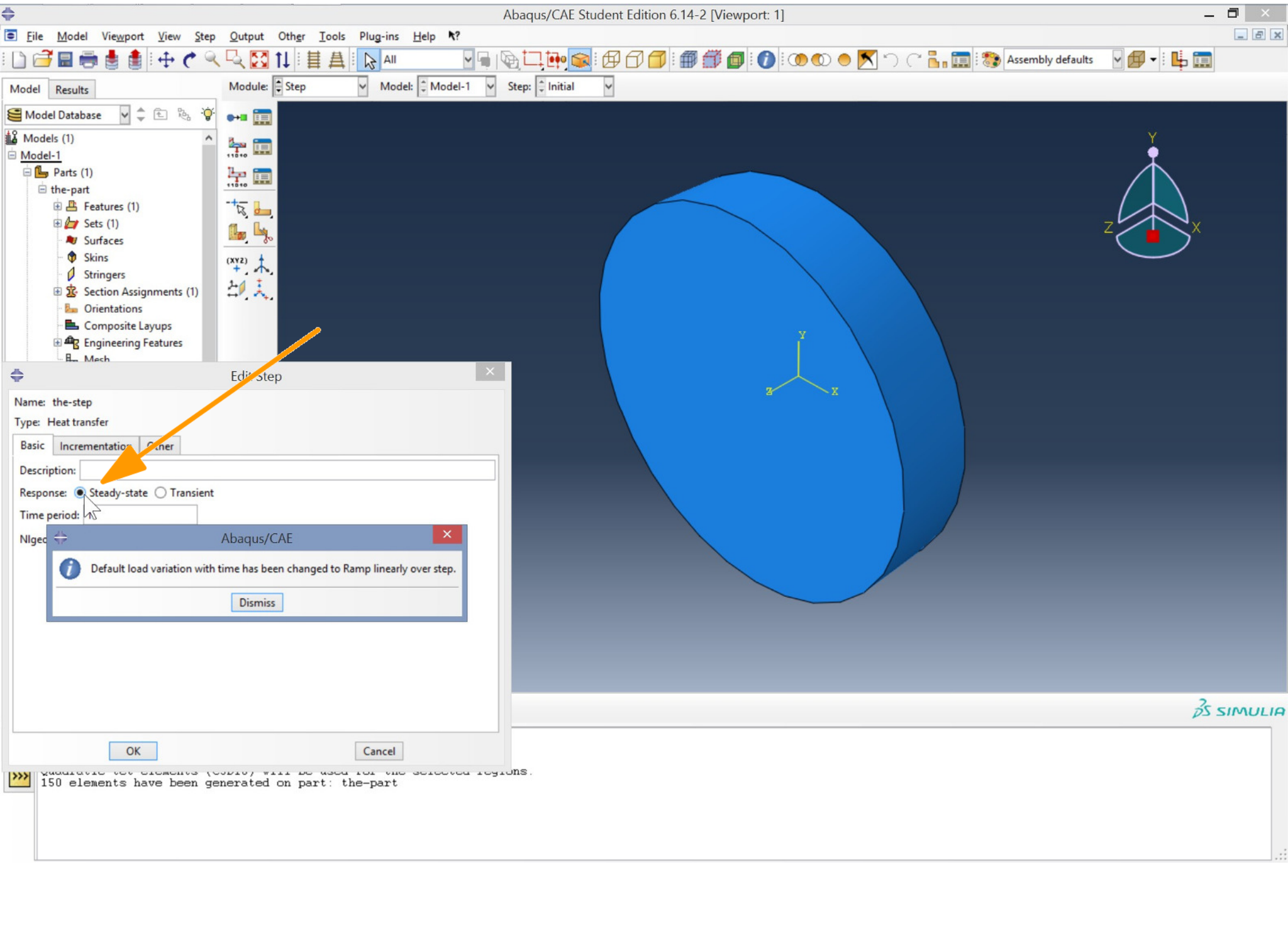
- Dynamic, Temp-disp, Explicit
- Geostatic
- Heat transfer
- Mass diffus
- Soils
- Static, General
- Static, Riks

Continue... Cancel

heat transfer



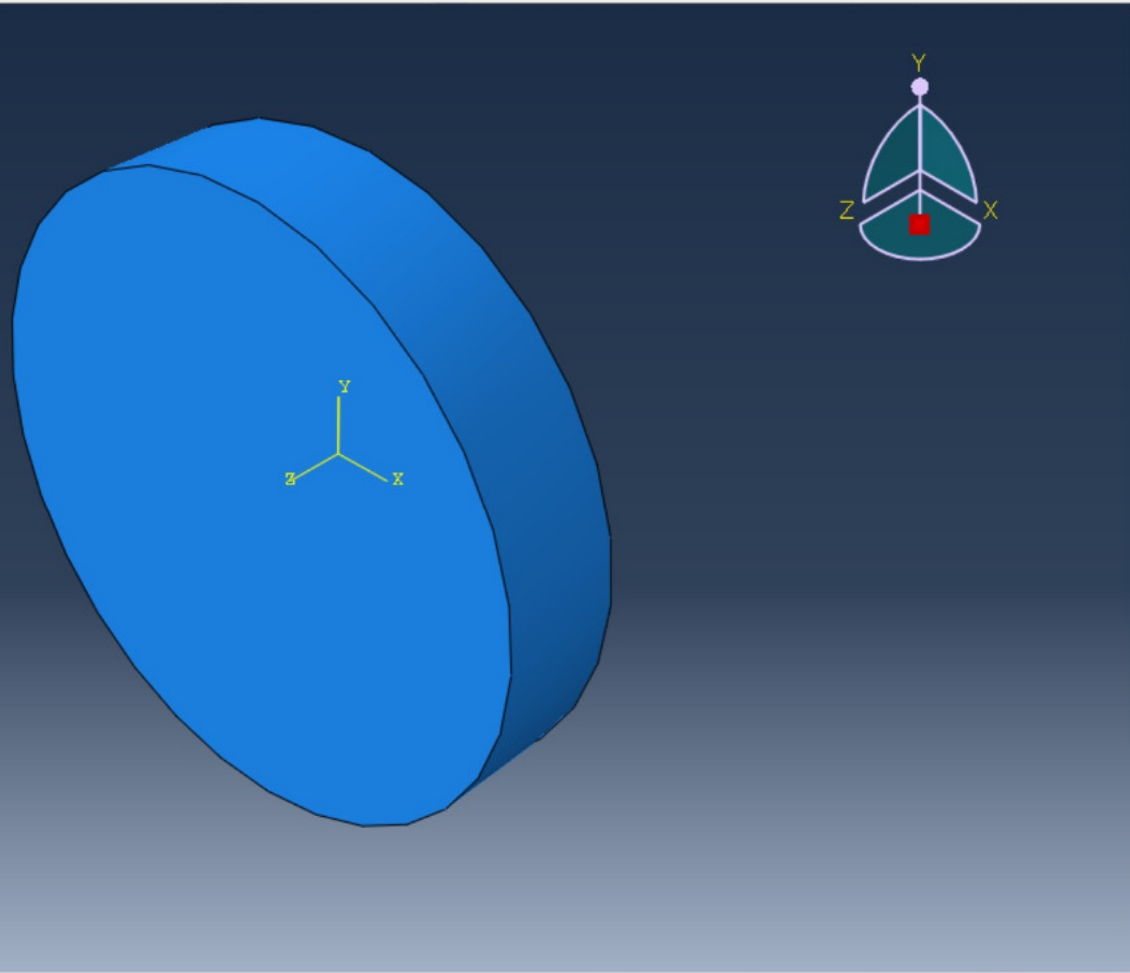
A new model database has been created.
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150 elements have been generated on part: the-part



Model Database

- Models (1)
 - Model-1
 - Parts (1)
 - the-part
 - Features (1)
 - Sets (1)
 - Surfaces
 - Skins
 - Stringers
 - Section Assignments (1)
 - Orientations
 - Composite Layups
 - Engineering Features
 - Mesh

Module: Step Model: Model-1 Step: Initial



Edit Step

Name: the-step
Type: Heat transfer

Basic Incrementation Other

Description:

Response: Steady-state Transient

Time period:

OK Cancel

Abaqus/CAE

Default load variation with time has been changed to Ramp linearly over step.

Dismiss

150 elements have been generated on part: the-part

create the loading through the hydration heat source (body load)

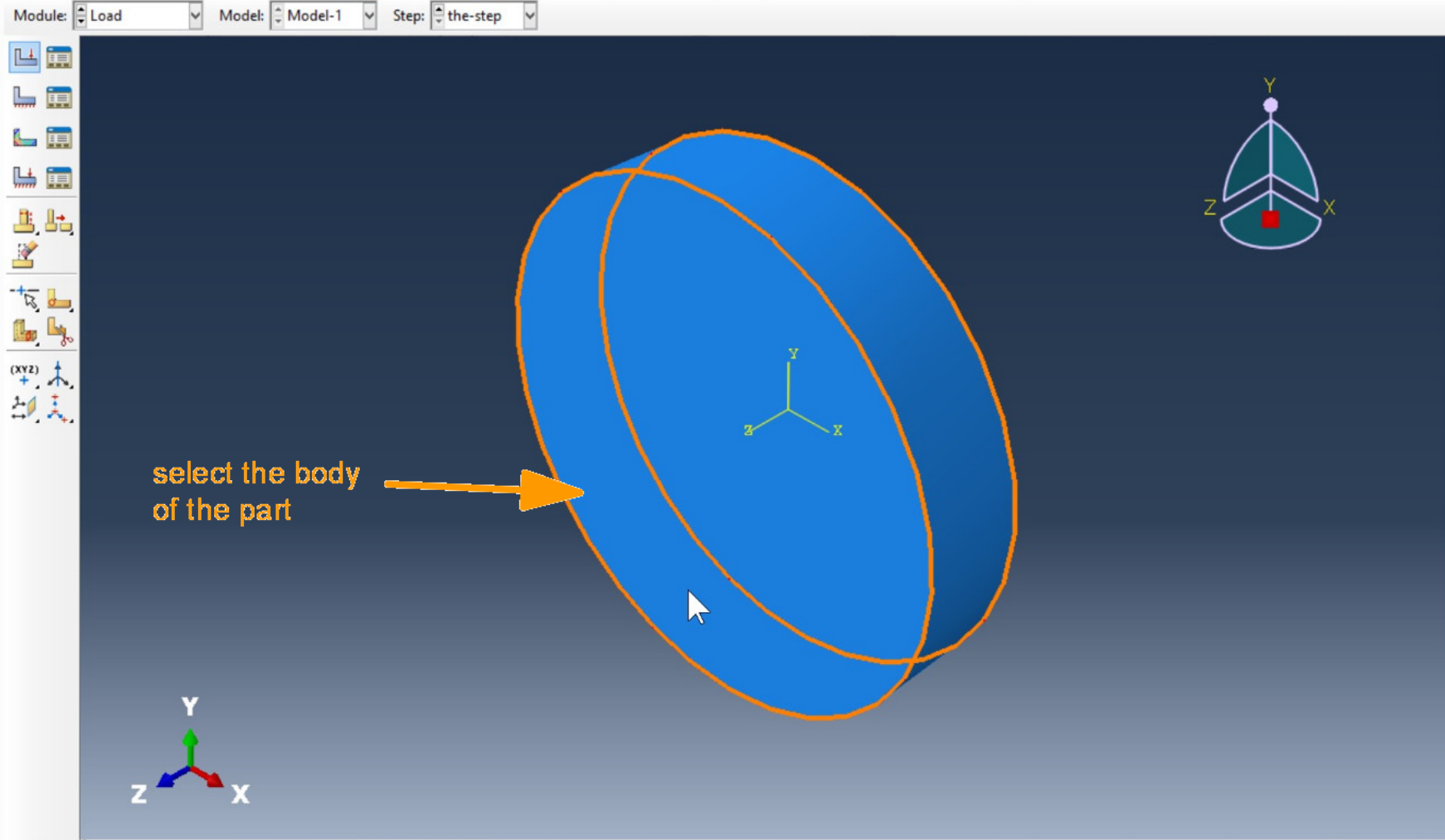
Name: the-body-load
Step: the-step
Procedure: Heat transfer

Category: Thermal

Types for Selected Step:
 Surface heat flux
 Body heat flux
 Concentrated heat flux

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150 elements have been generated on part: the-part

- Model Database
 - Engineering Features
 - Mesh
 - Materials (1)
 - Calibrations
 - Sections (1)
 - Profiles
 - Assembly
 - Steps (2)
 - Initial
 - the-step
 - Field Output Requests (1)
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constraints
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
 - Fields
 - Amplitudes
 - Loads
 - BCs
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches
 - Annotations
 - Analysis
 - Jobs
 - Adaptivity Processes
 - Co-executions



select the body of the part

Select bodies for the load (Create set: Set-1) Done

A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part

- Model
- History Output Requests
- Time Points
- ALE Adaptive Mesh Constraints
- Interactions
- Interaction Properties
- Contact Controls
- Contact Initializations
- Contact Stabilizations
- Constraints
- Connector Sections
- Fields
 - Amplitudes
 - Loads**
 - BCs
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches
- Annotations
- Analysis
- Jobs
- Adaptivity Processes
- Co-executions

Edit Load

Name: the-body-load
Type: Body heat flux
Step: the-step (Heat transfer)
Region: Set-1

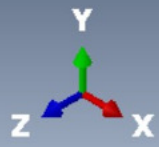
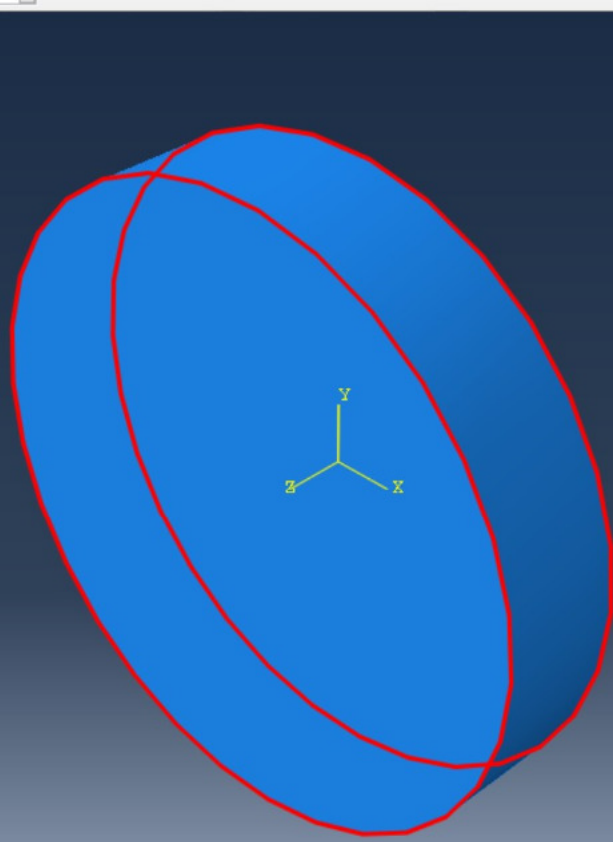
Distribution: Uniform $f(x)$

Magnitude: 4.5

Amplitude: (Ramp)

OK Cancel

heat generation rate
(power per unit volume)



Fill out the Edit Load dialog

A new model database has been created.
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150 elements have been generated on part: the-part

Model Database

- Engineering Features
 - Mesh
- Materials (1)
- Calibrations
- Sections (1)
- Profiles
- Assembly
- Steps (2)
 - Initial
 - the-step
- Field Output Requests (1)
- History Output Requests
- Time Points
- ALE Adaptive Mesh Constraints
- Interactions
- Interaction Properties
- Contact Constraints
- Contact Initial Conditions
- Contact Stabilities
- Constraints
- Connector Sections
- Fields
 - Amplitudes
 - Loads (1)
 - BCs
 - Predefined Fields
 - Remeshing Rules
 - Optimization
- Sketches

Analysis

- Jobs
- Adaptivity Processes
- Co-executions

Module: Load Model: Model-1 Step: the-step

in the same step

now apply the boundary condition for the temperature

Create Boundary Condition

Name: the-bc

Step: the-step

Procedure: Heat transfer

Category

- Mechanical
- Fluid
- Electrical/Magnetic
- Other

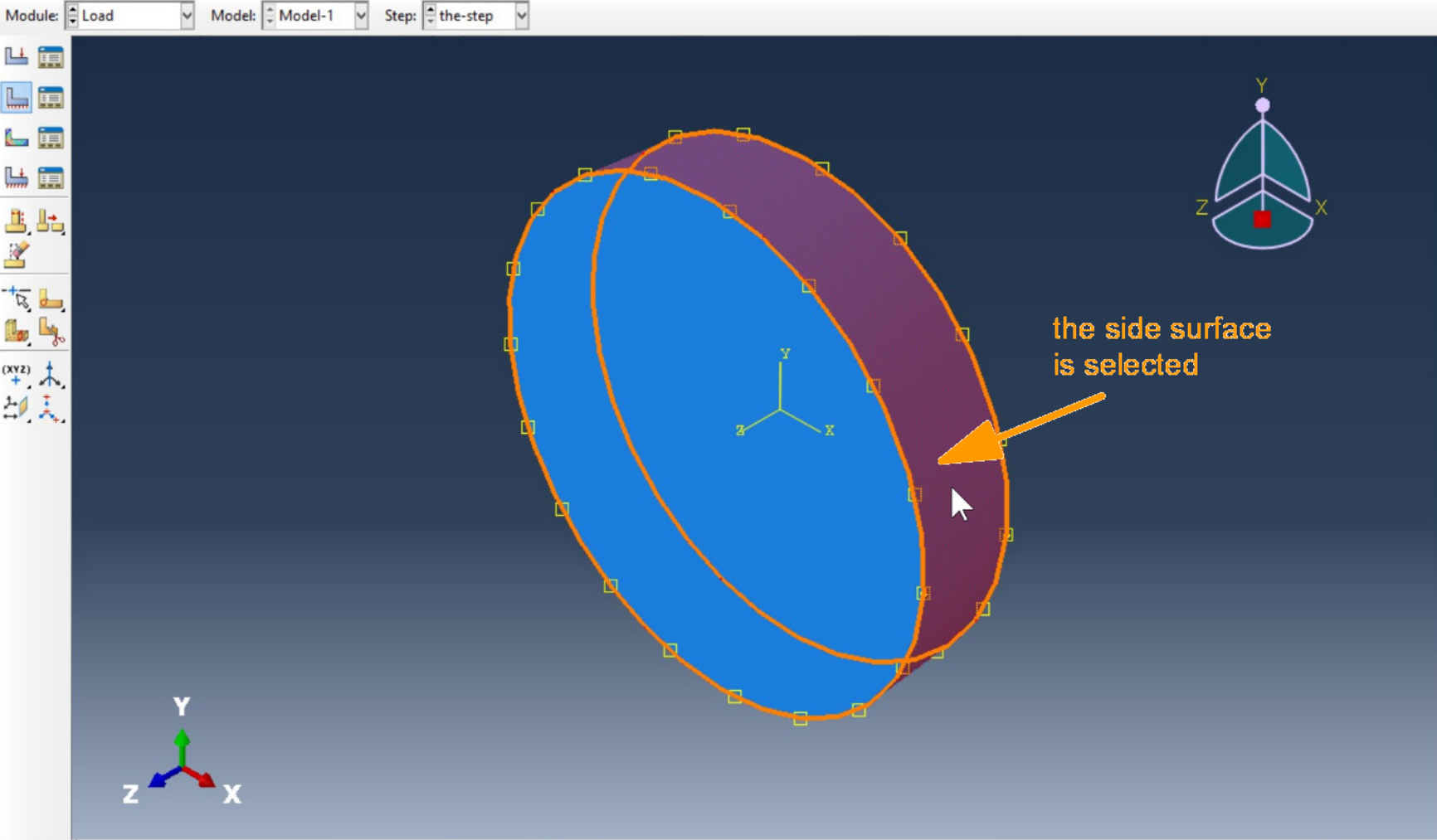
Types for Selected S

- Temperature
- Connector material flow
- Submodel

Continue... Cancel

A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part

- Model Database
 - Engineering Features
 - Mesh
 - Materials (1)
 - Calibrations
 - Sections (1)
 - Profiles
 - Assembly
 - Steps (2)
 - Initial
 - the-step
 - Field Output Requests (1)
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constraints
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
 - Fields
 - Amplitudes
 - Loads (1)
 - BCs
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches
- Annotations
 - Analysis
 - Jobs
 - Adaptivity Processes
 - Co-executions



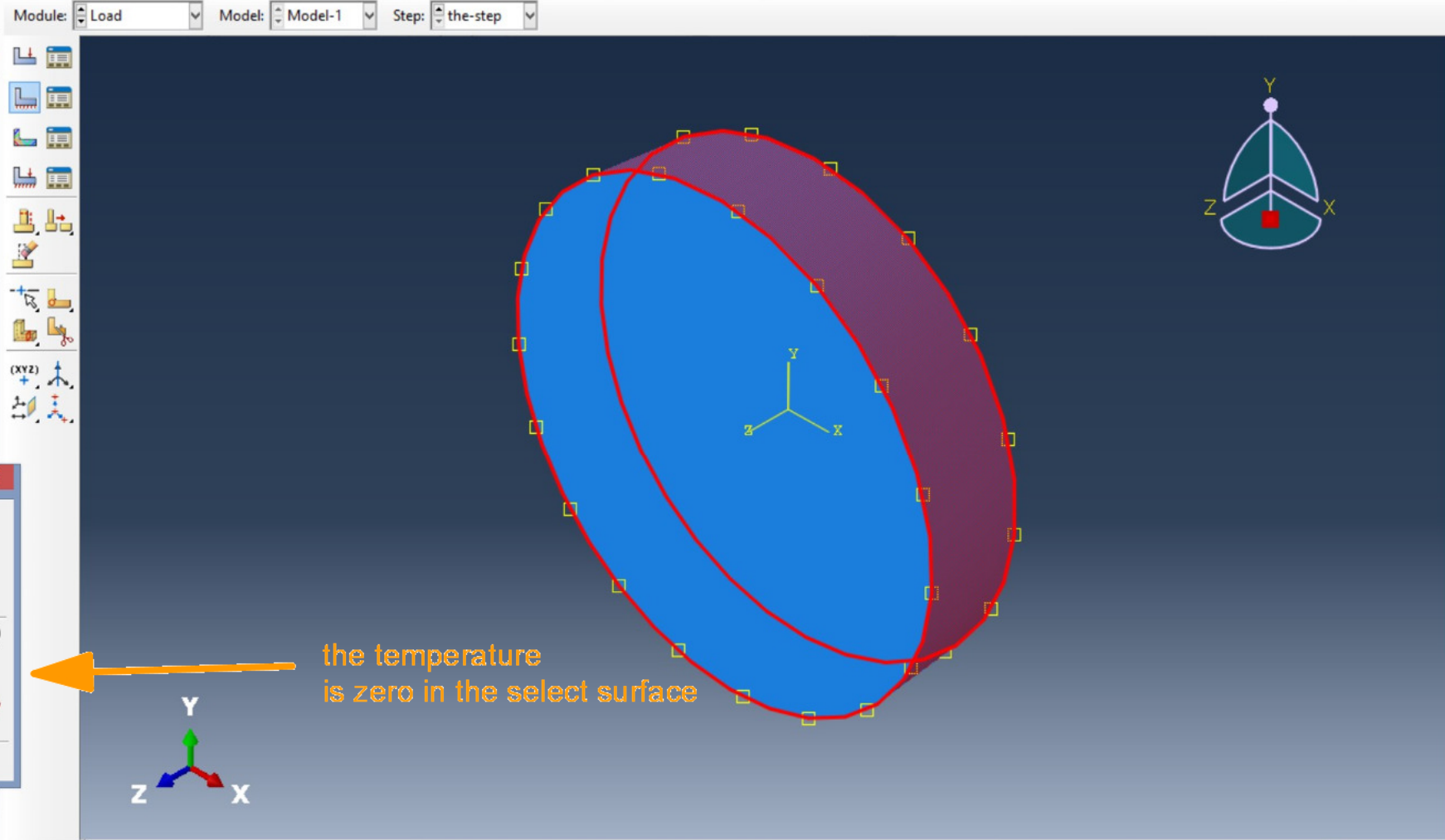
Select regions for the boundary condition (Create set: Set-2) Done

Sets... SIMULIA

A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part

Model Database

- Engineering Features
 - Mesh
- Materials (1)
- Calibrations
- Sections (1)
- Profiles
- Assembly
- Steps (2)
 - Initial
 - the-step
- Field Output Requests (1)
- History Output Requests
- Time Points
- ALE Adaptive Mesh Constraints
- Interactions
- Interaction Properties
- Contact Controls



Edit Boundary Condition

Name: the-bc
Type: Temperature
Step: the-step (Heat transfer)
Region: Set-2

Distribution: Uniform $f(x)$
Magnitude: 0.0
Amplitude: (Ramp)

OK Cancel



the temperature is zero in the select surface

Fill out the Edit Boundary Condition dialog

A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part

- Model Database
 - Mesh
 - Materials (1)
 - Calibrations
 - Sections (1)
 - Profiles
 - Assembly
 - Steps (2)
 - Initial
 - the-step
 - Field Output Requests (1)
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constraints
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
 - Fields
 - Amplitudes
 - Loads (1)
 - BCs (1)
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches
- Annotations
- Analysis
 - Jobs
 - Adaptivity Processes
 - Co-executions
 - Optimization Processes

create a job to execute the simulation

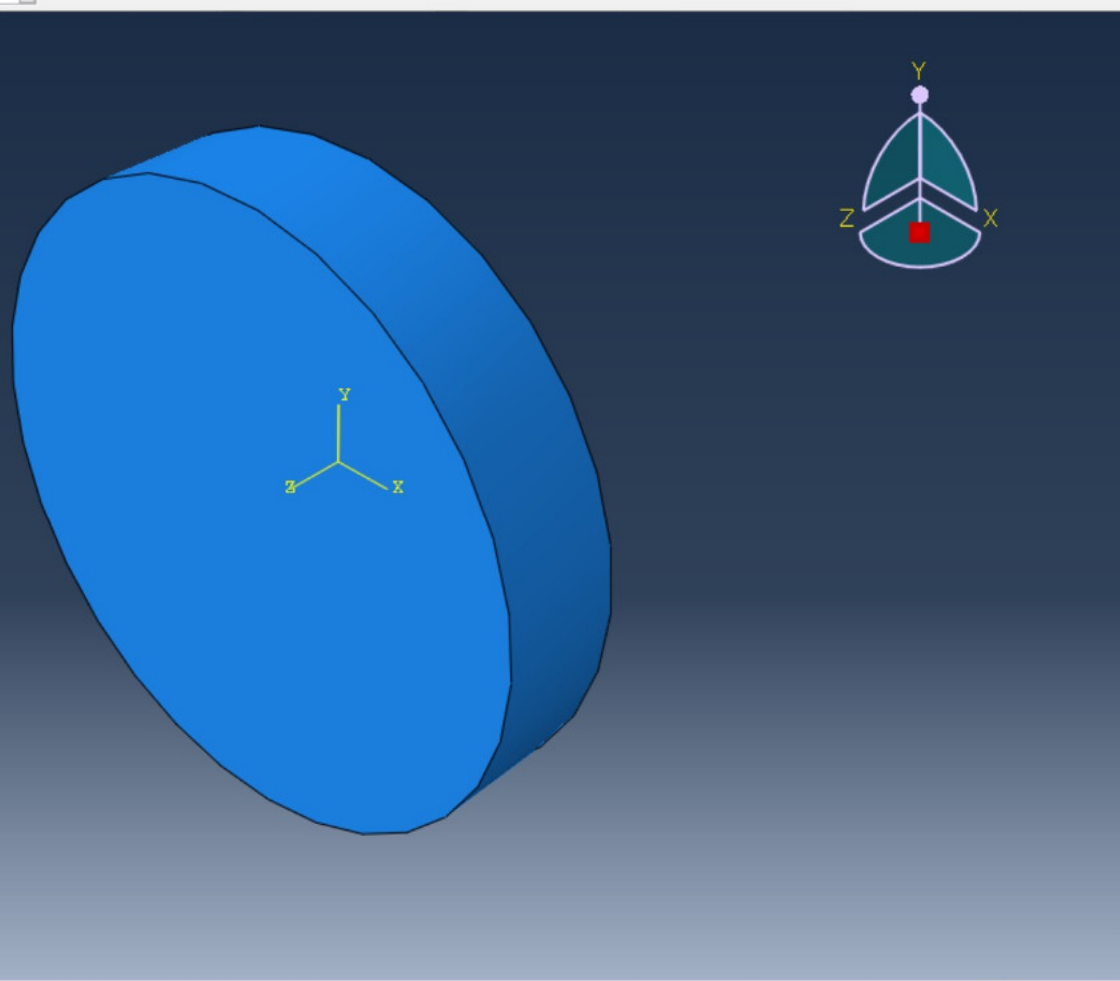
Create Job

Name: the-job

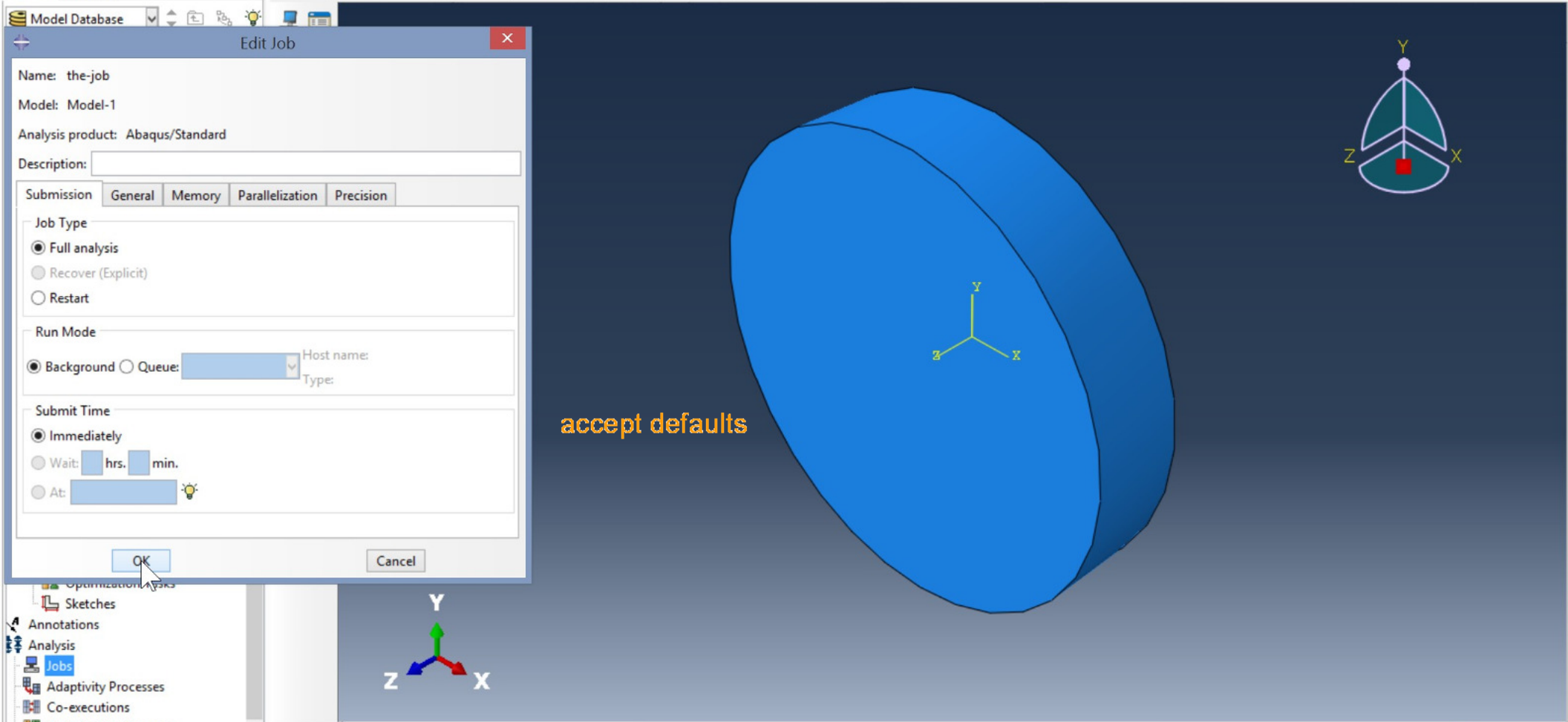
Source: Model

Model-1

Continue... Cancel



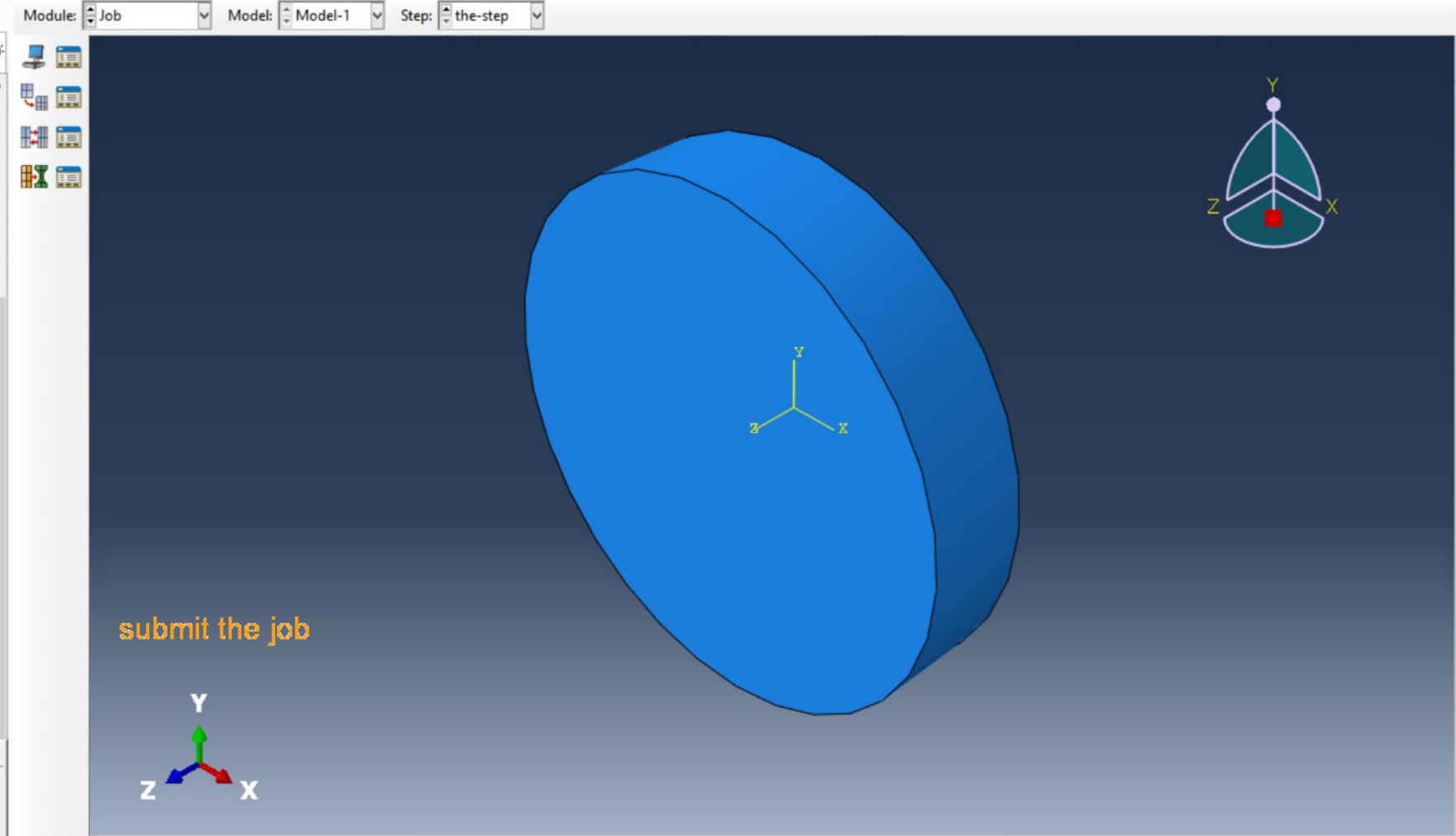
A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part



accept defaults

A new model database has been created.
The model "Model-1" has been created.
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Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part

- Model Database
 - Mesh
 - Materials (1)
 - Calibrations
 - Sections (1)
 - Profiles
 - Assembly
 - Steps (2)
 - Initial
 - the-step
 - Field Output Requests (1)
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constraints
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
 - Fields
 - Amplitudes
 - Loads (1)
 - BCs (1)
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches

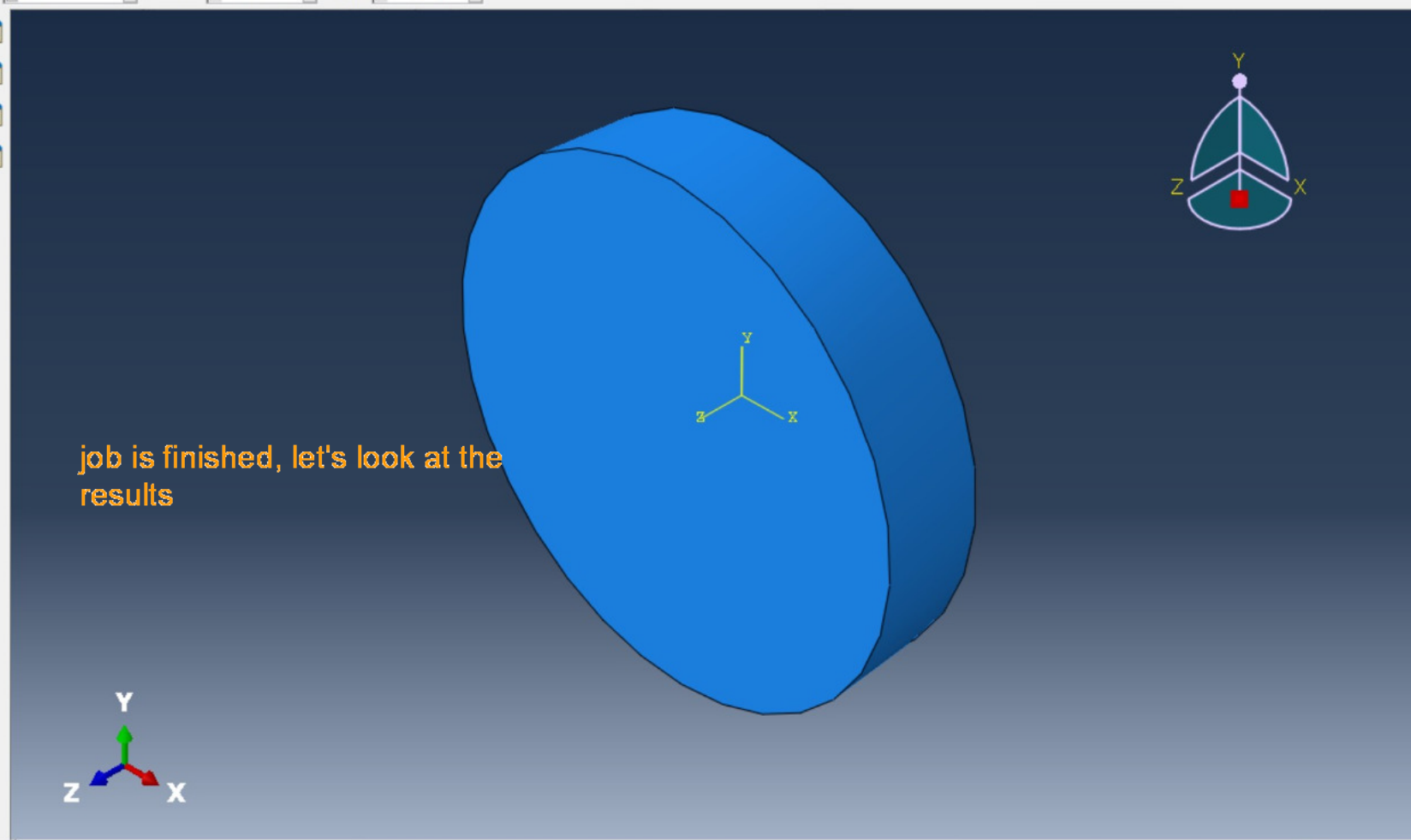


- Annotations
- Job
 - the-step
 - Submit

been created.
een created.
signed.
(3D10) will be used for the selected regions.
nerated on part: the-part
n created.

Model Database

- Mesh
- Materials (1)
- Calibrations
- Sections (1)
- Profiles
- Assembly
- Steps (2)
 - Init
 - the-step
- Field Output Requests (1)
- History Output Requests
- Time Points
- ALE Adaptive Mesh Constraints
- Interactions
- Interaction Properties
- Contact Controls
- Contact Initializations
- Contact Stabilizations
- Constraints
- Connector Sections
- Fields
- Amplitudes
- Loads (1)
- BCs (1)
- Predefined Fields
- Remeshing Rules
- Optimization Tasks
- Sketches
- Annotations
- Analysis
- Jobs (1)
 - the-job (Completed)
- Adaptivity Processes
- Co-executions



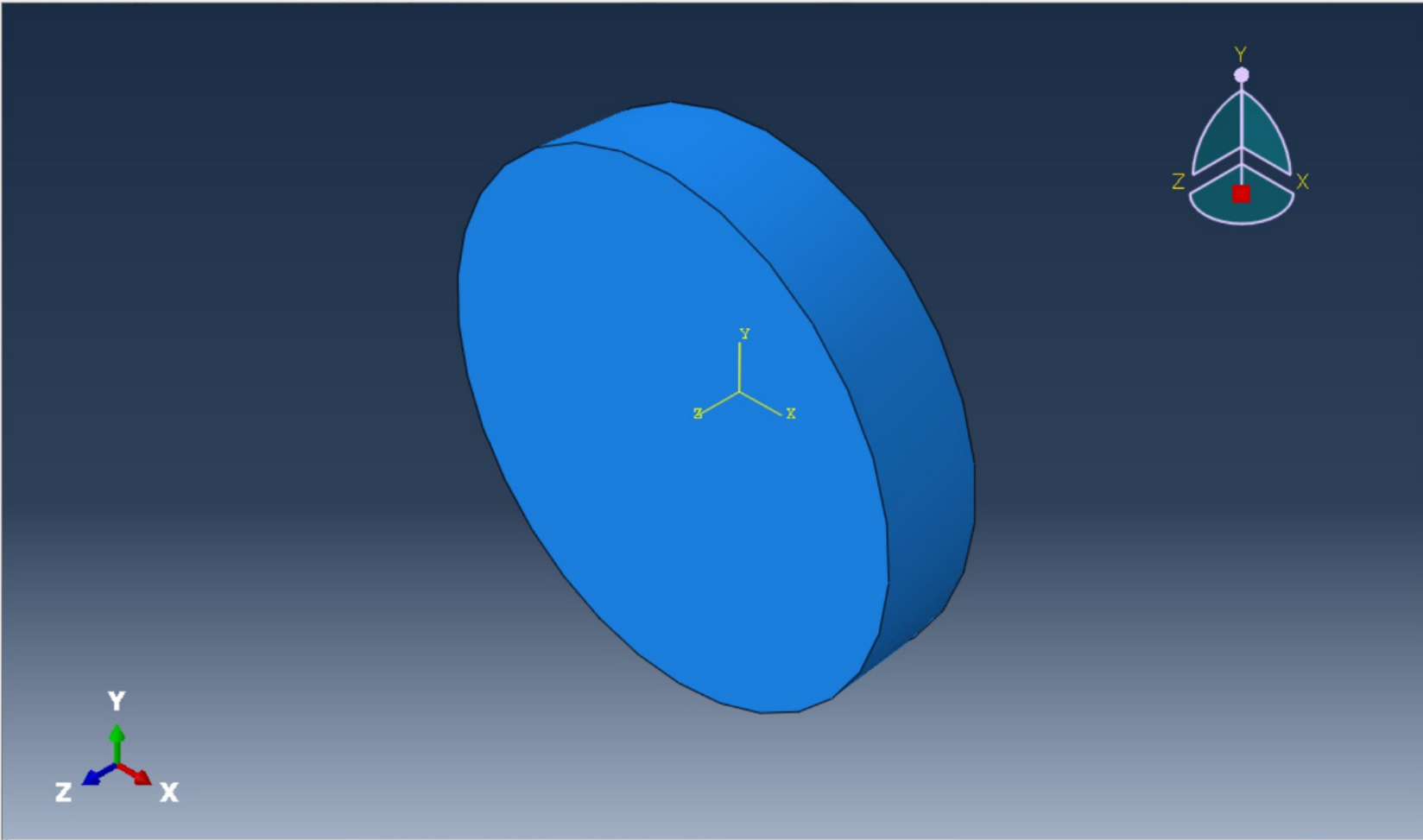
job is finished, let's look at the results

```

A new model database has been created.
The model "Model-1" has been created.
Global seeds have been assigned.
Quadratic tet elements (C3D10) will be used for the selected regions.
150 elements have been generated on part: the-part
The job "the-job" has been created.
The job input file "the-job.inp" has been submitted for analysis.
Job the-job: Analysis Input File Processor completed successfully.
Job the-job: Abaqus/Standard completed successfully.
Job the-job completed successfully.
    
```

- Model Database
 - Mesh
 - Materials (1)
 - Calibrations
 - Sections (1)
 - Profiles
 - Assembly
 - Steps (2)
 - Initial
 - the-step
 - Field Output Requests (1)
 - History Output Requests
 - Time Points
 - ALE Adaptive Mesh Constraints
 - Interactions
 - Interaction Properties
 - Contact Controls
 - Contact Initializations
 - Contact Stabilizations
 - Constraints
 - Connector Sections
 - Fields
 - Amplitudes
 - Loads (1)
 - BCs (1)
 - Predefined Fields
 - Remeshing Rules
 - Optimization Tasks
 - Sketches
- Annotations

Module: Job Model: Model-1 Step: the-step



- Analysis
 - Switch Context Ctrl+Space
 - Edit...
 - Copy...
 - Rename...
 - Delete... Del
 - Write Input
 - Data Check
 - Submit
 - Continue
 - Monitor...
 - Results
 - Kill
 - Export
- Jobs
 - the-j
 - Adap
 - Co-e

...een created.
...en created.
...igned.
...D10) will be used for the selected regions.
...erated on part: the-part
...reated.
...b.inp" has been submitted for analysis.
...t File Processor completed successfully.
...rd completed successfully.
...essfully.



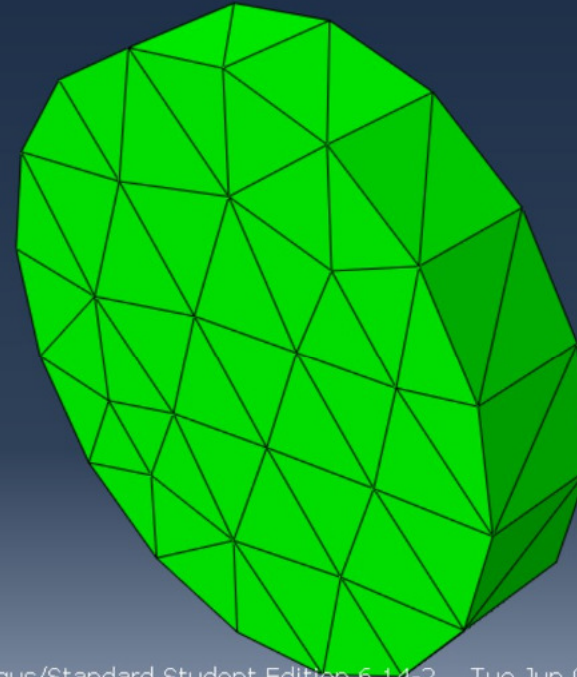
Model Results

Session Data

- Output Databases (1)
- Model Database (1)
- Spectrums (7)
- XYPlots
- XYData
- Paths
- Display Groups (1)
- Free Body Cuts
- Streams
- Movies
- Images

Module: Visualization Model: C:/Temp/the-job.odb

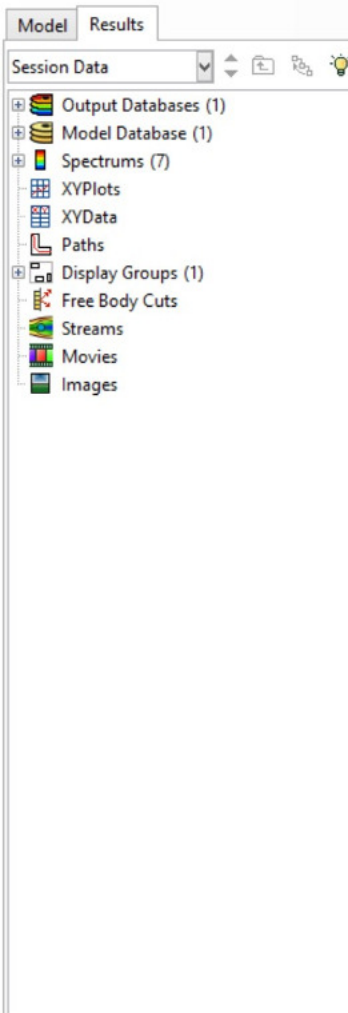
choose the temperature (NT11)



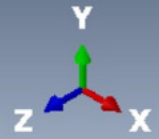
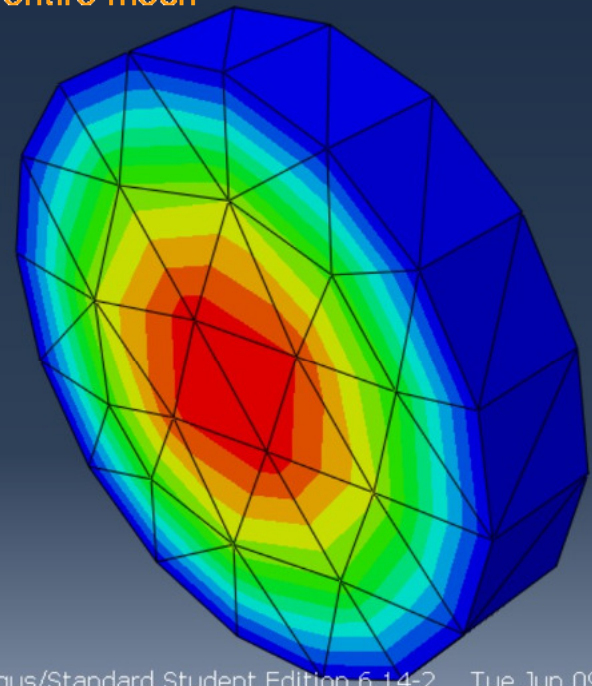
ODB: the-job.odb Abaqus/Standard Student Edition 6.14-2 Tue Jun 09 09:53:56 Pacific Daylight Time 2015

Step: the-step
Increment 1: Step Time = 1.000

A new model database has been created.
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150 elements have been generated on part: the-part
The job "the-job" has been created.
The job input file "the-job.inp" has been submitted for analysis.
Job the-job: Analysis Input File Processor completed successfully.
Job the-job: Abaqus/Standard completed successfully.
Job the-job completed successfully.



maximum temperature over the entire mesh



ODB: the-job.odb Abaqus/Standard Student Edition 6.14-2 Tue Jun 09 09:53:56 Pacific Daylight Time 2015

Step: the-step
 Increment 1: Step Time = 1.000
 Primary Var: NT11
 Deformed Var: not set Deformation Scale Factor: not set

```

A new model database has been created.
The model "Model-1" has been created.
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The job input file "the-job.inp" has been submitted for analysis.
Job the-job: Analysis Input File Processor completed successfully.
Job the-job: Abaqus/Standard completed successfully.
Job the-job completed successfully.
    
```