

# Maze

## Overview

Explain some assumption for the maze like using a "cell" based maze

## Text Based Input Format

We have developed a text based maze format to make maze creation as easy as possible. The goal for the text based format are: 1) easy for designers to update/change a maze design 2) human readable (no extra tool needed for understanding) and 3) easy for the code to parse.

Below is a sample what it looks like:

```
BEGIN
+--+--+--+
|B  V  B|
+--+  +--+
|    |  |
+  +--+ +  +
|  B|R|B|  |
+--+ +  +--+
|B  |    B|
+--+--+--+
END
```

A text maze input file must contain "BEGIN" and "END" tags with the actual maze design between the tag.

As you can see the maze it self should be fairly straight forward. Below is a detail explanation for each characters.

- '+' : Wall joints (actually has no effect, besides making the maze easier to read)
- '-' : Horizontal walls
- '|' : Vertical walls
- 'R' : Robot initial location
- 'B' : Benign Bug locations
- 'V' : Vile Virus locations

The map should always start with a '+' at left upper corner. And each + should be separated by either a '-' or space character vertically Also, it should separate by a '|' or space vertically.

## Adding Crypto Challenges

Each 'V' in the maze must have a corresponding crypto prompt. This is done by adding a PROMPT, CHALLENGETEXT and ANSWERTEXT for each 'V'. These are listed after the maze END block and are processed one-to-one for each 'V' in the maze from top left to bottom right (reading order).

Here is an example of the prompt:

```
PROMPT: Decode the following with a key of 5
CHALLENGETEXT: MJQQTBTWQI
ANSWERTEXT: HELLO WORLD
```

## Steps for Running a Custom Maze

Save your text maze file with a .maze extention. Then you simply need to drag'n'drop the .maze files desired on the challenge.bat/.app file. This will automatically load the mazes into the engine.

The drag'n'drop actually adds the absolute paths of the maze files as command line arguments to the engine.

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