

Lesson 6 Demo 4

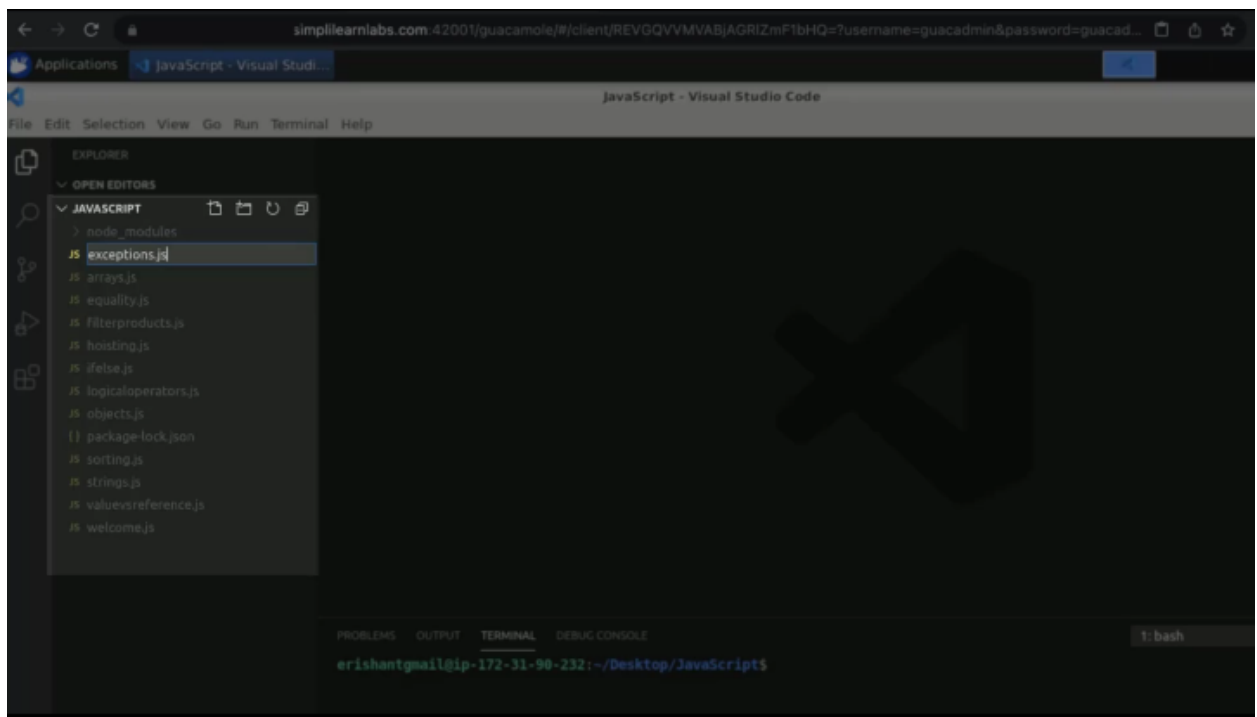
Working with Try-Catch

Objective: To work with try-catch

Prerequisites: None

Steps to perform:

1. Create a file named 'exceptions.js'.



2. Add a function named 'getCashBack' with input as 'luckyNumber'.

The screenshot shows the Visual Studio Code interface with the file 'exceptions.js' open. The Explorer panel on the left shows a list of files in the 'JAVASCRIPT' folder, including 'exceptions.js'. The main editor area shows the following code:

```

1 function getCashBack(luckyNumber){
2
3

```

The terminal at the bottom shows the command prompt '1: bash' and the user's shell prompt 'erishantmail@ip-172-31-90-232:~/Desktop/JavaScript\$'.

3. Create a cashbacks array with some random numbers.

The screenshot shows the Visual Studio Code interface with the file 'exceptions.js' open. The main editor area shows the following code:

```

1 function getCashBack(luckyNumber){
2   let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88]
3 }

```

The terminal at the bottom shows the command prompt '1: bash' and the user's shell prompt 'erishantmail@ip-172-31-90-232:~/Desktop/JavaScript\$'.

4. Pass a return function.

```

exceptions.js
1 function getCashBack(luckyNumber){
2   let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
3   return cashBacks[luckyNumber];
4 }

```

erishantgmail@ip-172-31-90-232: ~/Desktop/JavaScript\$

5. Add a console. Log statement.

```

exceptions.js
1 console.log("Cashback App Started");
2
3
4 function getCashBack(luckyNumber){
5   let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6   return cashBacks[luckyNumber];
7 }

```

erishantgmail@ip-172-31-90-232: ~/Desktop/JavaScript\$

- The second log statement should return 'Cashback app finished'.

```

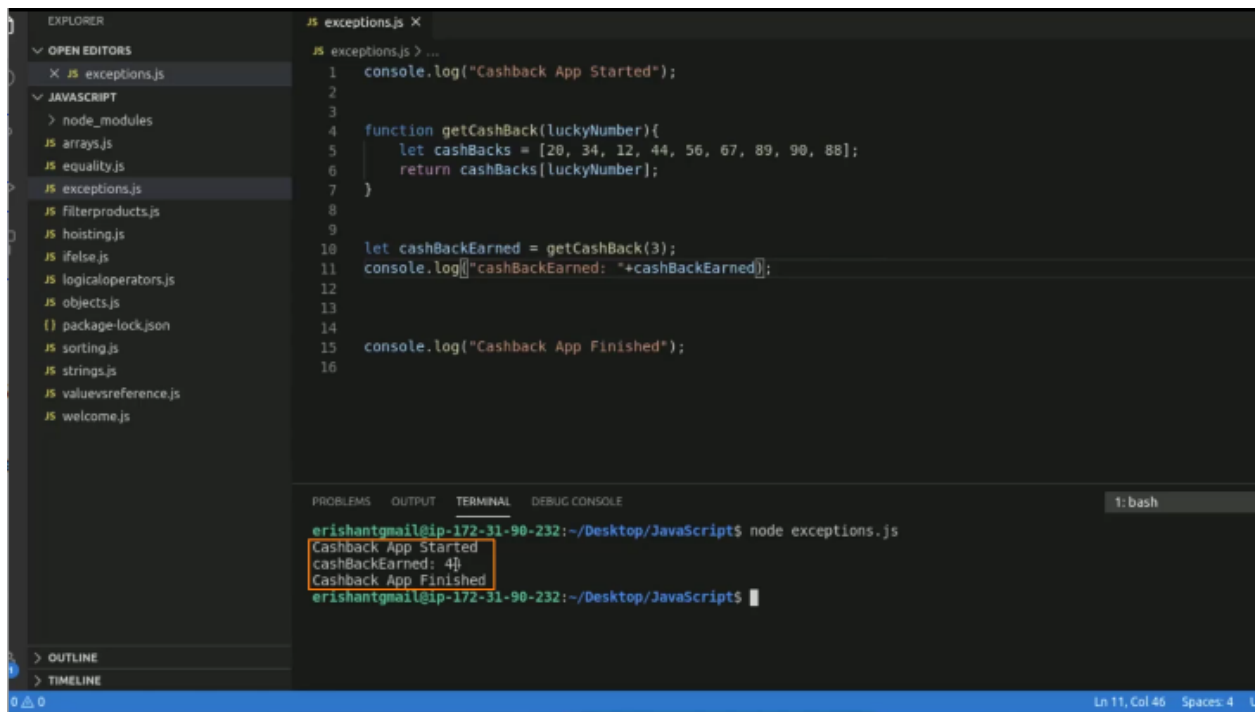
exceptions.js
1 console.log("Cashback App Started");
2
3
4 function getCashBack(luckyNumber){
5   let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6   return cashBacks[luckyNumber];
7 }
8
9
10
11 console.log("Cashback App Finished");
12
  
```

- Add a code with a log statement within a function as 'cashBackEarned'.

```

exceptions.js
1 console.log("Cashback App Started");
2
3
4 function getCashBack(luckyNumber){
5   let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6   return cashBacks[luckyNumber];
7 }
8
9
10 let cashBackEarned = getCashBack(3);
11 console.log("cashBackEarned: "+cashBackEarned);
12
13
14
15 console.log("Cashback App Finished");
16
  
```

8. Run the code.



The screenshot shows a Visual Studio Code editor with a file named `exceptions.js` open. The file contains the following JavaScript code:

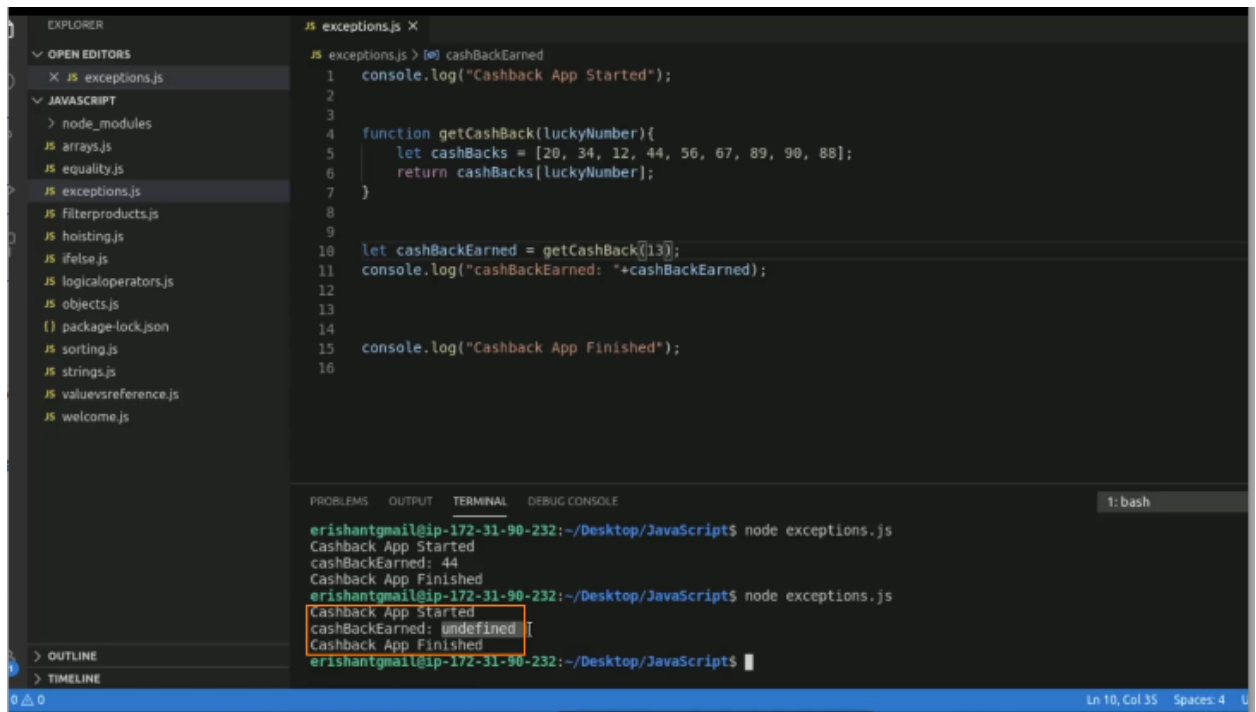
```
1 console.log("Cashback App Started");
2
3
4 function getCashBack(luckyNumber){
5   let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6   return cashBacks[luckyNumber];
7 }
8
9
10 let cashBackEarned = getCashBack(3);
11 console.log(`cashBackEarned: ${cashBackEarned}`);
12
13
14
15 console.log("Cashback App Finished");
16
```

The terminal output shows the execution of the code:

```
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
cashBackEarned: 44
Cashback App Finished
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$
```

The output is displayed in the terminal window, which is titled "1: bash". The status bar at the bottom indicates "Ln 11, Col 46 Spaces: 4".

9. If you pass the number as 13, then it will show the following result.



```

EXPLORER
  OPEN EDITORS
    X JS exceptions.js
  JAVASCRIPT
    node_modules
    arrays.js
    equality.js
    exceptions.js
    filterproducts.js
    hoisting.js
    ifelse.js
    logicaloperators.js
    objects.js
    package-lock.json
    sorting.js
    strings.js
    valuesreference.js
    welcome.js

JS exceptions.js X
JS exceptions.js > cashBackEarned
1 console.log("Cashback App Started");
2
3
4 function getCashBack(luckyNumber){
5   let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6   return cashBacks[luckyNumber];
7 }
8
9
10 let cashBackEarned = getCashBack(13);
11 console.log("cashBackEarned: "+cashBackEarned);
12
13
14
15 console.log("Cashback App Finished");
16

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE 1: bash
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
cashBackEarned: 44
Cashback App Finished
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
cashBackEarned: undefined
Cashback App Finished
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

10. Add one if else loop.

```

EXPLORER
  OPEN EDITORS
    exceptions.js
  JAVASCRIPT
    node_modules
    arrays.js
    equality.js
    exceptions.js
    filterproducts.js
    hoisting.js
    ifelse.js
    logicaloperators.js
    objects.js
    package-lock.json
    sorting.js
    strings.js
    valuesreference.js
    welcome.js

exceptions.js X
JS exceptions.js > getCashBack
1 console.log("Cashback App Started");
2
3
4 function getCashBack(luckyNumber){
5   let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6   if(cashBacks[luckyNumber]){
7     return cashBacks[luckyNumber];
8   }else{
9     return 0;
10  }
11 }
12
13
14 let cashBackEarned = getCashBack(13);
15 console.log("cashBackEarned: "+cashBackEarned);
16
17
18 console.log("Cashback App Finished");
19
20

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
1: bash
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
cashBackEarned: 44
Cashback App Finished
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
cashBackEarned: undefined
Cashback App Finished
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

11. Re-run the program.

```

EXPLORER
  OPEN EDITORS
    exceptions.js
  JAVASCRIPT
    node_modules
    arrays.js
    equality.js
    exceptions.js
    filterproducts.js
    hoisting.js
    ifelse.js
    logicaloperators.js
    objects.js
    package-lock.json
    sorting.js
    strings.js
    valuesreference.js
    welcome.js

exceptions.js X
JS exceptions.js > getCashBack
1 console.log("Cashback App Started");
2
3
4 function getCashBack(luckyNumber){
5   let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6   if(cashBacks[luckyNumber]){
7     return cashBacks[luckyNumber];
8   }else{
9     return 0;
10  }
11 }
12
13
14 let cashBackEarned = getCashBack(13);
15 console.log("cashBackEarned: "+cashBackEarned);
16
17
18 console.log("Cashback App Finished");
19
20

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
1: bash
Cashback App Finished
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
cashBackEarned: undefined
Cashback App Finished
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
cashBackEarned: 0
Cashback App Finished
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

12. Create an object of an error with a message.

```

1  console.log("Cashback App Started");
2
3
4  function getCashBack(luckyNumber){
5      let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6      if(cashBacks[luckyNumber]){
7          return cashBacks[luckyNumber];
8      }else{
9          //return 0;
10         let error = Error("Invalid Lucky Number");
11     }
12 }
13
14
15 let cashBackEarned = getCashBack("thirteen");
16 console.log("cashBackEarned: "+cashBackEarned);
17
18
19 console.log("Cashback App Finished");
20
21

```

```

Cashback App Finished
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
cashBackEarned: undefined
Cashback App Finished
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
cashBackEarned: 0
Cashback App Finished
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

13. Use the keyword 'throw' the error.

```

1  console.log("Cashback App Started");
2
3
4  function getCashBack(luckyNumber){
5      let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6      if(cashBacks[luckyNumber]){
7          return cashBacks[luckyNumber];
8      }else{
9          //return 0;
10         let error = Error("Invalid Lucky Number");
11         throw error;
12     }
13 }
14
15
16 let cashBackEarned = getCashBack("thirteen");
17 console.log("cashBackEarned: "+cashBackEarned);
18
19
20 console.log("Cashback App Finished");
21

```

```

Cashback App Finished
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
cashBackEarned: undefined
Cashback App Finished
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
cashBackEarned: 0
Cashback App Finished
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$

```


14. Run the program.

The screenshot shows a VS Code editor with a file named `exceptions.js` open. The file contains the following code:

```

1 console.log("Cashback App Started");
2
3
4 function getCashBack(luckyNumber){
5     let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6     if(cashBacks[luckyNumber]){
7         return cashBacks[luckyNumber];
8     }else{
9         //return 0;
10        let error = Error("Invalid Lucky Number");
11        throw error;
12    }
13 }
14
15
16 let cashBackEarned = getCashBack("thirteen");
17 console.log("cashBackEarned: "+cashBackEarned);
18
19
20
21 console.log("Cashback App Finished");

```

The terminal output shows the following error:

```

Error: Invalid Lucky Number
    at getCashBack (/home/erishantgmail/Desktop/JavaScript/exceptions.js:10:21)
    at Object.<anonymous> (/home/erishantgmail/Desktop/JavaScript/exceptions.js:16:22)
    at Module.compile (internal/modules/cjs/loader.js:1138:30)
    at Object.Module._extensions..js (internal/modules/cjs/loader.js:1158:10)
    at Module.load (internal/modules/cjs/loader.js:986:32)
    at Function.Module._load (internal/modules/cjs/loader.js:879:14)
    at Function.executeUserEntryPoint [as runMain] (internal/modules/run_main.js:71:12)
    at internal/main/run_main_module.js:17:47

```

The terminal prompt is `erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$`.

15. Add a try block.

```

EXPLORER
  OPEN EDITORS 1 UNSAVED
    JS exceptions.js 1
  JAVASCRIPT
    > node_modules
    JS arrays.js
    JS equality.js
    JS exceptions.js 1
    JS filterproducts.js
    JS hoisting.js
    JS ifelse.js
    JS logicaloperators.js
    JS objects.js
    {} package-lock.json
    JS sorting.js
    JS strings.js
    JS valuesreference.js
    JS welcome.js

JS exceptions.js
1 //welcome.js, welcomeApp, welcome.js
2
3
4 function getCashBack(luckyNumber){
5     let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6     if(cashBacks[luckyNumber]){
7         return cashBacks[luckyNumber];
8     }else{
9         //return 0;
10        let error = Error("Invalid Lucky Number");
11        throw error;
12    }
13 }
14
15 try{
16     let cashBackEarned = getCashBack("thirteen");
17     console.log("cashBackEarned: "+cashBackEarned);
18 }
19
20
21 console.log("Cashback App Finished");
22

PROBLEMS 1 OUTPUT TERMINAL DEBUG CONSOLE
Error: Invalid Lucky Number
at getCashBack (/home/erishantgmail/Desktop/JavaScript/exceptions.js:10:21)
at Object.<anonymous> (/home/erishantgmail/Desktop/JavaScript/exceptions.js:16:22)
at Module.compile (internal/modules/cjs/loader.js:1138:30)
at Object.Module._extensions..js (internal/modules/cjs/loader.js:1158:10)
at Module.load (internal/modules/cjs/loader.js:986:32)
at Function.Module._load (internal/modules/cjs/loader.js:879:14)
at Function.executeUserEntryPoint [as runMain] (internal/modules/run_main.js:71:12)
at internal/main/run_main_module.js:17:47
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

16. Add a catch block as well.

```

EXPLORER
  OPEN EDITORS 1 UNSAVED
    JS exceptions.js 1
  JAVASCRIPT
    > node_modules
    JS arrays.js
    JS equality.js
    JS exceptions.js 1
    JS filterproducts.js
    JS hoisting.js
    JS ifelse.js
    JS logicaloperators.js
    JS objects.js
    {} package-lock.json
    JS sorting.js
    JS strings.js
    JS valuesreference.js
    JS welcome.js

JS exceptions.js
1 //welcome.js, welcomeApp, welcome.js
2
3
4 function getCashBack(luckyNumber){
5     let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6     if(cashBacks[luckyNumber]){
7         return cashBacks[luckyNumber];
8     }else{
9         //return 0;
10        let error = Error("Invalid Lucky Number");
11        throw error;
12    }
13 }
14
15 try{
16     let cashBackEarned = getCashBack("thirteen");
17     console.log("cashBackEarned: "+cashBackEarned);
18 }catch{
19 }
20
21
22

PROBLEMS 1 OUTPUT TERMINAL DEBUG CONSOLE
Error: Invalid Lucky Number
at getCashBack (/home/erishantgmail/Desktop/JavaScript/exceptions.js:10:21)
at Object.<anonymous> (/home/erishantgmail/Desktop/JavaScript/exceptions.js:16:22)
at Module.compile (internal/modules/cjs/loader.js:1138:30)
at Object.Module._extensions..js (internal/modules/cjs/loader.js:1158:10)
at Module.load (internal/modules/cjs/loader.js:986:32)
at Function.Module._load (internal/modules/cjs/loader.js:879:14)
at Function.executeUserEntryPoint [as runMain] (internal/modules/run_main.js:71:12)
at internal/main/run_main_module.js:17:47
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

17. Pass a log message.

The screenshot shows the VS Code editor with the file `exceptions.js` open. The code defines a `getCashBack` function that returns a cashback value for lucky numbers 20, 34, 12, 44, 56, 67, 89, 90, and 88. For any other number, it throws an error. The function is called with the value "thirteen", and the result is logged to the console. A catch block is present, but it is currently empty. The terminal shows the output of the code execution, including the error message "Invalid Lucky Number".

```

1 // console.log, cashback app started !!
2
3
4 function getCashBack(luckyNumber){
5     let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6     if(cashBacks[luckyNumber]){
7         return cashBacks[luckyNumber];
8     }else{
9         //return 0;
10        let error = Error("Invalid Lucky Number");
11        throw error;
12    }
13 }
14
15 try{
16     let cashBackEarned = getCashBack("thirteen");
17     console.log("cashBackEarned: "+cashBackEarned);
18 }catch(e){
19     console.log("Something went wrong");
20 }
21
22

```

Terminal Output:

```

1: bash
Error: Invalid Lucky Number
    at getCashBack (/home/erishantgmail/Desktop/JavaScript/exceptions.js:10:21)
    at Object.<anonymous> (/home/erishantgmail/Desktop/JavaScript/exceptions.js:16:22)
    at Module.compile (internal/modules/cjs/loader.js:1138:30)
    at Object.Module._extensions..js (internal/modules/cjs/loader.js:1158:10)
    at Module.load (internal/modules/cjs/loader.js:986:32)
    at Function.Module._load (internal/modules/cjs/loader.js:879:14)
    at Function.executeUserEntryPoint [as runMain] (internal/modules/run_main.js:71:12)
    at internal/main/run_main_module.js:17:47
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

18. Execute the code.

The screenshot shows the VS Code editor with the file `exceptions.js` open. The code is the same as in the previous screenshot, but the catch block now logs the error message. The terminal shows the output of the code execution, including the error message "Something went wrong Error: Invalid Lucky Number".

```

1 // console.log, cashback app started !!
2
3
4 function getCashBack(luckyNumber){
5     let cashBacks = [20, 34, 12, 44, 56, 67, 89, 90, 88];
6     if(cashBacks[luckyNumber]){
7         return cashBacks[luckyNumber];
8     }else{
9         //return 0;
10        let error = Error("Invalid Lucky Number");
11        throw error;
12    }
13 }
14
15 try{
16     let cashBackEarned = getCashBack("thirteen");
17     console.log("cashBackEarned: "+cashBackEarned);
18 }catch(e){
19     console.log("Something went wrong "+e);
20 }
21
22

```

Terminal Output:

```

1: bash
    at Object.Module._extensions..js (internal/modules/cjs/loader.js:1158:10)
    at Module.load (internal/modules/cjs/loader.js:986:32)
    at Function.Module._load (internal/modules/cjs/loader.js:879:14)
    at Function.executeUserEntryPoint [as runMain] (internal/modules/run_main.js:71:12)
    at internal/main/run_main_module.js:17:47
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node exceptions.js
Cashback App Started
Something went wrong Error: Invalid Lucky Number
Cashback App Finished
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

