**OFF (file format)**

From Wikipedia, the free encyclopedia

|  |  |
| --- | --- |
| OFF geometry format | |
| [**Filename extension**](https://en.wikipedia.org/wiki/Filename_extension) | .off |
| **Type of format** | 3D model format |

**OFF** (**O**bject **F**ile **F**ormat) is a [geometry](https://en.wikipedia.org/wiki/Geometry" \o "Geometry) definition [file format](https://en.wikipedia.org/wiki/File_format" \o "File format) containing the description of the composing [polygons](https://en.wikipedia.org/wiki/Polygons" \o "Polygons) of the 3D object. [[1]](https://en.wikipedia.org/wiki/OFF_(file_format)" \l "cite_note-1)

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**Composition**

* first line: number of vertices, number of faces, number of edges (can be ignored)
* list of vertices: X, Y and Z coordinates
* list of faces: number of vertices, followed by the sequence number of the composing vertices (indexed from zero)
  + Optional face color information can follow the vertex list

**Example**

OFF

# cube.off

# A cube

8 6 12

1.0 0.0 1.4142

0.0 1.0 1.4142

-1.0 0.0 1.4142

0.0 -1.0 1.4142

1.0 0.0 0.0

0.0 1.0 0.0

-1.0 0.0 0.0

0.0 -1.0 0.0

4 0 1 2 3 255 0 0 #red

4 7 4 0 3 0 255 0 #green

4 4 5 1 0 0 0 255 #blue

4 5 6 2 1 0 255 0

4 3 2 6 7 0 0 255

4 6 5 4 7 255 0 0

**See also**

* [Wavefront .obj file](https://en.wikipedia.org/wiki/Wavefront_.obj_file)
* [STL (file format)](https://en.wikipedia.org/wiki/STL_(file_format))
* [PLY (file format)](https://en.wikipedia.org/wiki/PLY_(file_format)" \o "PLY (file format)) is an alternative file format offering more flexibility than most [stereolithography](https://en.wikipedia.org/wiki/Stereolithography" \o "Stereolithography) applications.

**References**

* 1. [*"OFF file format (Princeton)"*](http://segeval.cs.princeton.edu/public/off_format.html)*.*

**External links**

* [Description of the OFF format in the Geomview manual](http://www.geomview.org/docs/html/OFF.html)