

Game Data File (GDF) Format – Version 2.0

The following describes the general format of version 2.0 of a game data file. You may create higher versions with added features if you wish, but they should be backwards compatible with version 2.0. (If you do this, it is recommended you use 2.1, 2.2, etc., as there are already plans for 3.0, etc. to be issued by the instructor.)

GDF 2.0 Environment Name // Magic word, version number and environment name.
// Comments are ignored, as are blank lines

PLACES nPlaces // Place section keyword, followed by an integer number of places
// By default the first place listed is the starting point for this environment

nPlaces
times { ID long_name_with_spaces // ID is a unique integer in the range of a 32-bit signed int
// ID numbers 0 and 1 are reserved
// Normally all ID numbers are positive (see below)
// followed by the name of the Place (remainder of line except comments)
*description // One or more lines of text describing the Place, starting with an *

PATHS nPaths // Path section keyword, followed by an integer number of paths

nPaths
times { ID source direction destination lockPattern
// ID is a unique integer in the range of 32-bit signed ints
// source and destination correspond to Place IDs
// A negative destination indicates a locked door
// Destination 1 exits the program
// Destination 0 leads “nowhere”, and implies the door is locked and must stay locked
// (Provides for future expansion of the environment)
// direction indicates the direction from source to destination, and must be one of:
// N, S, E, W, U, D, NE, NW, SE, SW,
// NNE, NNW, SSE, SSW, ENE, ESE, WNW, WSW
// lockPattern is a 32-bit int indicating the pattern (combination) of lock on this path
// lockPattern = 0 indicates there is no key that can change this lock status

LIGHTING nEntries // Lighting section keyword, followed by an integer number of entries

nEntries
times: { ID placeID lightLevel
// ID is a unique integer in the range of 32-bit signed ints
// placeID corresponds to a previously defined place.
// lightLevel is an integer on the following scale:
// 0 = pitch dark
// 50 = normal inside room lighting
// 75 = bright sunlight
// 100 = blinding, as in looking straight into a bright spotlight or arc welder
// Default light level of all places if not otherwise specified is 50
// Assign a light level to place 0 to change the overall default level

ARTIFACTS nArtifacts // Artifacts section keyword, followed by an integer number of artifacts

nArtifacts
times: { ID placeID value movability name
// ID is a unique integer in the range of 32-bit signed ints
// placeID corresponds to a Place, indicating its original location.
// value can be used for scoring points, or eventually for bartering & trade (integer)
// movability is 0 for immovable objects, non-zero for movable objects (integer)
// name allows user to refer to this object, and may contain spaces but not tabs
*description // One or more lines of text describing the Artifact, starting with an *

nKeys
times: { KEYS nKeys // Key section keyword, followed by an integer number of keys

keyID placeID keyPattern masterCode value movability name
// keyID is a unique integer in the range of 32-bit signed ints
// placeID corresponds to a Place, indicating its original location.
// keyPattern is a 32-bit int. This key operates any item with a matching lockPattern
// Divide lockPattern by 10^masterCode, then check if lockPattern == keyPattern
// Example: keyPattern 52 with masterCode 2 works all locks 5200 to 5299
// Note that 10^0 = 1, so masterCode = 0 is an ordinary key fitting only 1 lock
// value, movability, and name are as for general Artifacts
*description // One or more lines of text describing the Key, starting with an *

nLights
times: { LIGHTS nLights // Light section keyword, followed by an integer number of lights

lightID placeID lightLevel value movability name
// lightID is a unique integer in the range of 32-bit signed ints
// placeID corresponds to a Place, indicating its original location.
// lightLevel is an integer for the amount of light this Light adds to a place
// The sum of ambient plus carried lights cannot exceed 100
// value, movability, and name are as for general Artifacts
*description // One or more lines of text describing the Light, starting with an *

// Higher versions of the GDF file format may contain additional sections
// such as properties of the items indicated above, tools, nutrition, or other kinds of artifacts.