

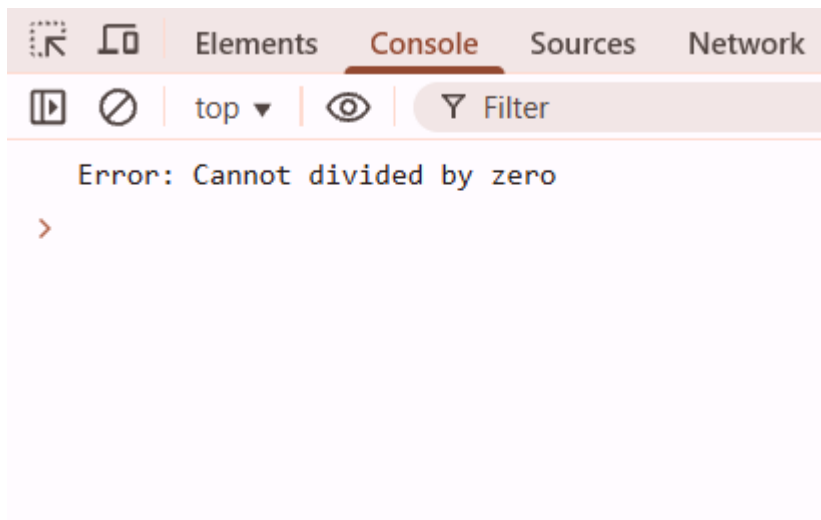
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3rd Year Section B (B1)

Practical 4 Part 2 (JavaScript)

Example 1:

```
<script>
try
{
let result = 10 / 0;
if (!isFinite(result)) throw new Error("Cannot divided by zero");
console.log(result);
}
catch (err) {
console.log("Error:",err.message);
}
</script>
```



Example 2:

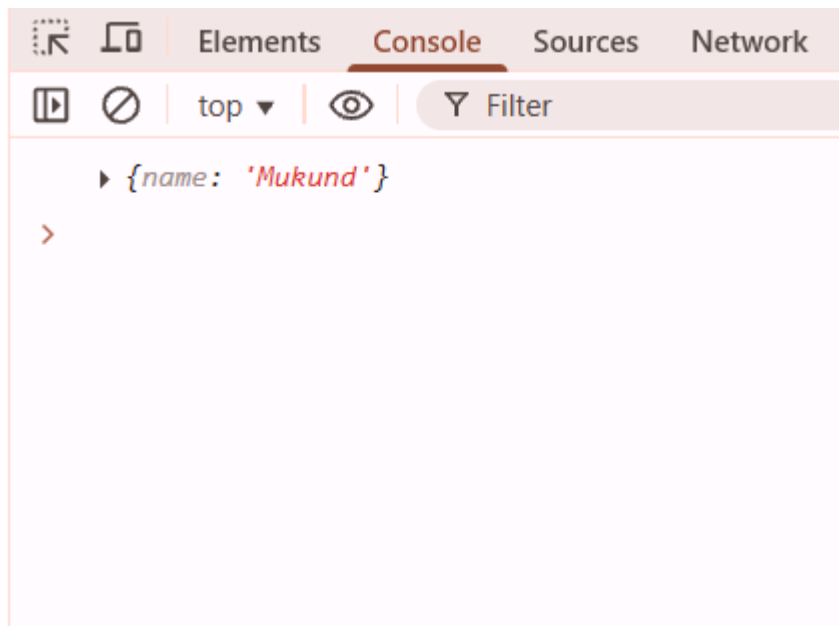
The screenshot displays a web browser's developer console. The top pane shows the source code of a file named 'practical4.html', specifically the 'script' section. The code is as follows:

```
1 <script>
2   try
3   {
4     let result = 10 / 2;
5     if (!isFinite(result)) throw new Error("Cannot divide by zero!");
6     console.log(result);
7   }
8   catch (err) {
9     console.log("Error:", err.message);
10  }
11 </script>
```

The bottom pane shows the 'Console' tab, which contains a single log entry. The entry is a blue number '5', indicating the value of 'result' from the `console.log(result);` statement on line 6. The console interface includes standard navigation icons (back, forward, search, etc.) and a filter input field.

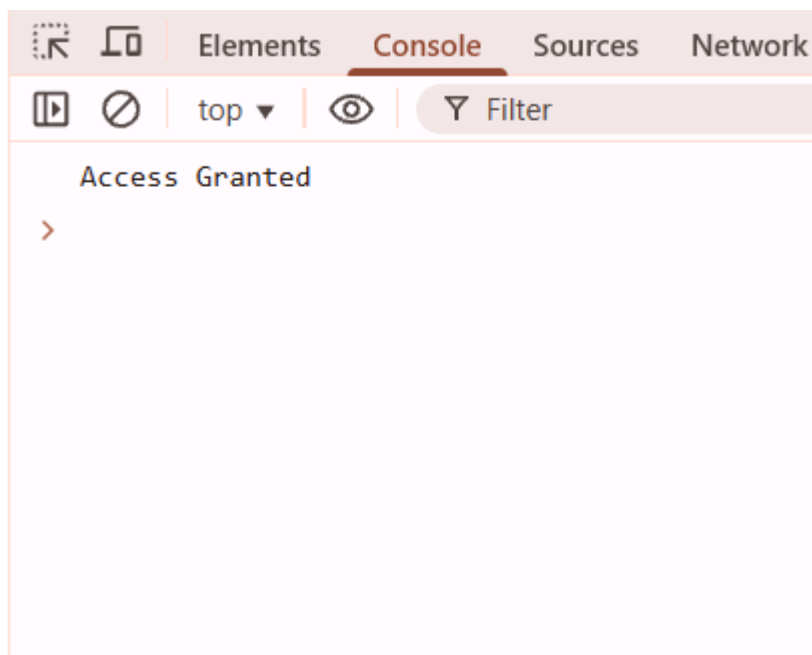
Example 3:

```
<> practical4.html X
<> practical4.html > script
1  <script>
2  try
3  {
4  let data = JSON.parse("invalid json");
5  }
6  catch (err)
7  {
8  console.log("JSON Parse Error:", err.message);
9  }
10 </script>
```



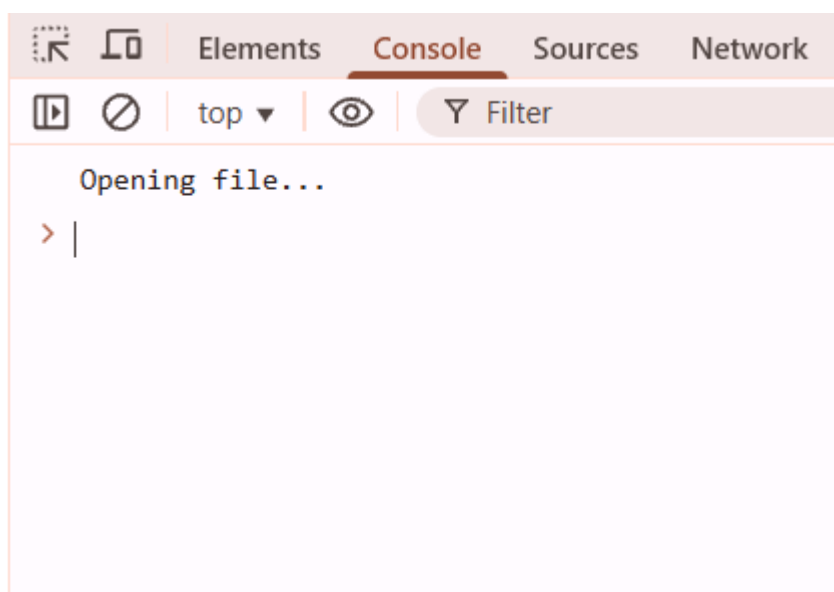
Example 4:

```
<script>
function checkAge(age)
{
  if (age < 18) throw new Error("You must be 18+");
  return "Access Granted";
}
try
{
  console.log(checkAge(16));
}
catch (err)
{
  console.log(err.message);
}
</script>
```



Example 5:

```
<> practical4.html > script
1  <script>
2  try {
3      let fileOpen = true;
4      console.log("Opening file...");
5
6      // Simulate an error
7      throw new Error("File read error!");
8
9      console.log("Reading file...");
10 }
11 catch (err) {
12     console.log("Error:", err.message);
13 }
14 finally {
15     console.log("Closing file (cleanup)...");
16 }
17 </script>
18
```



Reverse & Palindrome:

```
<> practical4.html > script
1  <script>
2      function reverseNumber(num) {
3          if (typeof num !== "number" || isNaN(num)) {
4              throw new Error("Invalid number input");
5          }
6          let sign = Math.sign(num);
7          let reversed = parseInt(Math.abs(num).toString().split("").reverse().join(""));
8          return sign * reversed;
9      }
10
11     function isStringPalindrome(str) {
12         if (typeof str !== "string") {
13             throw new Error("Input must be a string");
14         }
15         let ss = str.toLowerCase();
16         return ss === ss.split("").reverse().join("");
17     }
18
19     console.log("Reverse Number Tests:");
20     console.log(reverseNumber(123));
21     console.log(reverseNumber(-456));
22     console.log(reverseNumber(1200));
23
24     console.log("Palindrome Tests:");
25     console.log(isStringPalindrome("Mukund"));
26     console.log(isStringPalindrome("madam"));
27     console.log(isStringPalindrome("racecar"));
28     console.log(isStringPalindrome("hello"));
29 </script>
30
```

Reverse Number Tests: practical4.html:19

321 practical4.html:20

-654 practical4.html:21

21 practical4.html:22

Palindrome Tests: practical4.html:24

false practical4.html:25

true practical4.html:26

true practical4.html:27

false practical4.html:28

Task 1:

```
<> practical4.html > script
1  <script>
2      function reverseNumber(num) {
3          if (typeof num !== "number" || isNaN(num)) {
4              throw new Error("Invalid number input");
5          }
6          let sign = Math.sign(num);
7          let reversed = parseInt(Math.abs(num).toString().split("").reverse().join(""));
8          return sign * reversed;
9      }
10
11     console.log("Reverse Number:");
12     console.log(reverseNumber(123));
13     console.log(reverseNumber(-456));
14     console.log(reverseNumber(1200));
15 </script>
16
```

Reverse Number:

321

-654

21

>

Task 2:

```
<> practical4.html > script
1  <script>
2      let userInput = prompt("Enter a word to check if it's a palindrome:");
3      function isStringPalindrome(str) {
4          if (typeof str !== "string") {
5              throw new Error("Input must be a string");
6          }
7          let ss = str.toLowerCase();
8          return ss === ss.split("").reverse().join("");
9      }
10     alert(isStringPalindrome(userInput) ? "It's a palindrome!" : "Not a palindrome!");
11
12 </script>
13
```

127.0.0.1:5500 says

Enter a word to check if it's a palindrome:

Rar

OK


Cancel

127.0.0.1:5500 says

It's a palindrome!

OK

Task 3:

```
<> practical4.html >  script
1  <script>
2      function safeSquareRoot(input) {
3          try {
4              let num = Number(input);
5              if (isNaN(num)) throw "Not a number!";
6              if (num < 0) throw "Square root of negative number not allowed!";
7              return Math.sqrt(num);
8          } catch (err) {
9              return `Error: ${err}`;
10         }
11     }
12     console.log("Square Root:");
13     console.log(safeSquareRoot(16));
14     console.log(safeSquareRoot(-9));
15     console.log(safeSquareRoot("abc"));|
16 </script>
17
```

Square Root:

4

>

Task 4:

```
<> practical4.html > script
1  <script>
2      const isPrime = (num) => {
3      try {
4          if (typeof num !== "number" || isNaN(num) || num < 2) {
5              throw "Invalid number for prime check!";
6          }
7          for (let i = 2; i <= Math.sqrt(num); i++) {
8              if (num % i === 0) return false;
9          }
10         return true;
11     } catch (err) {
12         return `Error: ${err}`;
13     }
14 };
15
16 console.log("Prime Check:");
17 console.log(isPrime(2));
18 console.log(isPrime(17));
19 console.log(isPrime(20));
20 console.log(isPrime("abc"));
21 </script>
22
```

