

**Q. (a) How to make a comment in JavaScript ?**

**Ans:**

In JavaScript, you can use two types of comments: single-line comments and multi-line comments.

**1. Single-line comments:**

Single-line comments are used for adding comments on a single line.  
They start with `//` and everything after `//` on that line is treated as a comment.

```
// This is a single-line comment  
var x = 5; // You can add comments at the end of a line of code
```

**2. Multi-line comments:**

Multi-line comments are used for commenting out multiple lines of code.  
They start with `/*` and end with `*/`, and everything in between is treated as a comment.

```
/*  
This is a multi-line comment.  
It can span multiple lines.  
You can use it to comment out blocks of code.  
*/  
  
var y = 10;
```

Comments are helpful for documenting your code, explaining complex logic, or temporarily excluding code from execution. They are ignored by the JavaScript interpreter and are only there for developers to read.

**(b) What different options to display output to the screen in JS?**

**Ans:**

In JavaScript, there are several ways to display output to the screen. The choice of method depends on the context and environment where your JavaScript code is running. Here are some common options:

**Using console.log():**

In a browser environment, you can use console.log() to output information to the browser's console. This is useful for debugging and development purposes.

```
console.log("Hello, World!");
```

**Alert Boxes:**

You can use the alert() function to display a pop-up alert box with a message.

```
alert("Hello, World!");
```

Note: Alert boxes can be intrusive and are often not used in production code due to their disruptive nature.

**Writing to the HTML Document:**

You can manipulate the HTML document directly using the document.write() method. This method writes text to the document stream, but it's not commonly used in modern web development because of its limitations.

```
document.write("Hello, World!");
```

**Manipulating HTML Elements:**

You can manipulate HTML elements by updating their content using JavaScript. This is a more dynamic and controlled way to display output.

```
<div id="output"></div>

<script>
  document.getElementById("output").innerHTML = "Hello, World!";
</script>
```

### **Using innerText or textContent:**

You can set the innerText or textContent property of an HTML element to display text content.

```
<p id="output"></p>

<script>
  document.getElementById("output").innerText = "Hello, World!";
  // Or: document.getElementById("output").textContent = "Hello, World!";
</script>
```

### **Creating Elements Dynamically:**

You can dynamically create HTML elements and append them to the document.

```
<div id="output-container"></div>

<script>
  var outputDiv = document.getElementById("output-container");
  var newParagraph = document.createElement("p");
  newParagraph.textContent = "Hello, World!";
  outputDiv.appendChild(newParagraph);
</script>
```