COMPETITIVE ANALYSIS

**Comparison of part 1: (Image conversion)**

Many picture to ascii conversion programs already exist. Some of them are:

* <https://picascii.com/>
* <http://www.text-image.com/convert/ascii.html>
* <http://manytools.org/hacker-tools/convert-images-to-ascii-art/>
* Most of these existing products I found make use of a very basic algorithm that compute the brightness/intensity of blocks of pixels in the image, and map said block to a certain asci character depending on the brightness.

In contrast to this, I wanted to implement an edge detection algorithm in addition to the brightness determining one. The edge detecting algorithm would use mathematical optimizations, as well as filters to generate characters along the outline of the picture. The results would look very different from the brightness algorithm. The edge results of the edge detection algorithm are similar to ANSII art:

 (Image source: <https://upload.wikimedia.org/wikipedia/commons/thumb/d/d5/Mona01.svg/440px-Mona01.svg.png)>

* <https://picascii.com/> also uses colored characters to mimic the picture. In that cases, the asci conversion would be very easy; the algorithm would essentially convert every I decided to cutoff the feature for purely aesthetic reasons, although it would not be too difficult to implements.
* <http://www.jave.de/#description> is arguably most competitive product I found. It is a program capable of creating ASCII art in java, and can accomplish everything I plan to do in this part amongst its many features.

**Comparison of part 2: ( ASCII maze):**

* I found several 2D ASCII maze games, for e.g.: <http://games144.com/game/39556-ascii-maze-game.php> which lacked the 3D feature of my planned product
* I found 1 ascii maze in 3D, but it had fewer features than I planned to include (asci pictures, time constraint/ villain, health etc)
* I found several ASCII games in 3D, on steam (<http://store.steampowered.com/)> but they were mostly text based console games, revolving around the plot
* my inclusion of an ASCII image with hints on solving the maze is definitely unique among the products that exist.