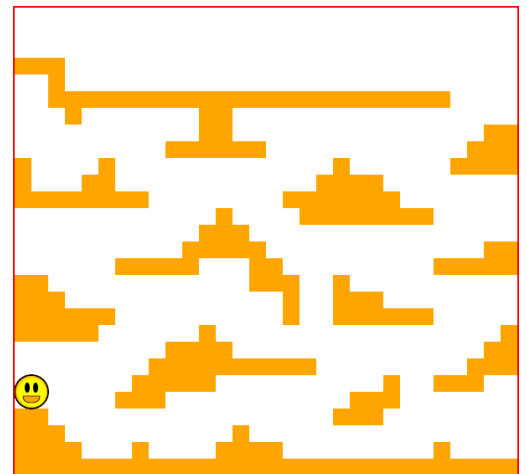# COMP4021 Midterm Review Question

In your lab 5 you put platforms in your SVG platform game using a lot of SVG rectangles. This task is time consuming and requires a lot of calculation for the correct position and size of the platforms.

In this question, a function *createPlatforms()* is given together with an array called *GAME_MAP*. This function is used to create and add platforms in the game using JavaScript according to the values inside the *GAME_MAP* array.

Each character inside a string of the array represents a 20x20 area in the game. A space in the string means no platform exists at that point whereas a hash means a platform is in that area. By going through the content of the array, platforms (i.e. the SVG rectangles) can be added to the SVG platforms group, which is initially empty.

```
var GAME_MAP = new Array(
    "                              ",
    "                              ",
    "                              ",
    "###                           ",
    "   #                          ",
    "    #######################   ",
    "     #       ##               ",
    "             ##            ##",
    "          ######          ###",
    "#      #            #      ####",
    "#    ##             ####      ",
    "########       #######        ",
    "              #     ########   ",
    "             ###               ",
    "            #####           ##",
    "      #####   ##        #####",
    "##            ###   #         ",
    "###             #   ###       ",
    "######         #  ######      ",
    "#####     #                #",
    "         ####              ##",
    "         ##########       ###",
    "       #####        #  ###   ",
    "      ###           ###       ",
    "##                  ###       ",
    "###          #                ",
    "####    #    ####        #     ",
    "##############################"
);
```

<=>

You don't have to handle the smiley face and the border around the whole game in this question

```
function createPlatforms() {
    var platforms = svgdoc.getElementById("platforms");

    for (y = 0; y < GAME_MAP.length; y++) {
        var start = null, end = null;

        for (x = 0; x < GAME_MAP[y].length; x++) {
            if (start == null && GAME_MAP[y].charAt(x) == '#')
                start = x;
            if (start != null && GAME_MAP[y].charAt(x) == ' ')
                end = x - 1;
            if (start != null && x == GAME_MAP[y].length - 1)
                end = x;

            if (start != null && end != null) {
                var platform =
                svgdoc.createElementNS("http://www.w3.org/2000/svg",
                                        "rect");
```

> *Add your code here*
>
> platform.setAttribute("x", start * 20);
> platform.setAttribute("y", y * 20);
> platform.setAttribute("width", (end - start + 1)*20);
> platform.setAttribute("height", 20);
> platform.setAttribute("fill", "orange");
>
> platforms.appendChild(platform);
>
> start = end = null;

```
                start = end = null;
            }
        }
    }
}
```

A section of code, which is indicated by a big box above, is missing. Please add the missing code in the box above to complete the function. The platforms are orange.