

# The Map parsing Notes

---

- ☒ Check if the Map line starts with 1 or ''
- ☒ Calculate the Length of each line and the height of all the map using the counter
- ☒ Check if the content Inside of the Map is one of those **012NSEW**
- ☒ Check if the Map is valid else return and exit successfully from the program
- ☒ Allocate a 2D Array with the exact same width and height
- ☒ Start Filling our Matrice with the content of the map in the config file

## Drawing the map

- ☒ draw our map directly from the File
- ☐ Checking all the incoming errors !!
- ☐ Then we can start raycasting

## Some of the best practices in memory allocation in C (Allocate a 2D Array)

### "Problem"

- The normal way to allocate 10 lines and 3 columns in C

```
int **arr = malloc(sizeof(int) * 10);
for (int i = 0; i < 3; i++) {
    arr[i] = malloc(sizeof(int) * 3);
}
```

### "THE SOLUTION"

```
int **arr = malloc(sizeof(int) * 10 * 3);
```

*and make an array with the size of number of lines (height)*

```
int *array = malloc (sizeof(int) * 10);
```

*and points to every start of line of the first array*

```
for (int i = 0; i < 10; i++)
    array[i] = arr + 10 * i;
```