

## Variable Documentation

### Real Variables

A =	O = Over
B =	P = [Next] Position
C =	Q = Draw Character Only
D = Down	R = Right
E =	S = Special
F = First Time	T = Transmute
G =	U = Up
H = Halt On Special	V = Reload/No Movement
I = Character X	W = Word (Display)
J = Character Y	X = Draw Map
K = Key Code	Y = Draw Map
L = Left	Z = Used In Decompression
M = Map	θ = Marquee Scrolling Speed Delay
N = Sub-Map	

### List Variables

LFHT(1) = Map # 1 Completed	LFHT(8) = Map # 8 Completed
LFHT(2) = Map # 2 Completed	LFHT(9) = Map # 9 Completed
LFHT(3) = Map # 3 Completed	LFHT(10) = Map # 10 Completed
LFHT(4) = Map # 4 Completed	LFHT(11) = Marquee Scrolling Speed
LFHT(5) = Map # 5 Completed	LFHT(12) = File Exists If = $\sqrt[3]{3^{-1}\pi}$
LFHT(6) = Map # 6 Completed	LFHT(13) = Run Internal Subprogram
LFHT(7) = Map # 7 Completed	LTSMF & LTSMI = Temporary lists

### String Variables

Str0 = Map Display String  
Str1 = Marquee Display String

### Matrix Variables

[F] = Floor Code  
[I] = Image Code

### [F] Matrix Codes:

0 = Empty Space (although may not appear to be)  
1 = Wall (although may not appear to be)  
2 = Special Command  
3 = Treasure (Game Over)  
4 = Special Command On Selection (**ENTER** or **2nd**)

### [I] Matrix Codes:

$\frac{0}{0}$	$\frac{1}{1}$	$\frac{2}{2}$	$\frac{3}{3}$	$\frac{4}{4}$	$\frac{5}{5}$	$\frac{6}{6}$	$\frac{7}{7}$	$\frac{\pi}{8}$	$\frac{\div}{9}$	$\frac{'}{10}$	$\frac{+}{11}$	$\frac{(}{12}$	$\frac{)}{13}$	$\frac{[}{14}$	$\frac{]}{15}$	$\frac{\{ }{16}$
$\frac{]}{17}$	$\frac{\sqrt{}}{18}$	$\frac{-}{19}$	$\frac{\wedge}{20}$	$\frac{\cdot}{21}$	$\frac{\geq}{22}$	$\frac{\leq}{23}$	$\frac{\geq}{24}$	$\frac{\leq}{25}$	$\frac{\neq}{26}$	$\frac{\equiv}{27}$	$\frac{\times}{28}$	$\frac{\tau}{29}$	$\frac{\circ}{30}$	$\frac{A}{31}$	$\frac{B}{32}$	$\frac{C}{33}$
$\frac{D}{34}$	$\frac{E}{35}$	$\frac{F}{36}$	$\frac{G}{37}$	$\frac{H}{38}$	$\frac{I}{39}$	$\frac{J}{40}$	$\frac{K}{41}$	$\frac{L}{42}$	$\frac{M}{43}$	$\frac{N}{44}$	$\frac{O}{45}$	$\frac{P}{46}$	$\frac{Q}{47}$	$\frac{R}{48}$	$\frac{S}{49}$	$\frac{T}{50}$
$\frac{U}{51}$	$\frac{V}{52}$	$\frac{W}{53}$	$\frac{X}{54}$	$\frac{Y}{55}$	$\frac{Z}{56}$	$\frac{\theta}{57}$	$\frac{\emptyset}{58}$	$\frac{1}{59}$	$\frac{2}{60}$	$\frac{3}{61}$	$\frac{4}{62}$	$\frac{5}{63}$	$\frac{6}{64}$	$\frac{7}{65}$	$\frac{8}{66}$	$\frac{9}{67}$
$\frac{i}{68}$	$\frac{l}{69}$	$\frac{n}{70}$	$\frac{\blacktriangleright}{71}$	$\frac{x}{72}$	$\frac{\Sigma}{73}$	$\frac{\Delta}{74}$										

## **Variable Usage**

### **Real Variables:**

U, D, L and R are integer variables. They are used to control the directional arrows. They are assigned the same values as their respective keycodes; that is, U is set to 25 if you want the “Up Arrow” button to make the character move upwards. This allows for the game to manipulate the directional arrows, to restrict the user, or to confuse the user by changing their values. For normal controls, U=25, D = 34, L=24, R=26.

F is a binary variable. It is used to determine the first time a map is being loaded so that it can set up the appropriate variables, and essentially load the map. However, variable F can also be used within a map, when combined with the V variable, to reset a map, and also with the N variable to draw a sub-map.

H is a binary variable. It is used to ignore the any “special” tile that the player is standing on at that particular moment, until the user moves elsewhere, in which it is deactivated. The H variable is useful when the program manipulates the character’s position to a special tile. i.e. teleporting to another teleporter would instantly teleport you elsewhere, if the H variable is not activated.

I and J are integer variables. They determine the current location of the main character, and when used with the Q variable, contain both its current position and previous position.

K is an integer variable. It is used as a temporary variable to store the keyCode of which button has been pressed.

M and N are integer variables. The M variable determines which Map/World is currently (or about to be) loaded. The N variable determines which sub-map of a world (when applicable) is currently (or about to be) loaded. Sub-maps are useful when extending the size of a map, for say, making the map longer width or length wise.

O is a binary variable. It is used to determine when the game is “over” to exit the game loop and return to the main menu.

P is an integer variable. It is used to determine what kind of tile the player is standing on (or about to stand on) to perform actions. It retrieves the tile type through the [F] matrix.

Q is a binary variable. It is used to redraw the character only, by erasing its previous position and redrawing its current one. Very useful when teleporting the player.

S is a binary variable. It is used to determine whether the function for a special position has been executed, and prevents other functions from accidental activation.

T is a binary variable. It is used to transmute (redraw) the map and player’s position. Very useful in instances of mass map manipulation, or the first time of running a map (or changing sub-maps).

V is a binary variable. It is used to reload the code (or loop the code) before the player movement function. In other words, it does everything except for allowing the user to move the player.

W is a integer variable. It is used to display the Str1 string as a scrolling marquee. When W=1, the map is redrawn only where the marquee was superimposed. If W=2 (or any number > 1) it does not redraw the map where the marquee was superimposed (useful when a message is being displayed before transmuting the map).

X and Y are integer variables. They are used as temporary variables to draw (or redraw) a map.

Z is an integer variable. It is used to temporarily store part of a compressed map for decompressing.

$\theta$  is an integer variable. It is used to store the length of delay for marquee scrolling.

**List Variables:**

LFTHT(1...10) are binary variables. They are used to determine which worlds have been completed.

LFTHT(11) is an integer variable. It is used to store the length of delay for marquee scrolling.

LFTHT(12) is a decimal variable. It is used to determine whether or not a file has been saved.

LFTHT(13) is a decimal variable. It is used to determine whether or not to execute the internal subprogram.

LTSMF and LTSMF are temporary lists. They are used to store compressed maps for decompression.

**String Variables:**

Str0 is used as a template of character tiles for display on the map.

Str 1 is used to store a string to be displayed as a scrolling marquee on the screen.

**Matrix Variables:**

The [F] and [I] matrices are 8×16 matrices, used to store information for each tile of a map.

The [F] matrix (floor code matrix) is used to store the codes for each tile of a map, regarding how the map interacts with the user. See the above code list for usage.

The [I] matrix (image code matrix) is used to store the character display for each tile of the map. See the above code list for usage.