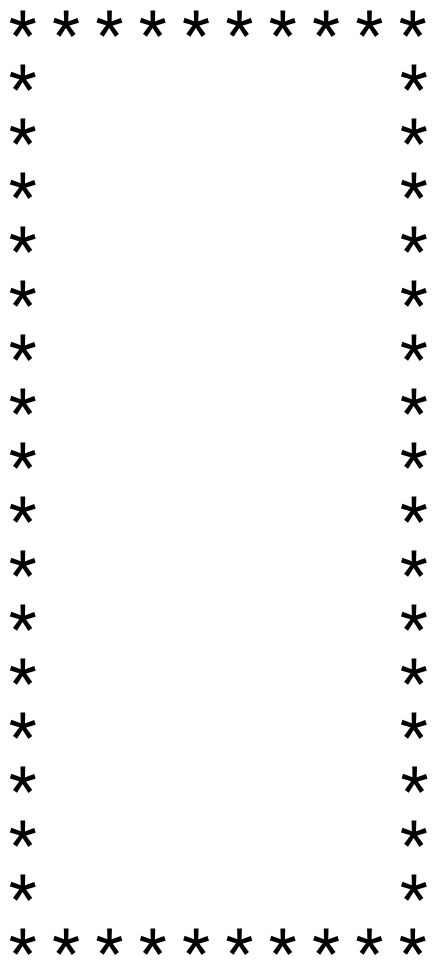
Module 1 :

Create a 18 x 10 matrix and give an outer border to the matrix. The inner space will be the playable grid, which is of shape 16 * 8



Module 2:

Get an input 'Shape' and spawn the corresponding figure at the top of the grid.

Shape	Figure
S	`  * *` `* *`

L	`  *`
	`  *`
	`  * *`

T	`* * *`
	`  *`
	`  *`

SQ	`* *` `* *`

Shape	Figure
Z	`* *` `  * *`

ML	`  *`
	`  *`
	`* *`

I	`*` `*` `*`

Input **:** Shape - **Z**

```
* * * * * * * * * * *
*       * *         *
*         * *       *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
* * * * * * * * * * *
```

Input : Shape - **ML**

```
* * * * * * * * * * *
*           *       *
*           *       *
*         * *       *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
*                   *
* * * * * * * * * * *
```

Module 3 :

Get input - Rotate Right **(E)** / Rotate Left **(Q)**, and rotate the shape in the corresponding direction.

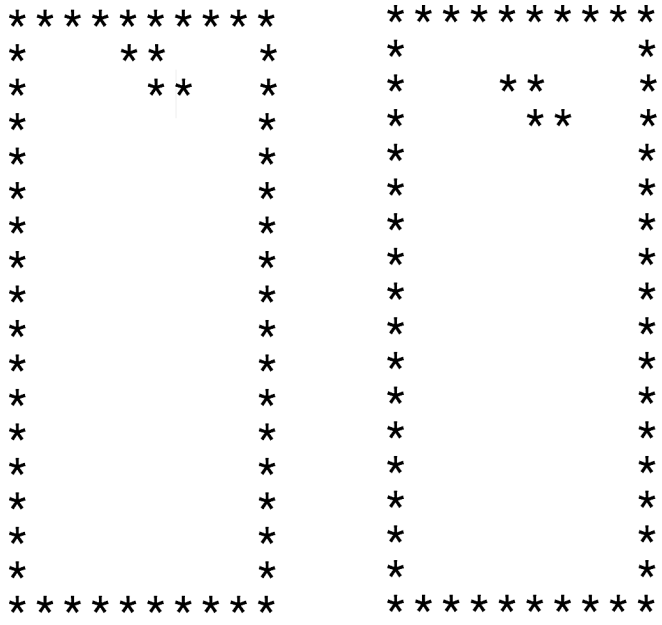
Input : Shape - **ML**

Input : Rotate - **Q**

Module 4:

Add options - Move Left **(A)** / Move Down **(S)** / Move Right **(D)** and move the shape in the corresponding direction until the shape hits the bottom floor

Shape - **Z**



Move - **S**

Move - **D**

Move - **E**

Note : The available movement options from now on will be [Q, A, S, D, E]

Module 5:

- Get all input shapes as array. (Eg. [S, ML, SQ])
- Spawn the first shape, once the bottom of the shape touches the bottom grid border spawn the next shape.
- Retain the occupied positions in the grid while spawning new shapes.
- Every time a shape sets foot on the bottom grid border or a previous shape, spawn a new shape. A bottomed shape can no longer be accessed.
- Once any row is full, remove the row and bring down the rows above. (Multiple rows can be deleted at a single move)

Random Position

Move - **E, S**

Move - **S**

Note : The shapes can also be generated in Random.

Module : 6 (Let's play Tetris!)

- Assign score = 0 as the game starts, add 100 points to score for every row deleted.
- As the game progresses, the shapes keep piling up. When the pile gets high enough such that the next shape cannot be spawned (a spawning position is occupied already), declare game over and display the score.