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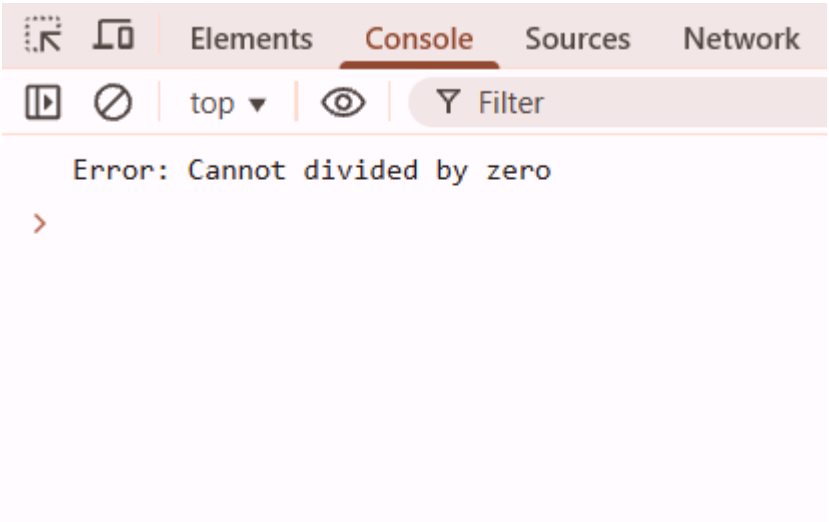
3rd Year Section B (B1)

Practical 4 Part 2 (JavaScript)

Example 1:

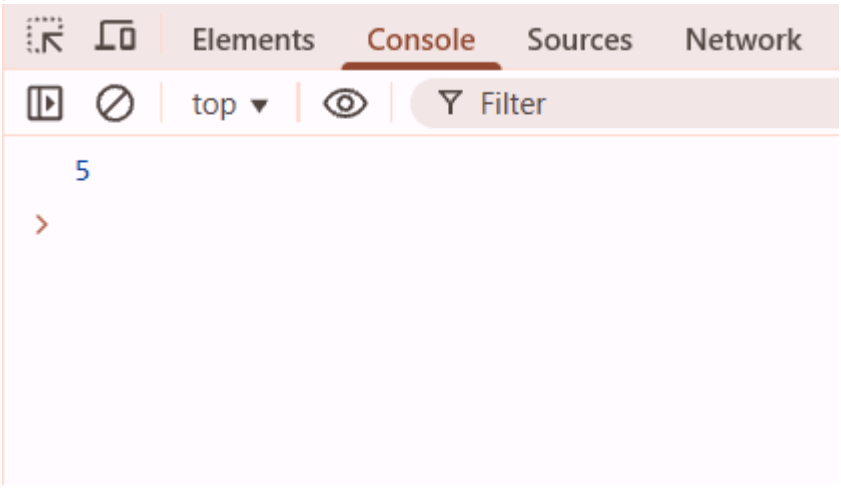
```
<script>
try
{
let result = 10 / 0;
if (!isFinite(result)) throw new Error("Cannot divided by zero");
console.log(result);
}
catch (err) {
console.log("Error:",err.message);
}
</script>
```



Example 2:

practical4.html > script

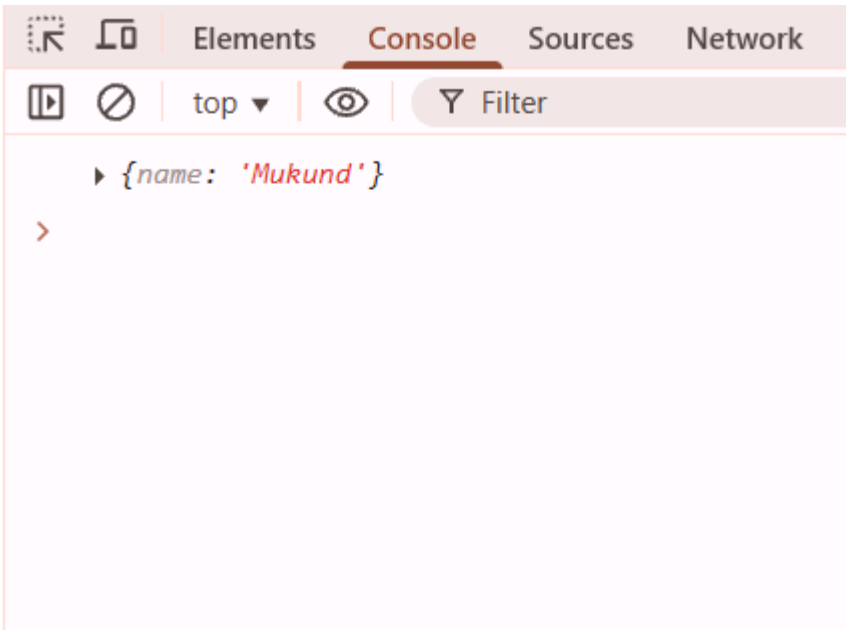
```
<script>
    try
{
    let result = 10 / 2;
    if (!isFinite(result)) throw new Error("Cannot divide by zero!");
    console.log(result);
}
catch (err) {
    console.log("Error:", err.message);
}
</script>

```



Example 3:

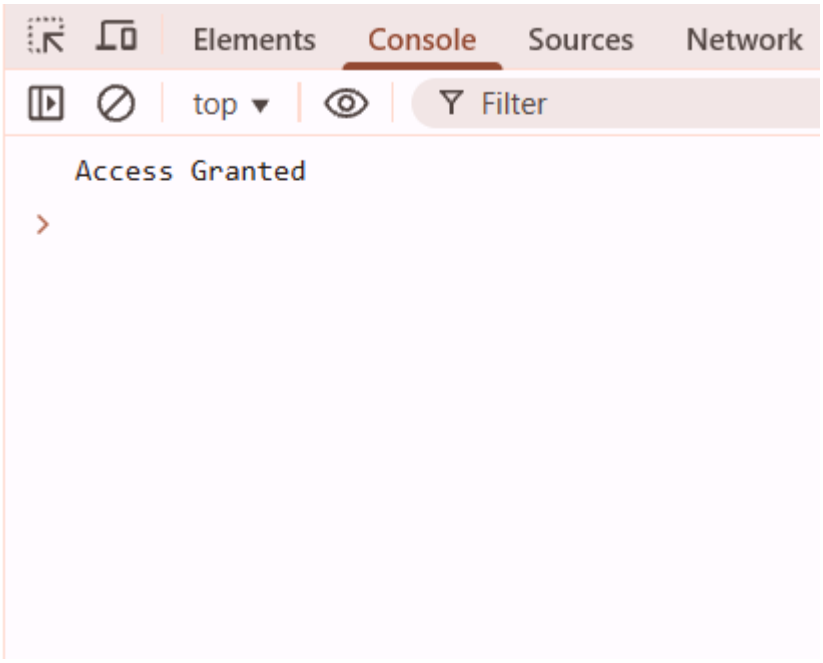
practical4.html

```
<script>
try
{
let data = JSON.parse("invalid json");
}
catch (err)
{
console.log("JSON Parse Error:", err.message);
}
</script>
```



Example 4:

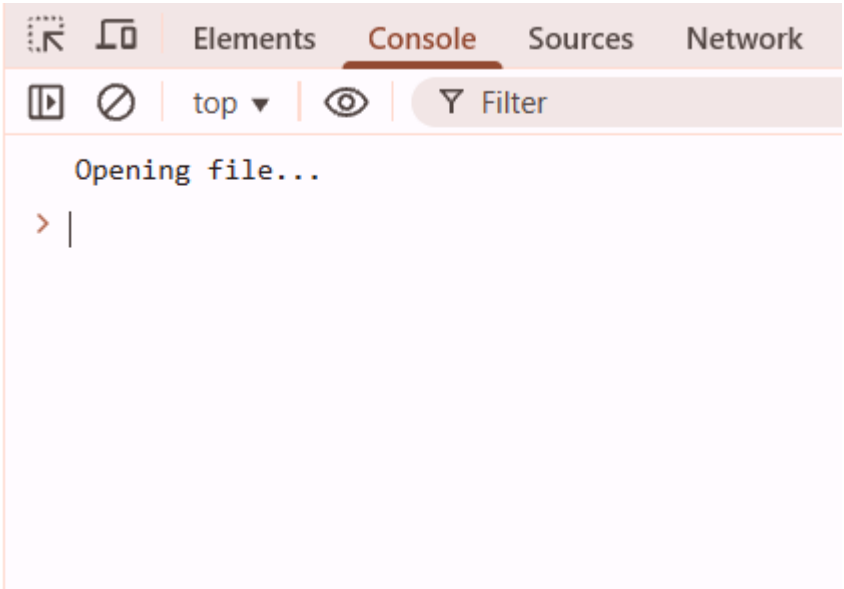
```
<script>
function checkAge(age)
{
if (age < 18) throw new Error("You must be 18+");
return "Access Granted";
}
try
{
console.log(checkAge(16));
}
catch (err)
{
console.log(err.message);
}
</script>
```



Example 5:

practical4.html > script

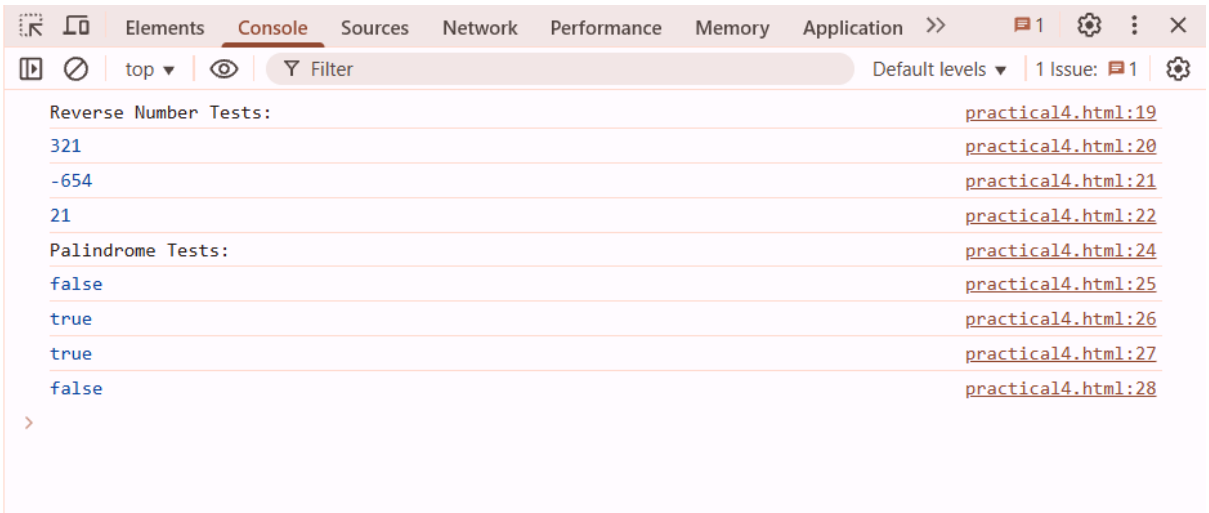
```
<script>
try {
  let fileOpen = true;
  console.log("Opening file...");

  // Simulate an error
  throw new Error("File read error!");

  console.log("Reading file...");
}
catch (err) {
  console.log("Error:", err.message);
}
finally {
  console.log("Closing file (cleanup)...");
}
</script>
```



Reverse & Palindrome:

practical4.html > script

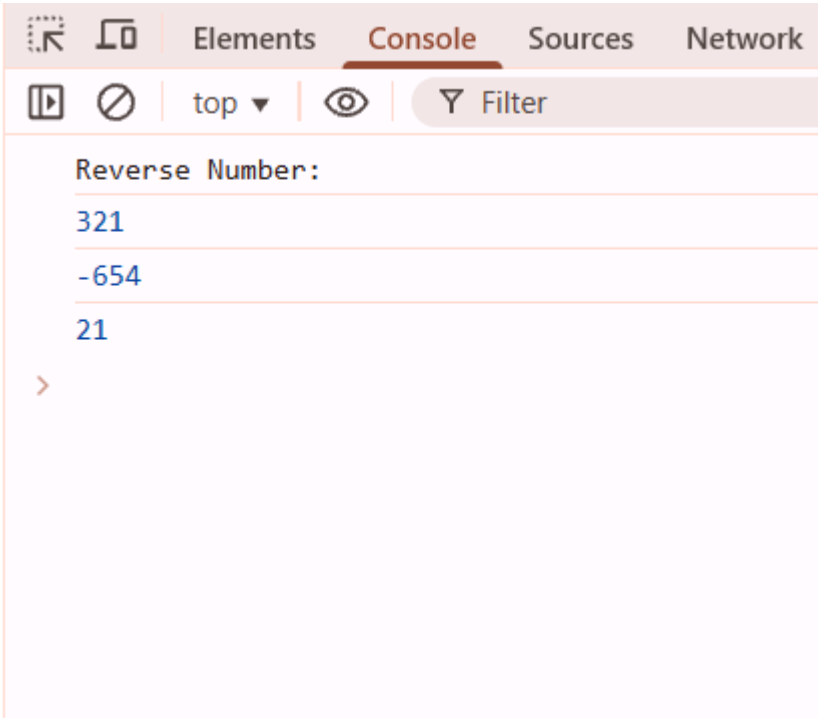
```
<script>
  function reverseNumber(num) {
    if (typeof num !== "number" || isNaN(num)) {
      throw new Error("Invalid number input");
    }
    let sign = Math.sign(num);
    let reversed = parseInt(Math.abs(num).toString().split("").reverse().join(""));
    return sign * reversed;
  }

  function isStringPalindrome(str) {
    if (typeof str !== "string") {
      throw new Error("Input must be a string");
    }
    let ss = str.toLowerCase();
    return ss === ss.split("").reverse().join("");
  }

  console.log("Reverse Number Tests:");
  console.log(reverseNumber(123));
  console.log(reverseNumber(-456));
  console.log(reverseNumber(1200));

  console.log("Palindrome Tests:");
  console.log(isStringPalindrome("Mukund"));
  console.log(isStringPalindrome("madam"));
  console.log(isStringPalindrome("racecar"));
  console.log(isStringPalindrome("hello"));
</script>
```



Task 1:

practical4.html > script

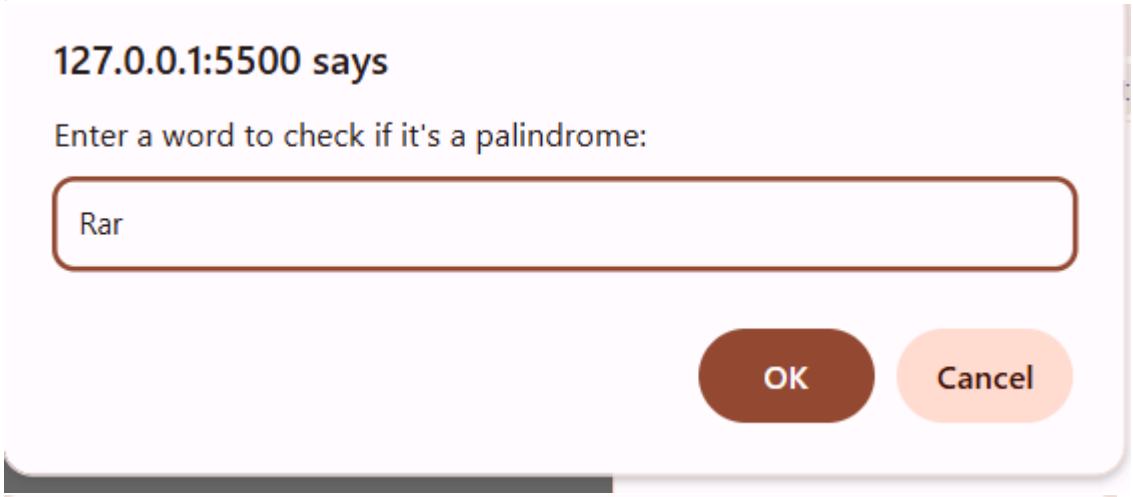
```
<script>
    function reverseNumber(num) {
    if (typeof num !== "number" || isNaN(num)) {
      throw new Error("Invalid number input");
    }
    let sign = Math.sign(num);
    let reversed = parseInt(Math.abs(num).toString().split("").reverse().join(""));
    return sign * reversed;
  }

  console.log("Reverse Number:");
  console.log(reverseNumber(123));
  console.log(reverseNumber(-456));
  console.log(reverseNumber(1200));
</script>

```

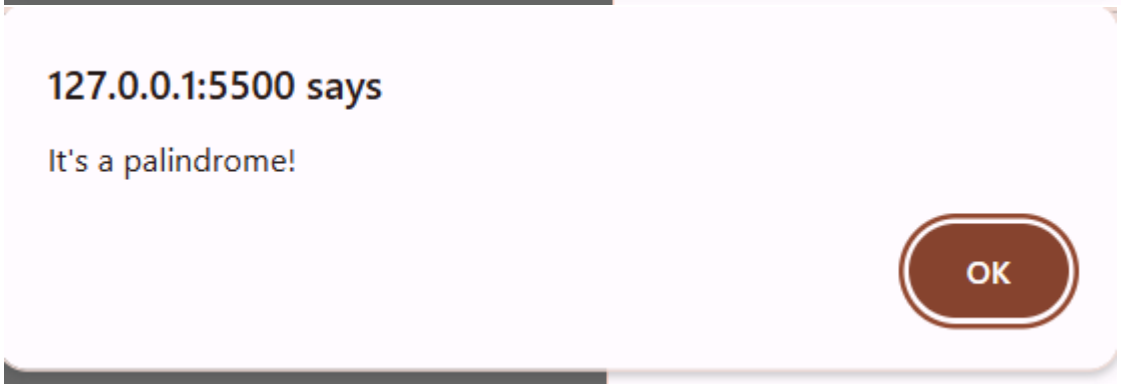


Task 2:

practical4.html > script

```
<script>
    let userInput = prompt("Enter a word to check if it's a palindrome:");
  function isStringPalindrome(str) {
    if (typeof str !== "string") {
      throw new Error("Input must be a string");
    }
    let ss = str.toLowerCase();
    return ss === ss.split("").reverse().join("");
  }
  alert(isStringPalindrome(userInput) ? "It's a palindrome!" : "Not a palindrome!");

</script>

```





Task 3:

practical4.html > script

```
<script>
    function safeSquareRoot(input) {
    try {
      let num = Number(input);
      if (isNaN(num)) throw "Not a number!";
      if (num < 0) throw "Square root of negative number not allowed!";
      return Math.sqrt(num);
    } catch (err) {
      return `Error: ${err}`;
    }
  }
  console.log("Square Root:");
  console.log(safeSquareRoot(16));
  console.log(safeSquareRoot(-9));
  console.log(safeSquareRoot("abc"));
</script>
```

```
Square Root:
4
>
```

Task 4:

practical4.html > script

```
<script>
    const isPrime = (num) => {
    try {
      if (typeof num !== "number" || isNaN(num) || num < 2) {
        throw "Invalid number for prime check!";
      }
      for (let i = 2; i <= Math.sqrt(num); i++) {
        if (num % i === 0) return false;
      }
      return true;
    } catch (err) {
      return `Error: ${err}`;
    }
  };

  console.log("Prime Check:");
  console.log(isPrime(2));
  console.log(isPrime(17));
  console.log(isPrime(20));
  console.log(isPrime("abc"));
</script>
```