APPENDIX 1:   .face File Format

This file format begins with a header block with identifying information, and basic information about the file. It is similar in nature to the standard .obj file, but much simpler, as it leaves out normals, texture coordinates, &c.

You should have a header and two blocks in the following order:
1.   Vertex block
2.   Face block

In the vertex block, each vertex is listed by number with its xyz coordinates on a single line.

In the face block, each face is listed by number with its face indices on a single line in CCW order.

```
# University of Leeds 2022-2023
# COMP 5812M Assignment 1
# Your Name Goes Here
# Your Student Number Goes Here
#
# Object Name: Cube
# Vertices=8 Faces=12
#
Vertex 0   0.000000   0.000000   0.000000
Vertex 1   1.000000   0.000000   0.000000
Vertex 2   1.000000   0.000000   1.000000
Vertex 3   0.000000   0.000000   1.000000
Vertex 4   0.000000   1.000000   0.000000
Vertex 5   1.000000   1.000000   0.000000
Vertex 6   0.000000   1.000000   1.000000
Vertex 7   1.000000   1.000000   1.000000
Face  0   0   1   2
Face  1   0   2   3
Face  2   0   4   5
Face  3   0   5   1
Face  4   0   3   6
Face  5   0   6   4
Face  6   1   5   2
Face  7   5   7   2
Face  8   3   2   6
Face  9   2   7   6
Face 10   6   7   5
Face 11   6   5   4
```

APPENDIX 2:   .diredge File Format

This file format is an extended version of the .face file format. It begins with the same header block, and adds additional blocks to the file.

You should have a header and four blocks in the following order:
          1.   Vertex block (as for the .face file)
          2.   First Directed Edge block
          3.   Face block (as for the .face file)
          4.   Other Half block

The reason why we insert 2. before 3. rather than after it is that the Vertex & FirstDirectedEdge blocks are the same size.

In the vertex block, each vertex is listed by number with its xyz coordinates on a single line.

In the first directed edge block, the ID of the vertex is listed, with the ID of the first directed edge at each vertex. Note that this is not canonical, as any directed edge from the vertex may be chosen.

In the face block, each face is listed by number with its face indices on a single line in CCW order.

In the other half block, each directed edge is listed by number, with the other directed edge pointing in the opposite direction that pairs with it

```
# University of Leeds 2022-2023
# COMP 5812M Assignment 1
# Your Name Goes Here
# Your Student Number Goes Here
#
# Object Name: Cube
# Vertices=8 Faces=12
#
Vertex 0   0.000000   0.000000   0.000000
Vertex 1   1.000000   0.000000   0.000000
Vertex 2   1.000000   0.000000   1.000000
Vertex 3   0.000000   0.000000   1.000000
Vertex 4   0.000000   1.000000   0.000000
Vertex 5   1.000000   1.000000   0.000000
Vertex 6   0.000000   1.000000   1.000000
Vertex 7   1.000000   1.000000   1.000000
FirstDirectedEdge 0    1
FirstDirectedEdge 1    2
FirstDirectedEdge 2    0
FirstDirectedEdge 3    3
FirstDirectedEdge 4    8
FirstDirectedEdge 5    6
FirstDirectedEdge 6    12
FirstDirectedEdge 7    23
Face  0  0  1  2
Face  1  0  2  3
Face  2  0  4  5
Face  3  0  5  1
Face  4  0  3  6
Face  5  0  6  4
```

```
Face  6  1  5  2
Face  7  5  7  2
Face  8  3  2  6
Face  9  2  7  6
Face 10  6  7  5
Face 11  6  5  4
OtherHalf 0    4
OtherHalf 1    9
OtherHalf 2   18
OtherHalf 3   13
OtherHalf 4    0
OtherHalf 5   25
OtherHalf 6   10
OtherHalf 7   15
OtherHalf 8   35
OtherHalf 9    1
OtherHalf 10    6
OtherHalf 11   19
OtherHalf 12   16
OtherHalf 13    3
OtherHalf 14   24
OtherHalf 15    7
OtherHalf 16   12
OtherHalf 17   33
OtherHalf 18    2
OtherHalf 19   11
OtherHalf 20   21
OtherHalf 21   20
OtherHalf 22   32
OtherHalf 23   28
OtherHalf 24   14
OtherHalf 25    5
OtherHalf 26   27
OtherHalf 27   26
OtherHalf 28   23
OtherHalf 29   31
OtherHalf 30   34
OtherHalf 31   29
OtherHalf 32   22
OtherHalf 33   17
OtherHalf 34   30
OtherHalf 35    8
```