

```

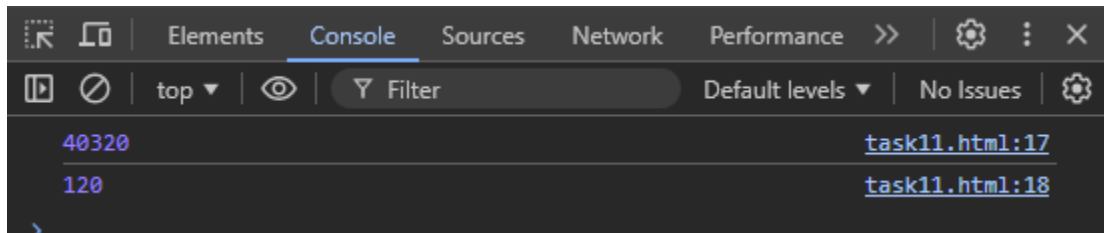
1.<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,initial-scale=1">
    <title> document</title>
  </head>
<body>
  <script>

const factorial=(num)=>{
  if (num === 0)
    return 1;
  return num*factorial(num-1);
};

console.log(factorial(8));
console.log(factorial(5));

  </script>
</body>
</html>

```



```

2. <!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,initial-scale=1">
    <title> document</title>
  </head>
<body>
  <script>

const fib=(num)=>{
  if (num === 0)
    return 0;
  if(num==1)
    return 1;

```

```

    return fib(num-1)+fib(num-2);
};

```

```

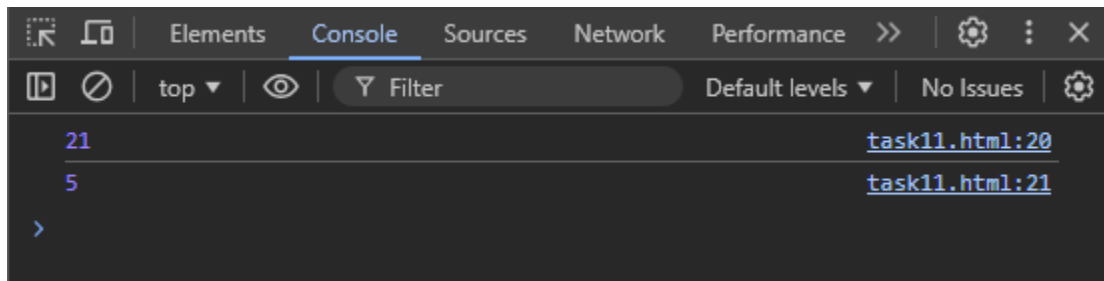
console.log(fib(8));
console.log(fib(5));

```

```

    </script>
</body>
</html>

```



3. `<!DOCTYPE html>`

```

<html lang="en">
  <head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,initial-scale=1">
    <title> document</title>
  </head>
<body>
  <script>

```

```

function countWays(n) {

  if (n === 0)
    return 1;

  if (n < 0)
    return 0;

  return countWays(n - 1) + countWays(n - 2) + countWays(n - 3);
}

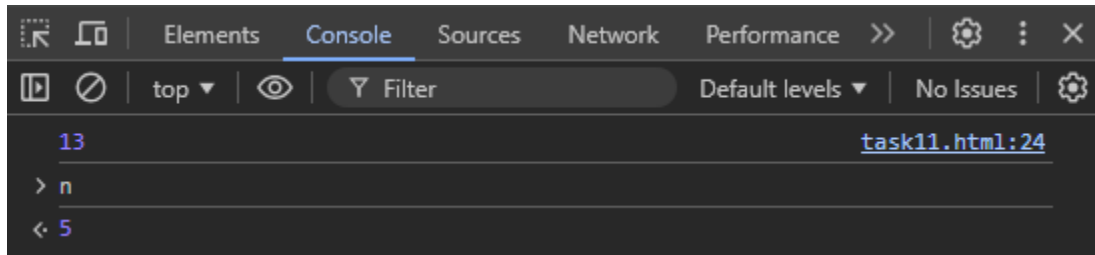
```

```

const n = +parseInt(prompt("enter n:"));
console.log(countWays(n));

```

```
    </script>
</body>
</html>
```



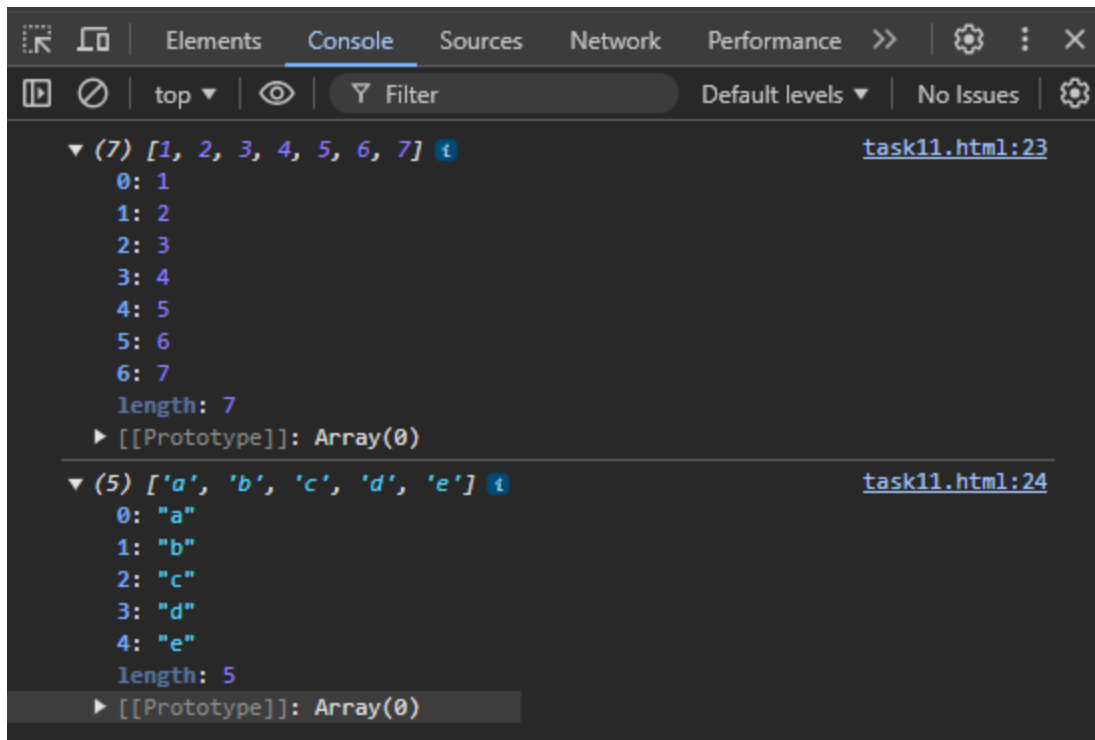
4. `<!DOCTYPE html>`

```
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,initial-scale=1">
    <title> document</title>
  </head>
<body>
  <script>
```

```
    const flatten = (arr) => {
      let result = [];
      arr.forEach(item => {
        if (Array.isArray(item)) {
          result = result.concat(flatten(item));
        } else {
          result.push(item);
        }
      });
      return result;
    };

    console.log(flatten([1, [2, 3], [4, [5, 6]], 7]));
    console.log(flatten([['a', 'b'], ['c', 'd'], 'e']));

  </script>
</body>
</html>
```



```
5. <!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,initial-scale=1">
    <title> document</title>
  </head>
<body>
  <script>

const towerOfHanoi = (n, source, destination, auxiliary) => {
  if (n === 1) {
    console.log(`Move disk 1 from ${source} to ${destination}`);
    return;
  }
  towerOfHanoi(n - 1, source, auxiliary, destination);

  console.log(`Move disk ${n} from ${source} to ${destination}`);

  towerOfHanoi(n - 1, auxiliary, destination, source);
};

towerOfHanoi(3, 'A', 'C', 'B');
```

```
</script>
</body>
</html>
```

