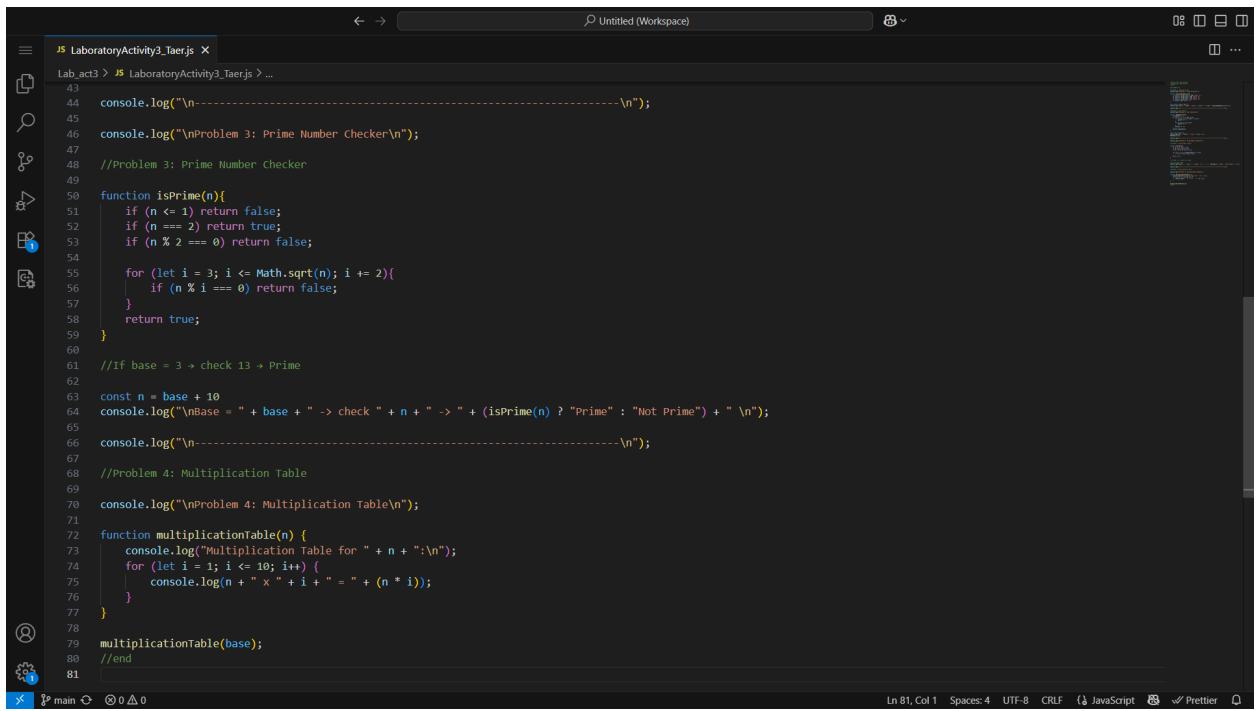


- Source code screenshots:

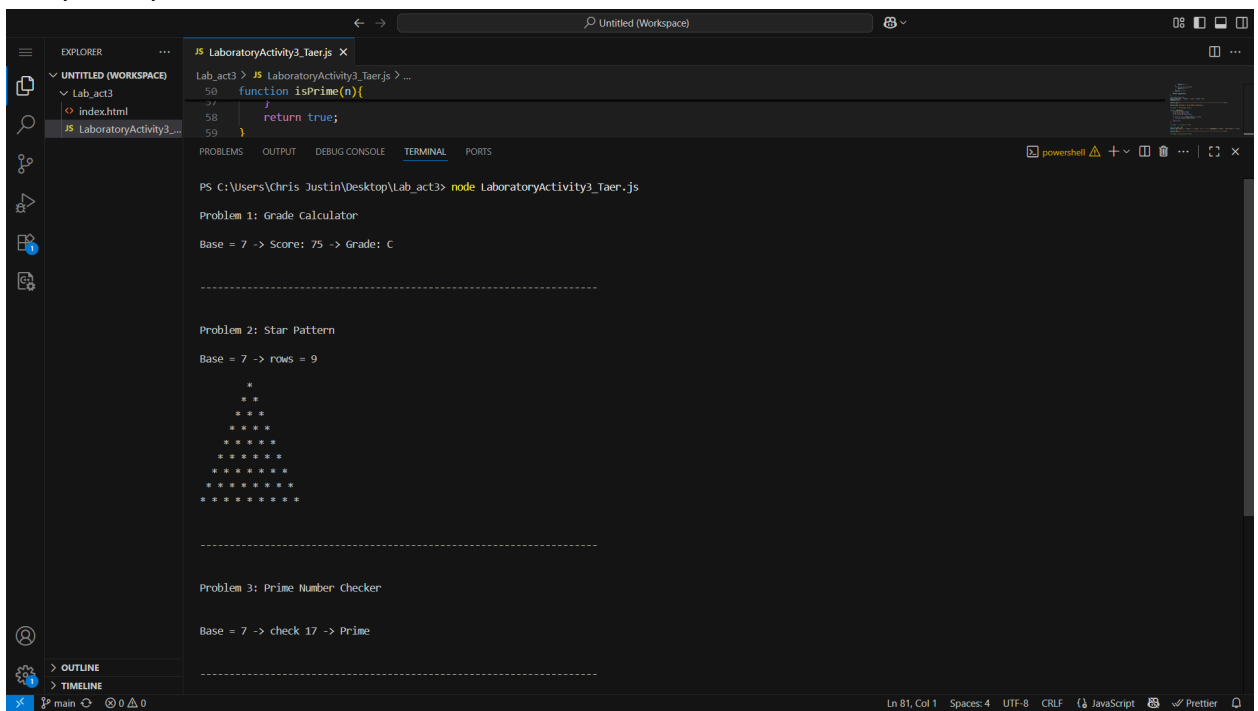
```
JS LaboratoryActivity3_Taerjs x
Lab_act3 > JS LaboratoryActivity3_Taerjs > ...
1 //Chris Justin Taer App Dev
2 //Student ID: 2024-01-16777
3 //Base = 7
4
5 const base = 7;
6
7 //Problem 1: Grade Calculator
8 console.log("\nProblem 1: Grade Calculator");
9
10 function calculateGrade(score){
11     if (score >= 90 && score <= 100) return 'A';
12     if (score >= 80 && score < 90) return 'B';
13     if (score >= 70 && score < 80) return 'C';
14     if (score >= 60 && score < 70) return 'D';
15     if (score <= 60) return 'F';
16 }
17
18 const score = base * 10 + 5;
19 console.log("\nBase = "+base+" -> Score: "+score+" -> Grade: "+calculateGrade(score)+"\n");
20
21 console.log("\n-----\n");
22
23 //Problem 2: Star Pattern
24 console.log("\nProblem 2: Star Pattern\n");
25
26 function ShowStars(rows){
27     let pattern = "";
28     for (let i = 1; i <= rows; i++){
29         for (let j = 1; j <= rows - i; j++){
30             pattern += " ";
31         }
32         for (j = 1; j <= i; j++){
33             pattern += "x ";
34         }
35         pattern += "\n";
36     }
37     console.log(pattern);
38 }
39
40 const rows = base + 2;
```

```
JS LaboratoryActivity3_Taerjs x
Lab_act3 > JS LaboratoryActivity3_Taerjs > ...
38 }
39
40 const rows = base + 2;
41 console.log("Base = "+base+" -> rows = "+rows+" \n");
42 ShowStars(rows)
43
44 console.log("\n-----\n");
45
46 console.log("\nProblem 3: Prime Number Checker\n");
47
48 //Problem 3: Prime Number Checker
49
50 function isPrime(n){
51     if (n <= 1) return false;
52     if (n === 2) return true;
53     if (n % 2 === 0) return false;
54
55     for (let i = 3; i <= Math.sqrt(n); i += 2){
56         if (n % i === 0) return false;
57     }
58     return true;
59 }
60
61 //If base = 3 + check 13 + Prime
62
63 const n = base + 10
64 console.log("\nBase = " + base + " -> check " + n + " -> " + (isPrime(n) ? "Prime" : "Not Prime") + " \n");
65
66 console.log("\n-----\n");
67
68 //Problem 4: Multiplication Table
69
70 console.log("\nProblem 4: Multiplication Table\n");
71
72 function multiplicationTable(n) {
73     console.log("Multiplication Table for " + n + ":\n");
74     for (let i = 1; i <= 10; i++) {
75         console.log(n + " x " + i + " = " + (n * i));
76     }
77 }
```



```
43
44 console.log("\n-----\n");
45
46 console.log("\nProblem 3: Prime Number Checker\n");
47
48 //Problem 3: Prime Number Checker
49
50 function isPrime(n){
51     if (n <= 1) return false;
52     if (n === 2) return true;
53     if (n % 2 === 0) return false;
54
55     for (let i = 3; i <= Math.sqrt(n); i += 2){
56         if (n % i === 0) return false;
57     }
58     return true;
59 }
60
61 //If base = 3 + check 13 + Prime
62
63 const n = base + 10
64 console.log("\nBase = " + base + " -> check " + n + " -> " + (isPrime(n) ? "Prime" : "Not Prime") + " \n");
65
66 console.log("\n-----\n");
67
68 //Problem 4: Multiplication Table
69
70 console.log("\nProblem 4: Multiplication Table\n");
71
72 function multiplicationTable(n) {
73     console.log("Multiplication Table for " + n + ":\n");
74     for (let i = 1; i <= 10; i++) {
75         console.log(n + " x " + i + " = " + (n * i));
76     }
77 }
78
79 multiplicationTable(base);
80 //end
81
```

- Sample outputs:



```
PS C:\Users\chris Justin\Desktop\Lab_act3> node LaboratoryActivity3_Taer.js

Problem 1: Grade Calculator

Base = 7 -> Score: 75 -> Grade: C

-----

Problem 2: Star Pattern

Base = 7 -> rows = 9

  *
 * *
* * *
* * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *

-----

Problem 3: Prime Number Checker

Base = 7 -> check 17 -> Prime

-----
```

The screenshot shows a Visual Studio Code editor window with a dark theme. The Explorer sidebar on the left shows a workspace named 'UNTITLED (WORKSPACE)' containing a folder 'Lab_act3' with files 'index.html' and 'LaboratoryActivity3...'. The main editor area displays a JavaScript file 'LaboratoryActivity3.Taer.js' with the following code:

```
Lab_act3 > JS LaboratoryActivity3.Taer.js > ...
50 function isPrime(n){
51     if
52     }
53     return true;
54 }
```

Below the code editor, the TERMINAL panel is active, showing the following output:

```
*****
*****
*****
*****
*****

-----

Problem 3: Prime Number Checker

Base = 7 -> check 17 -> Prime

-----

Problem 4: Multiplication Table

Multiplication Table for 7:

7 x 1 = 7
7 x 2 = 14
7 x 3 = 21
7 x 4 = 28
7 x 5 = 35
7 x 6 = 42
7 x 7 = 49
7 x 8 = 56
7 x 9 = 63
7 x 10 = 70
PS C:\Users\chris Justin\Desktop\Lab_act3>
```

The status bar at the bottom indicates the current line and column (Ln 81, Col 1), encoding (UTF-8), line ending (CRLF), language (JavaScript), and formatting (Prettier).

- Link of your GitHub repository for the activity:
https://github.com/chris-cmd235/lab_act_3_Chris_tae