# Prompt&input

echo 'usr\_requirment: "do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow"

max\_loop: 20

temperature: 0.01

batchsize: 10

searchdocs: 2

run\_times: 10

alpha\_PATH: "./workspace"

OPENAI\_API\_KEY: "sk-13a6fbf5f4894cd0877f12eb3eea98c2"

#OPENAI\_PROXY: "XXX"

OPENAI\_BASE\_URL: "https://api.deepseek.com/v1"

model: "deepseek-chat"' > CylinderFlow.yaml

# Run

## Start, usr\_requirment，runtimes: 1

(ximualpha) root@ubuntu:/data/sda/lichenshuo/XiMuAlpha4CFD# ./run\_pipeline.sh run\_main

Please select an input file from the list below:

1) BuoyantCavity.yaml 4) Combustion.yaml 7) PitzDaily.yaml

2) Cavity.yaml 5) CylinderFlow.yaml 8) Planar\_Poiseuille.yaml

3) Cavity\_RANS.yaml 6) HIT.yaml 9) SquareBendLiq.yaml

#? 5

You selected CylinderFlow.yaml

Running alphaOpenfoam\_v2.py to execute the main program...

config\_file\_path inputs/CylinderFlow.yaml

Configuration loaded successfully:

usr\_requirment: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

./workspace/config/config2.yaml has been updated successfully.

runtimes: 1

/root/anaconda3/envs/ximualpha/lib/python3.10/site-packages/langchain\_core/\_api/deprecation.py:117: LangChainDeprecationWarning: The class `langchain\_community.chat\_models.openai.ChatOpenAI` was deprecated in langchain-community 0.0.10 and will be removed in 0.2.0. An updated version of the class exists in the langchain-openai package and should be used instead. To use it run `pip install -U langchain-openai` and import as `from langchain\_openai import ChatOpenAI`.

warn\_deprecated(

## roles.Architect:\_act:26 - Zhuxu: to do ArchitectAction(ArchitectAction)

2024-08-24 22:49:29.778 | INFO | roles.Architect:\_act:26 - Zhuxu: to do ArchitectAction(ArchitectAction)

self.rc.history: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100.

### Find case

Case name: Cylinder\_Flow

user\_case: case name: Cylinder\_Flow

case domain: incompressible

case category: RANS

case solver: simpleFoam

find\_case page\_content="case name: cylinderAndBackground\ncase domain: incompressible\ncase category: cylinder\ncase solver: overPimpleDyMFoam\ncase input name:['U', 'pointDisplacement', 'cellDisplacement', 'zoneID', 'epsilon', 'nut', 'k', 'p', 'blockMeshDict', 'setFieldsDict', 'controlDict', 'topoSetDict', 'fvSchemes', 'decomposeParDict', 'fvSolution', 'dynamicMeshDict', 'turbulenceProperties', 'transportProperties']\ncorresponding input folder:{'U': '0.orig', 'pointDisplacement': '0.orig', 'cellDisplacement': '0.orig', 'zoneID': '0.orig', 'epsilon': '0.orig', 'nut': '0.orig', 'k': '0.orig', 'p': '0.orig', 'blockMeshDict': 'system', 'setFieldsDict': 'system', 'controlDict': 'system', 'topoSetDict': 'system', 'fvSchemes': 'system', 'decomposeParDict': 'system', 'fvSolution': 'system', 'dynamicMeshDict': 'constant', 'turbulenceProperties': 'constant', 'transportProperties': 'constant'}" metadata={'source': '/data/sda/lichenshuo/XiMuAlpha4CFD/database/openfoam\_tutorials\_summary.txt'}

File saved successfully at /data/sda/lichenshuo/XiMuAlpha4CFD/run/Cylinder\_Flow\_1/find\_tutorial.txt

### actions.ArchitectAction:run:111 - ```splits into 12 subtasks:

2024-08-24 22:50:22.776 | INFO | actions.ArchitectAction:run:111 - ```splits into 12 subtasks:

subtask1: to Write a OpenFoam 'U' foamfile in '0.orig' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

subtask2: to Write a OpenFoam 'nut' foamfile in '0.orig' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

subtask3: to Write a OpenFoam 'k' foamfile in '0.orig' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

subtask4: to Write a OpenFoam 'epsilon' foamfile in '0.orig' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

subtask5: to Write a OpenFoam 'p' foamfile in '0.orig' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

subtask6: to Write a OpenFoam 'blockMeshDict' foamfile in 'system' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

subtask7: to Write a OpenFoam 'controlDict' foamfile in 'system' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

subtask8: to Write a OpenFoam 'fvSchemes' foamfile in 'system' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

subtask9: to Write a OpenFoam 'fvSolution' foamfile in 'system' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

subtask10: to Write a OpenFoam 'turbulenceProperties' foamfile in 'constant' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

subtask11: to Write a OpenFoam 'transportProperties' foamfile in 'constant' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

subtask12: to Write a OpenFoam 'setFieldsDict' foamfile in 'system' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.

```

## roles.InputWriter, simulate into writting case\_files

2024-08-24 22:50:22.781 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

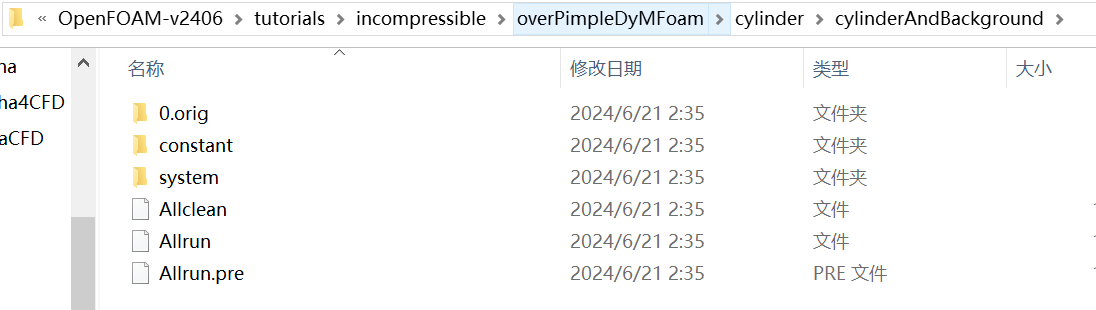
number\_subtasks Architect: 12

get\_memories\_InputWriter [user: to Write a OpenFoam 'U' foamfile in '0.orig' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow., user: to Write a OpenFoam 'nut' foamfile in '0.orig' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow., user: to Write a OpenFoam 'k' foamfile in '0.orig' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow., user: to Write a OpenFoam 'epsilon' foamfile in '0.orig' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow., user: to Write a OpenFoam 'p' foamfile in '0.orig' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow., user: to Write a OpenFoam 'blockMeshDict' foamfile in 'system' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow., user: to Write a OpenFoam 'controlDict' foamfile in 'system' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow., user: to Write a OpenFoam 'fvSchemes' foamfile in 'system' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow., user: to Write a OpenFoam 'fvSolution' foamfile in 'system' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow., user: to Write a OpenFoam 'turbulenceProperties' foamfile in 'constant' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow., user: to Write a OpenFoam 'transportProperties' foamfile in 'constant' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow., user: to Write a OpenFoam 'setFieldsDict' foamfile in 'system' folder that could be used to meet user requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow.]

### find\_similar\_foamfile, U

tutorial\_file: None

find\_similar\_foamfile: Based on the provided context, the foamfile for 'U' in '0.orig' of the case named 'Cylinder\_Flow\_1' most closely matches the input U file of case cylinderAndBackground. This is because the cylinderAndBackground case is described as being in the incompressible domain, category cylinder, and using the solver overPimpleDyMFoam, which is likely to be relevant for a case involving flow around a cylinder.



Here is the relevant foamfile for 'U' in '0.orig' of case cylinderAndBackground:

```plaintext

/\*--------------------------------\*- C++ -\*----------------------------------\*\

| ========= | |

| \\ / F ield | OpenFOAM: The Open Source CFD Toolbox |

| \\ / O peration | Version: v2312 |

| \\ / A nd | Website: www.openfoam.com |

| \\/ M anipulation | |

\\*---------------------------------------------------------------------------\*/

FoamFile

{

version 2.0;

format ascii;

class volVectorField;

object U;

}

// \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* //

#include "include/initialConditions"

dimensions [0 1 -1 0 0 0 0];

internalField uniform $flowVelocity;

boundaryField

{

#includeEtc "caseDicts/setConstraintTypes"

overset

{

type overset;

}

walls

{

type movingWallVelocity;

value uniform (0 0 0);

}

inlet

{

type fixedValue;

value $internalField;

}

outlet

{

type inletOutlet;

inletValue uniform (0 0 0);

value $internalField;

}

topAndBottom

{

type zeroGradient;

}

}

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* //

```

This foamfile includes initial conditions and specifies boundary types relevant for a flow simulation around a cylinder, which aligns with the description of 'Cylinder\_Flow\_1'.

### Input U file (X)

find\_tutorial\_file: input U file of case cylinder (domain: basic, category: None, solver:potentialFoam) in 0.orig folder:

/\*--------------------------------\*- C++ -\*----------------------------------\*\

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| \\ / O peration | Version: v2312 |

| \\ / A nd | Website: www.openfoam.com |

| \\/ M anipulation | |

\\*---------------------------------------------------------------------------\*/

FoamFile

{

version 2.0;

format ascii;

class volVectorField;

object U;

}

// \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* //

dimensions [0 1 -1 0 0 0 0];

internalField uniform (0 0 0);

boundaryField

{

down

{

type symmetryPlane;

}

right

{

type zeroGradient;

}

up

{

type symmetryPlane;

}

left

{

type uniformFixedValue;

uniformValue constant (1 0 0);

}

cylinder

{

type symmetry;

}

defaultFaces

{

type empty;

}

}

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* //

File 'U' is going to be written

dict\_keys(['id', 'choices', 'created', 'model', 'object', 'system\_fingerprint', 'usage'])

folder\_name '0.orig'

file\_name 'U'

File saved successfully at /data/sda/lichenshuo/XiMuAlpha4CFD/run/Cylinder\_Flow\_1/'0.orig'/'U'

tutorial\_file: None

find\_similar\_foamfile: Based on the provided context, the foamfile for 'nut' in '0.orig' of the case named 'Cylinder\_Flow\_1' most closely matches the foamfile for 'nut' in the case 'cylinderAndBackground' with the domain 'incompressible' and solver 'overPimpleDyMFoam'. Here is the foamfile:

```plaintext

/\*--------------------------------\*- C++ -\*----------------------------------\*\

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| \\ / O peration | Version: v2312 |

| \\ / A nd | Website: www.openfoam.com |

| \\/ M anipulation | |

\\*---------------------------------------------------------------------------\*/

FoamFile

{

version 2.0;

format ascii;

class volScalarField;

object nut;

}

// \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* //

dimensions [ 0 2 -1 0 0 0 0 ];

internalField uniform 0;

boundaryField

{

#includeEtc "caseDicts/setConstraintTypes"

overset

{

type overset;

}

wall

{

type nutkWallFunction;

value uniform 0;

}

".\*"

{

type calculated;

value uniform 0;

}

}

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* //

```

find\_tutorial\_file: input nut file of case cylinderAndBackground (domain: incompressible, category: cylinder, solver:overPimpleDyMFoam) in 0.orig folder:

/\*--------------------------------\*- C++ -\*----------------------------------\*\

| ========= | |

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| \\ / O peration | Version: v2312 |

| \\ / A nd | Website: www.openfoam.com |

| \\/ M anipulation | |

\\*---------------------------------------------------------------------------\*/

FoamFile

{

version 2.0;

format ascii;

class volScalarField;

object nut;

}

// \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* //

dimensions [ 0 2 -1 0 0 0 0 ];

internalField uniform 0;

boundaryField

{

#includeEtc "caseDicts/setConstraintTypes"

overset

{

type overset;

}

wall

{

type nutkWallFunction;

value uniform 0;

}

".\*"

{

type calculated;

value uniform 0;

}

}

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* //

File 'nut' is going to be written

dict\_keys(['id', 'choices', 'created', 'model', 'object', 'system\_fingerprint', 'usage'])

folder\_name '0.orig'

file\_name 'nut'

File saved successfully at /data/sda/lichenshuo/XiMuAlpha4CFD/run/Cylinder\_Flow\_1/'0.orig'/'nut'

tutorial\_file: None

find\_similar\_foamfile: Based on the provided context, the foamfile for 'k' in '0.orig' of a case named 'Cylinder\_Flow\_1' most closely matches the input k file of case cylinderAndBackground with domain: incompressible, category: cylinder, and solver: overPimpleDyMFoam. Here is the relevant foamfile:

```plaintext

/\*--------------------------------\*- C++ -\*----------------------------------\*\

| ========= | |

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| \\ / O peration | Version: v2312 |

| \\ / A nd | Website: www.openfoam.com |

| \\/ M anipulation | |

\\*---------------------------------------------------------------------------\*/

FoamFile

{

version 2.0;

format ascii;

class volScalarField;

object k;

}

// \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* //

#include "include/initialConditions"

dimensions [ 0 2 -2 0 0 0 0 ];

internalField uniform $turbulentKE;

boundaryField

{

#includeEtc "caseDicts/setConstraintTypes"

overset

{

type overset;

}

#include "include/fixedInlet"

outlet

{

type inletOutlet;

inletValue $internalField;

value $internalField;

}

wall

{

type kqRWallFunction;

value $internalField;

}

".\*"

{

type zeroGradient;

}

}

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* //

```

find\_tutorial\_file: input k file of case cylinderAndBackground (domain: compressible, category: hotCylinder, solver:overRhoSimpleFoam) in 0.orig folder:

/\*--------------------------------\*- C++ -\*----------------------------------\*\

| ========= | |

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| \\ / O peration | Version: v2312 |

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| \\/ M anipulation | |

\\*---------------------------------------------------------------------------\*/

FoamFile

{

version 2.0;

format ascii;

class volScalarField;

object k;

}

// \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* //

#include "include/initialConditions"

dimensions [ 0 2 -2 0 0 0 0 ];

internalField uniform $turbulentKE;

boundaryField

{

#includeEtc "caseDicts/setConstraintTypes"

wall

{

type kqRWallFunction;

value uniform 0;

}

inlet

{

type turbulentIntensityKineticEnergyInlet;

intensity 0.05; // 5% turbulent intensity

value $internalField;

}

"(outlet|topAndBottom)"

{

type inletOutlet;

inletValue $internalField;

value $internalField;

}

}

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* //

File 'k' is going to be written

dict\_keys(['id', 'choices', 'created', 'model', 'object', 'system\_fingerprint', 'usage'])

folder\_name '0.orig'

file\_name 'k'

File saved successfully at /data/sda/lichenshuo/XiMuAlpha4CFD/run/Cylinder\_Flow\_1/'0.orig'/'k'

tutorial\_file: None

find\_similar\_foamfile: Based on the provided context, the foamfile for 'epsilon' in '0.orig' of the case named 'Cylinder\_Flow\_1' most closely matches the foamfile for 'epsilon' in '0.orig' of the case 'cylinderAndBackground' from the domain: compressible, category: hotCylinder, solver: overRhoSimpleFoam. Here is the foamfile for 'epsilon' in '0.orig' of the 'cylinderAndBackground' case:

```plaintext

/\*--------------------------------\*- C++ -\*----------------------------------\*\

| ========= | |

| \\ / F ield | OpenFOAM: The Open Source CFD Toolbox |

| \\ / O peration | Version: v2312 |

| \\ / A nd | Website: www.openfoam.com |

| \\/ M anipulation | |

\\*---------------------------------------------------------------------------\*/

FoamFile

{

version 2.0;

format ascii;

class volScalarField;

object epsilon;

}

// \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* //

#include "include/initialConditions"

dimensions [0 2 -3 0 0 0 0];

internalField uniform $turbulentEpsilon;

boundaryField

{

#includeEtc "caseDicts/setConstraintTypes"

walls

{

type epsilonWallFunction;

value $internalField;

}

inlet

{

type fixedValue;

value $internalField;

}

outlet

{

type inletOutlet;

inletValue $internalField;

value $internalField;

}

topAndBottom

{

type inletOutlet;

inletValue $internalField

value $internalField;

}

}

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* //

```

This foamfile includes directives for initial conditions and constraint types, and it specifies boundary conditions for walls, inlet, outlet, and topAndBottom.

find\_tutorial\_file: input epsilon file of case poolEvaporationMultiComponent (domain: multiphase, category: None, solver:icoReactingMultiphaseInterFoam) in 0.orig folder:

/\*--------------------------------\*- C++ -\*----------------------------------\*\

| ========= | |

| \\ / F ield | OpenFOAM: The Open Source CFD Toolbox |

| \\ / O peration | Version: v2312 |

| \\ / A nd | Website: www.openfoam.com |

| \\/ M anipulation | |

\\*---------------------------------------------------------------------------\*/

FoamFile

{

version 2.0;

format ascii;

class volScalarField;

object epsilon;

}

// \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* //

dimensions [0 2 -3 0 0 0 0];

internalField uniform 1e-3;

boundaryField

{

bottom

{

type epsilonWallFunction;

value $internalField;

}

top

{

type inletOutlet;

inletValue $internalField;

value $internalField;

}

left

{

type epsilonWallFunction;

value $internalField;

}

right

{

type epsilonWallFunction;

value $internalField;

}

frontAndBack

{

type empty;

}

}

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* //

File 'epsilon' is going to be written

dict\_keys(['id', 'choices', 'created', 'model', 'object', 'system\_fingerprint', 'usage'])

folder\_name '0.orig'

file\_name 'epsilon'

File saved successfully at /data/sda/lichenshuo/XiMuAlpha4CFD/run/Cylinder\_Flow\_1/'0.orig'/'epsilon'

tutorial\_file: None

find\_similar\_foamfile: Based on the provided context, the foamfile for 'p' in '0.orig' of the case named "Cylinder\_Flow\_1" most closely matches the input p file of case cylinderAndBackground with the domain: incompressible, category: cylinder, and solver: overPimpleDyMFoam. This is because both files have similar boundary conditions and dimensions relevant to incompressible flow around a cylinder.

find\_tutorial\_file: input p file of case cylinderAndBackground (domain: compressible, category: hotCylinder, solver:overRhoSimpleFoam) in 0.orig folder:

/\*--------------------------------\*- C++ -\*----------------------------------\*\

| ========= | |

| \\ / F ield | OpenFOAM: The Open Source CFD Toolbox |

| \\ / O peration | Version: v2312 |

| \\ / A nd | Website: www.openfoam.com |

| \\/ M anipulation | |

\\*---------------------------------------------------------------------------\*/

FoamFile

{

version 2.0;

format ascii;

class volScalarField;

object p;

}

// \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* //

#include "include/initialConditions"

dimensions [1 -1 -2 0 0 0 0];

internalField uniform $pressure;

boundaryField

{

#includeEtc "caseDicts/setConstraintTypes"

wall

{

type zeroGradient;

}

inlet

{

type zeroGradient;

}

outlet

{

type fixedValue;

value $internalField;

}

topAndBottom

{

type zeroGradient;

}

}

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* //

File 'p' is going to be written

……

File 'setFieldsDict' is going to be written

dict\_keys(['id', 'choices', 'created', 'model', 'object', 'system\_fingerprint', 'usage'])

folder\_name 'system'

file\_name 'setFieldsDict'

File saved successfully at /data/sda/lichenshuo/XiMuAlpha4CFD/run/Cylinder\_Flow\_1/'system'/'setFieldsDict'

## roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

2024-08-24 22:57:20.363 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_total: ```your\_allrun\_file\_here

#!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

```

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 1

## roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

2024-08-24 22:57:24.784 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

### review: InputWriter

2024-08-24 22:57:24.786 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

### review: Runner

2024-08-24 22:57:24.800 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 2

2024-08-24 22:57:24.814 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:24.815 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:24.825 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 3

2024-08-24 22:57:24.837 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:24.839 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:24.849 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 4

2024-08-24 22:57:24.862 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:24.865 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:24.877 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 5

2024-08-24 22:57:24.890 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:24.892 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:24.901 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 6

2024-08-24 22:57:24.914 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:24.915 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:24.925 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 7

2024-08-24 22:57:24.938 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:24.940 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:24.949 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 8

2024-08-24 22:57:24.962 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:24.964 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:24.973 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 9

2024-08-24 22:57:24.986 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:24.987 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:24.997 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 10

2024-08-24 22:57:25.013 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:25.015 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:25.024 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 11

2024-08-24 22:57:25.037 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:25.038 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:25.048 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 12

2024-08-24 22:57:25.059 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:25.061 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:25.070 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 13

2024-08-24 22:57:25.082 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:25.084 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:25.094 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 14

2024-08-24 22:57:25.108 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:25.110 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:25.120 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 15

2024-08-24 22:57:25.135 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:25.138 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:25.147 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 16

2024-08-24 22:57:25.162 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:25.163 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:25.173 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 17

2024-08-24 22:57:25.185 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:25.186 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:25.196 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 18

2024-08-24 22:57:25.210 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:25.212 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:25.223 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 19

2024-08-24 22:57:25.237 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow

2024-08-24 22:57:25.239 | INFO | roles.InputWriter:\_act:24 - Yuxuan: to do InputWriterAction(InputWriterAction)

number\_subtasks Reviewer: 1

get\_memories\_InputWriter [user: None]

File already exists in . Skipping...

2024-08-24 22:57:25.249 | INFO | roles.Runner:\_act:20 - Foamer: to do RunnerAction(RunnerAction)

allrun\_write2: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

allrun\_write: #!/bin/sh

cd "${0%/\*}" || exit # Run from this directory

. ${WM\_PROJECT\_DIR:?}/bin/tools/RunFunctions # Tutorial run functions

#------------------------------------------------------------------------------

./Allrun.pre

runApplication blockMesh

runApplication setFields

runApplication simpleFoam

#------------------------------------------------------------------------------

initial\_files: {"'0.orig'": {"'p'", "'U'", "'nut'", "'k'", "'epsilon'"}, "'system'": {"'setFieldsDict'", "'fvSolution'", "'blockMeshDict'", "'fvSchemes'", "'controlDict'"}, "'constant'": {"'turbulenceProperties'", "'transportProperties'"}}

error\_logs: []

No error logs found.

controlDict file not found.

loop: 20

reach max loops 20

## review done, reach max loops 20

Subdirectory File Count Line Count

======================================================================

'0.orig' 5 204

'system' 5 260

'constant' 2 34

======================================================================

Total 12 498

2024-08-24 22:57:25.263 | INFO | roles.Reviewer:\_act:22 - Xingyu: to do ReviewerAction(ReviewerAction)

files\_names: ["'epsilon'", "'nut'", "'k'", "'p'", "'U'", "'controlDict'", "'fvSolution'", "'fvSchemes'", "'setFieldsDict'", "'blockMeshDict'", "'turbulenceProperties'", "'transportProperties'"] {"'epsilon'": "'0.orig'", "'nut'": "'0.orig'", "'k'": "'0.orig'", "'p'": "'0.orig'", "'U'": "'0.orig'", "'controlDict'": "'system'", "'fvSolution'": "'system'", "'fvSchemes'": "'system'", "'setFieldsDict'": "'system'", "'blockMeshDict'": "'system'", "'turbulenceProperties'": "'constant'", "'transportProperties'": "'constant'"}

command: None

requirement: do a RANS simulation of flow around a cylinder using simpleFoam. The simulation investigates the steady flow field around a circular cylinder in an incompressible fluid at Reynolds number of 100. Case name: Cylinder\_Flow