

## Exercise 2:

1. Explain the utility, functionality and the usage of CSS-preprocessors.

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Css preprocessor makes developers able to write reduced code, increases flexibility also prevents reuse of code.

In addition, it implements concepts like inheritance to plain css.

## Exercise 3:

1. a. What is a canvas element and what is its purpose?

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It is an html5 element that acts as a container to draw graphics(such as lines, boxes, circles etc.) with javascript.

b. How to embed canvas into an HTML page?  
How does the coordinate system look like?

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Canvas tag can be written into the body tag. It is a two-dimensional grid. Coordinates start from the upper-left corner of the canvas. For example “`context.fillRect(80, 60, 10, 20);`” means go to the position that is 80 pixels right and 60 pixels below of the upper-left corner(0,0), and draw a 10x20 pixels rectangle.

c. How do you draw with it? What functions can be used for this purpose?

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```
// Access the canvas element
```

```
var canvas = document.getElementById("myCanvas");
```

```
// Create a Drawing Object
```

```
var ctx = canvas.getContext("2d");
```

```
// Draw on the Canvas
```

```
ctx.fillStyle = "#FF0000";
```

```
ctx.fillRect(0,0,150,75);
```

## d. How can text and images be embedded?

It can be done by using `fillText`, `strokeText` and `drawImage` functions.

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### Examples:

```
var canvas = document.getElementById("myCanvas");  
var ctx = canvas.getContext("2d");  
ctx.font = "30px Arial";  
ctx.fillText("Hello World",10,50);
```

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```
window.onload = function() {  
    var canvas = document.getElementById("myCanvas");  
    var ctx = canvas.getContext("2d");  
    var img = document.getElementById("scream");  
    ctx.drawImage(img, 10, 10);  
};
```