

## Closure Task:

```
<!DOCTYPE html>

<html>

<head>

  <title> Closure</title>

</head>

<body>

  <h1>Closure </h1>
```

//Task 1

```
<script>

  function outerFunction() {

    const capturedVar = 'I am a captured variable!';

    return function innerFunction() {

      console.log(capturedVar);

    };

  }

  const myFunction = outerFunction();

  myFunction();

</script>
```

// Task 2

```
<script>

  function counter() {

    let count = 0;

    return function increment() {

      count++;

      console.log('Counter:', count);

    };

  }

  const incrementCounter = counter();

  incrementCounter();

  incrementCounter();
```

```
</script>
```

```
// Task 3
```

```
<script>
```

```
function createCounter() {  
    let count = 0;  
    return function increment() {  
        count++;  
        return count;  
    };  
}
```

```
const counter1 = createCounter();
```

```
const counter2 = createCounter();
```

```
console.log('Counter 1:', counter1());
```

```
console.log('Counter 1:', counter1());
```

```
console.log('Counter 2:', counter2());
```

```
</script>
```

```
// Task 4
```

```
<script>
```

```
function createPrivateVar() {  
    let privateVar = 'Private Value';  
    return function changePrivate() {  
        privateVar = 'New Private Value';  
        console.log('Private Value:', privateVar);  
    };  
}
```

```
const changePrivateVar = createPrivateVar();
```

```
changePrivateVar();
```

```
</script>
```

```
//Task 5
```

```
<script>
```

```
function functionFactory(input) {  
  return function() {  
    console.log('Factory function with input:', input);  
  };  
}
```

```
const newFunc = functionFactory('Hello, world!');  
newFunc();
```

```
</script>
```

```
</body>
```

```
</html>
```