Fluent Mesh File Format

File Structure

1) Mesh Information
2) Nodes
3) Faces and connectivity
4) Cells
5) Zone Assignment

Comments

(0

Comments are indicated by open parenthesis followed directly by zero “(0”

)

Dimension

If 3D, the first non-comment line will be

(2 3)

Else, 2D will have

(2 2)

Nodes (Vertices)

(10 (id start_index_interior end_index_interior type) ← Information line

X y z

x y z

. . .

$x_{last\_interior}$ $y_{last\_interior}$ $z_{last\_interior}$

))

(10 (id start_index_boundary end_index_boundary type)(← Information line

X y z

x y z

. . .

$x_{last\_boundary}$ $y_{last\_boundary}$ $z_{last\_boundary}$

))

Faces and Connectivity

(13 (id start_index$_{interior}$(HEX) end_index$_{interior}$(HEX) type elemType)(← Information line

V1(HEX) V2(HEX) . . . VN(HEX) C1(HEX) C2(HEX)

V1(HEX) V2(HEX) . . . VN(HEX) C1(HEX) C2(HEX)

V1(HEX)$_{last\_interior}$ V2(HEX)$_{last\_interior}$ . . . VN(HEX)$_{last\_interior}$ C1(HEX)$_{last\_interior}$ C2(HEX)$_{last\_interior}$

))

(13 (id start_index$_{boundary}$(HEX) end_index$_{boundary}$(HEX) type elemType)(← Information line

V1(HEX) V2(HEX) . . . VN(HEX) C1(HEX) C2(HEX)

V1(HEX) V2(HEX) . . . VN(HEX) C1(HEX) C2(HEX)

V1(HEX)$_{last\_boundary}$ V2(HEX)$_{last\_boundary}$ . . . VN(HEX)$_{last\_boundary}$ C1(HEX)$_{last\_boundary}$ C2(HEX)$_{last\_boundary}$

))

Where “V” denotes vertices, “C” are cells and (HEX) indicates hexadecimal

In 2D, connectivity obeys the following