

Name : Mariyam Mahnoor

Course : Blockchain Programming

Section: "B"

### Power function Task:

```
1 var readline = require("readline");
2 var takeInput = readline.createInterface({
3   input: process.stdin,
4   output: process.stdout,
5 });
6
7
8 function power(num,por) {
9   console.log(Math.pow(num,por))
10   let sqr = (Math.pow(num,por))
11   console.log(Math.sqrt(sqr))
12   takeInput.close()
13 }
14
15 takeInput.question('enter a number', function (num) {
16   takeInput.question('enter power of the number?', function (por) {
17     power(num,por);
18   })
19 })
```

Output:

```
enter a number5
enter power of the number?5
3125
55.90169943749474
```

### Nested Map Task:

Marksheet:

```
var studentlist = new Map()

var HamzaMarksheet=new Map()
var phymap=new Map()
phymap.set ("TotalMarks", "100")
phymap.set("MarksObtained", "75")
HamzaMarksheet.set("Physics", phymap)
var chemmap=new Map()
chemmap.set ("TotalMarks", "100")
chemmap.set("MarksObtained", "85")
HamzaMarksheet.set("Chemistry", chemmap)
var compmap=new Map()
compmap.set ("TotalMarks", "100")
compmap.set("MarksObtained", "90")
HamzaMarksheet.set("Computer", compmap)
var mathmap=new Map()
mathmap.set ("TotalMarks", "100")
mathmap.set("MarksObtained", "95")
HamzaMarksheet.set("Maths", mathmap)
var urdumap=new Map()
urdumap.set ("TotalMarks", "100")
urdumap.set("MarksObtained", "75")
HamzaMarksheet.set("Urdu", urdumap)
studentlist.set("hamza",HamzaMarksheet)
console.log(studentlist.size)
console.table(studentlist)
```

```

var bilalMarksheett=new Map()
var phymap=new Map()
phymap.set ("TotalMarks", "100")
phymap.set("MarksObtained", "85")
bilalMarksheett.set("Physics", phymap)
var chemmap=new Map()
chemmap.set ("TotalMarks", "100")

chemmap.set("MarksObtained", "75")
bilalMarksheett.set("Chemistry", chemmap)
var compmap=new Map()
compmap.set ("TotalMarks", "100")
compmap.set("MarksObtained", "80")
bilalMarksheett.set("Computer", compmap)
var mathmap=new Map()
mathmap.set ("TotalMarks", "100")
mathmap.set("MarksObtained", "85")
bilalMarksheett.set("Maths", mathmap)
var urdumap=new Map()
urdumap.set ("TotalMarks", "100")
urdumap.set("MarksObtained", "65")
bilalMarksheett.set("Urdu", urdumap)
studentlist.set("Bilal",bilalMarksheett)
console.log(studentlist.size)
console.log(studentlist)

console.table(bilalMarksheett )

var total=0;
var obtained=0;
var arr=bilalMarksheett.entries()

for (item of arr){
    var persubject = ((bilalMarksheett.get(item[0]).get("MarksObtained")/bilalMarksheett.get(item[0]).get("TotalMarks")))*100
    console.log("Percentage of "+item[0]+" :"+ persubject)
    total=total+parseInt(bilalMarksheett.get(item[0]).get("TotalMarks"))
    obtained=obtained+parseInt(bilalMarksheett.get(item[0]).get("MarksObtained"))
    var totalpercentage=(obtained/total)*100
}

console.log("\n***** REPORT CARD *****")
console.log("\nGrand Obtained Marks: ",obtained)
console.log("Grand Total Marks: ", total)
console.log("Final Percentage is: ",totalpercentage,"\n")
console.log("\n***** REPORT CARD *****\n")

```

Output:

(iteration index)	Key	Values
0	'hamza'	Map { 'Physics' => [Map], 'Chemistry' => [Map], 'Computer' => [Map], 'Maths' => [Map], 'Urdu' => [Map] }

```
2
Map {
  'hamza' => Map {
    'Physics' => Map { 'TotalMarks' => '100', 'MarksObtained' => '75' },
    'Chemistry' => Map { 'TotalMarks' => '100', 'MarksObtained' => '85' },
    'Computer' => Map { 'TotalMarks' => '100', 'MarksObtained' => '90' },
    'Maths' => Map { 'TotalMarks' => '100', 'MarksObtained' => '95' },
    'Urdu' => Map { 'TotalMarks' => '100', 'MarksObtained' => '75' }
  },
  'Bilal' => Map {
    'Physics' => Map { 'TotalMarks' => '100', 'MarksObtained' => '85' },
    'Chemistry' => Map { 'TotalMarks' => '100', 'MarksObtained' => '75' },
    'Computer' => Map { 'TotalMarks' => '100', 'MarksObtained' => '80' },
    'Maths' => Map { 'TotalMarks' => '100', 'MarksObtained' => '85' },
    'Urdu' => Map { 'TotalMarks' => '100', 'MarksObtained' => '65' }
  }
}
```

(iteration index)	Key	Values
0	'Physics'	Map { 'TotalMarks' => '100', 'MarksObtained' => '85' }
1	'Chemistry'	Map { 'TotalMarks' => '100', 'MarksObtained' => '75' }
2	'Computer'	Map { 'TotalMarks' => '100', 'MarksObtained' => '80' }
3	'Maths'	Map { 'TotalMarks' => '100', 'MarksObtained' => '85' }
4	'Urdu'	Map { 'TotalMarks' => '100', 'MarksObtained' => '65' }

Percentage of Physics :85  
Percentage of Chemistry :75  
Percentage of Computer :80  
Percentage of Maths :85  
Percentage of Urdu :65

\*\*\*\*\* REPORT CARD \*\*\*\*\*

Grand Obtained Marks: 390  
Grand Total Marks: 500  
Final Percentage is: 78

\*\*\*\*\* REPORT CARD \*\*\*\*\*