Game Data File (GDF) Format

The following describes the general format of version 1.0 of a game data file. You may create higher versions with added features if you wish, but they should be backwards compatible with version 1.0. (If you do this, it is recommended you use 1.1, 1.2, etc., as there are already plans for 2.0, 3.0, etc. to be issued by the instructor.)

GDF 1.0   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
        // 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
}

// Higher versions of the GDF file format may contain additional sections
// such as properties of the items indicated above.

Sample Environment

A sample file, sixRooms.gdf is provided on the course web site. The corresponding network diagram is as follows:
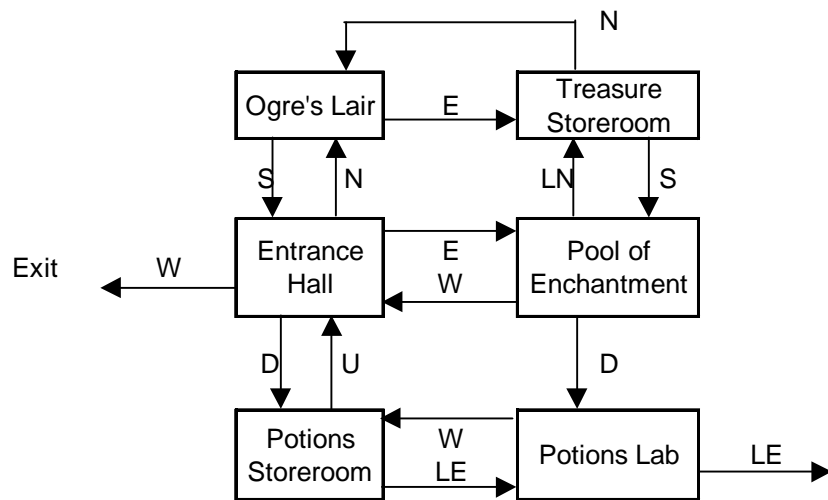
Just to illustrate that the place ID numbers do not have to be sequential, the ID numbers are assigned as two-digit number for column and row, starting from the lower left. (Tens digit indicates column, ones the row.) So this makes the Potions Storeroom room 11 and the Treasure Storeroom room 23. Additional floors would jump to the hundreds or thousands, etc.