Modules in JavaScript:

`Math` Object Methods

The `Math` object contains various methods for mathematical operations. Here are some of the commonly used methods with examples:

1. **`Math.abs(x)`**: Returns the absolute value of `x`.
   ```javascript
   console.log(Math.abs(-5)); // Output: 5
   ```

2. **`Math.ceil(x)`**: Returns the smallest integer greater than or equal to `x`.
   ```javascript
   console.log(Math.ceil(4.2)); // Output: 5
   ```

3. **`Math.floor(x)`**: Returns the largest integer less than or equal to `x`.
   ```javascript
   console.log(Math.floor(4.8)); // Output: 4
   ```

4. **`Math.round(x)`**: Returns the value of `x` rounded to the nearest integer.
   ```javascript
   console.log(Math.round(4.5)); // Output: 5
   ```

5. **`Math.max(...values)`**: Returns the largest of the provided values.
   ```javascript
   console.log(Math.max(1, 5, 3)); // Output: 5
   ```

6. **`Math.min(...values)`**: Returns the smallest of the provided values.
   ```javascript
   console.log(Math.min(1, 5, 3)); // Output: 1
   ```

7. **`Math.pow(base, exponent)`**: Returns the base raised to the exponent power.
   ```javascript
   console.log(Math.pow(2, 3)); // Output: 8
   ```

8. **`Math.sqrt(x)`**: Returns the square root of `x`.
   ```javascript
   ```

```
console.log(Math.sqrt(9)); // Output: 3
```

9. **`Math.sin(x)`** and **`Math.cos(x)`**: Returns the sine and cosine of `x` (measured in radians).
```javascript
console.log(Math.sin(Math.PI / 2)); // Output: 1
console.log(Math.cos(Math.PI)); // Output: -1
```

10. **`Math.log(x)`**: Returns the natural logarithm (base `e`) of `x`.
```javascript
console.log(Math.log(Math.E)); // Output: 1
```

`Math.random()` Method

The `Math.random()` method returns a pseudo-random floating-point number between 0 (inclusive) and 1 (exclusive).

- **Example**:
```javascript
let randomNumber = Math.random();
console.log(randomNumber); // Output: A random number between 0 and 1
```

You can combine `Math.random()` with other `Math` methods to generate random integers within a specific range.

- **Example**:
```javascript
let min = 1;
let max = 100;
let randomInteger = Math.floor(Math.random() * (max - min + 1)) + min;
console.log(randomInteger); // Output: A random integer between 1 and 100
```

`os` Module in Node.js

The `os` module is not available in JavaScript in the browser environment, but it is part of Node.js, the runtime environment for executing JavaScript server-side. The `os` module provides operating system-related utility methods. Here are some of the commonly used methods:

1. **`os.platform()`**: Returns the platform of the operating system.
   ```javascript
   const os = require('os');
   console.log(os.platform()); // Output: e.g., 'win32' for Windows
   ```

2. **`os.type()`**: Returns the operating system name.
   ```javascript
   const os = require('os');
   console.log(os.type()); // Output: e.g., 'Windows_NT' for Windows
   ```

3. **`os.release()`**: Returns the release of the operating system.
   ```javascript
   const os = require('os');
   console.log(os.release()); // Output: e.g., '10.0.19043' for Windows 10
   ```

4. **`os.cpus()`**: Returns an array of objects containing information about each logical CPU core.
   ```javascript
   const os = require('os');
   console.log(os.cpus()); // Output: Array of CPU information
   ```

5. **`os.totalmem()`** and **`os.freemem()`**: Returns the total and free memory in the system.
   ```javascript
   const os = require('os');
   console.log(`Total Memory: ${os.totalmem()} bytes`);
   console.log(`Free Memory: ${os.freemem()} bytes`);
   ```

6. **`os.homedir()`**: Returns the home directory of the current user.
   ```javascript
   const os = require('os');
   console.log(os.homedir()); // Output: e.g., 'C:\\Users\\username' for Windows
   ```

These are some examples of the methods available in the `os` module in Node.js. If you have any more questions or need additional information, feel free to ask!