

# Javascript Assignment 9

1. Carefully observe this example.

a) Is the `InnerFunction()` a closure?

Ans: YES

b) What is output of this program

Ans: 100

```
function OuterFunction()
{ var outerVariable = 100;
  function InnerFunction() {
    alert(outerVariable);
  }
  return InnerFunction;
}
var innerFunc = OuterFunction();
innerFunc();
```

2. What is the difference between a closure and a scope ?

**Scope:** variables defined within { } cant be accessed outside.

**Closure:** when an inner function is returned by any function and that returned function access some of the variables from outer function then those variables are also part of the returned function. So the function and the lexical scope both are part of the returned inner function. This is closure.

3. What is a lexical scope and how is it related to closure?

when an inner function is returned by any function and that returned function access some of the variables from outer function (lexical scope) then those variables are also part of the returned function.

4. Output of following closure ?

```
for (var i = 0; i < 3; i++) {
  setTimeout(function log() {
    console.log(i); // What is logged?
  }, 1000);
}
```

Output will be: -

3  
3  
3

Reason being for loop will continue to run and 'i' will keep on incrementing to 3 and the setTimeout() function will run after 1000ms and at that time value of i will be 3.