

6. Answer

```
var count = (function(){  
    var counter = 0;  
    const addCounter = function(){  
        return ++counter;  
    };  
    const resetCounter = function(){  
        counter = 0;  
        return counter;  
    };  
    return{  
        add: addCounter,  
        reset: resetCounter  
    };  
})();
```

7. Answer

In the above example the free variable is counter because It is not a parameter and declared inside the closure.

Free variable are the variable which is not a parameters and declared inside in a function. These variable comes from the outer scope of that function.

8. Answer

```
var make_adder = function(inc){  
    var counter = 0;  
    return function(){  
        counter+=inc;  
        return counter;  
    };  
};
```

9. Answer

Simple modification is to make the module and move all the variable declaration and list of the function into that module and give it a name.

10. Answer

```
1. let employee = (function(){  
2.     let name = "";  
3.     let age = "";  
4.     let salary = 0.0;  
5.     let setAge = function(newAge){
```

```

6.     age = newAge;
7.   };
8.   let setSalary = function(newSalary){
9.     salary = newSalary;
10.  };
11.  let setName = function(newName){
12.    name = newName;
13.  };
14.  let getAge = function(){
15.    return age;
16.  };
17.  let getSalary = function(){
18.    return salary;
19.  };
20.  let getName = function(){
21.    return name;
22.  };
23.  let increaseSalary = function(percentage){
24.    setSalary(getSalary()*(1+percentage/100));
25.  };
26.  let incrementAge = function(){
27.    setAge(getAge()+1);
28.  };
29.  return {
30.    setAge, setSalary, setName, increaseSalary, incrementAge,
31.    toString: function(){
32.      return `Name:${getName()} Age:${getAge()} Salary
33.        ${getSalary()}`;
34.    }
35.  };
36. };
37.
38. }());

```

I have return extra toString method and make it public to print the name salary and age for the test purpose;

11. Answer

```

let address = (function () {
  let state = "";
  let zip = "";
  let city = "";
  let setState = function (newState) {
    state = newState;
  };
  let setZip = function (newZip) {
    zip = newZip;
  };

```

```

    };
    let setCity = function (newCity) {
        city = newCity;
    };
    let getCity = function () {
        return city;
    };
    let getState = function () {
        return state;
    };
    let getZip = function () {
        return zip;
    }
    return {
        setCity, setState, setZip, getCity, getState, getZip,
        toString: function () {
            return `City ${getCity()} State ${getState()} Zip ${getZip()}`;
        }
    };
}));

```

```

let employee = (function () {
    let name = "";
    let age = "";
    let salary = 0.0;
    let address = null;
    let setAddress = function (newAddress) {
        address = newAddress;
    }
    let getAddress = function () {
        return address;
    }
    let setAge = function (newAge) {
        age = newAge;
    };
    let setSalary = function (newSalary) {
        salary = newSalary;
    };
    let setName = function (newName) {
        name = newName;
    };
    let getAge = function () {
        return age;
    };
    let getSalary = function () {

```

```

        return salary;
    };
    let getName = function () {
        return name;
    };
    let increaseSalary = function (percentage) {
        setSalary(getSalary() * (1 + percentage / 100));
    };
    let incrementAge = function () {
        setAge(getAge() + 1);
    };
    return {
        setAge, setSalary, setName, increaseSalary, incrementAge,
        getAddress, setAddress, address,
        toString: function () {
            return `Name:${getName()} Age:${getAge()} Salary ${getSalary()}\nA
ddress: ${getAddress().toString()}`;
        }
    };
}());

```