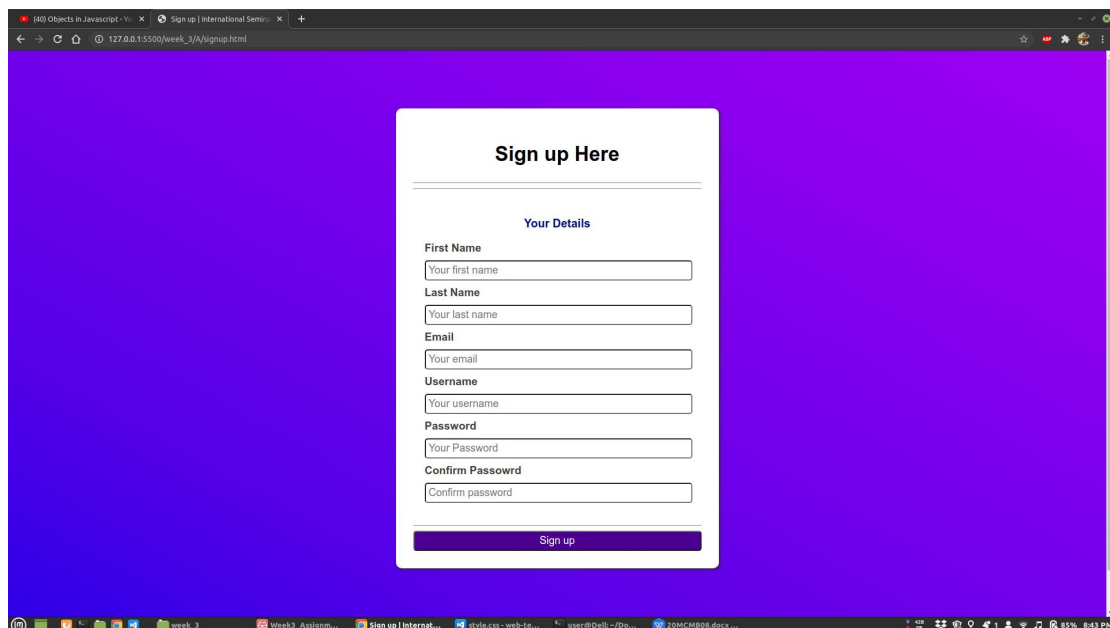
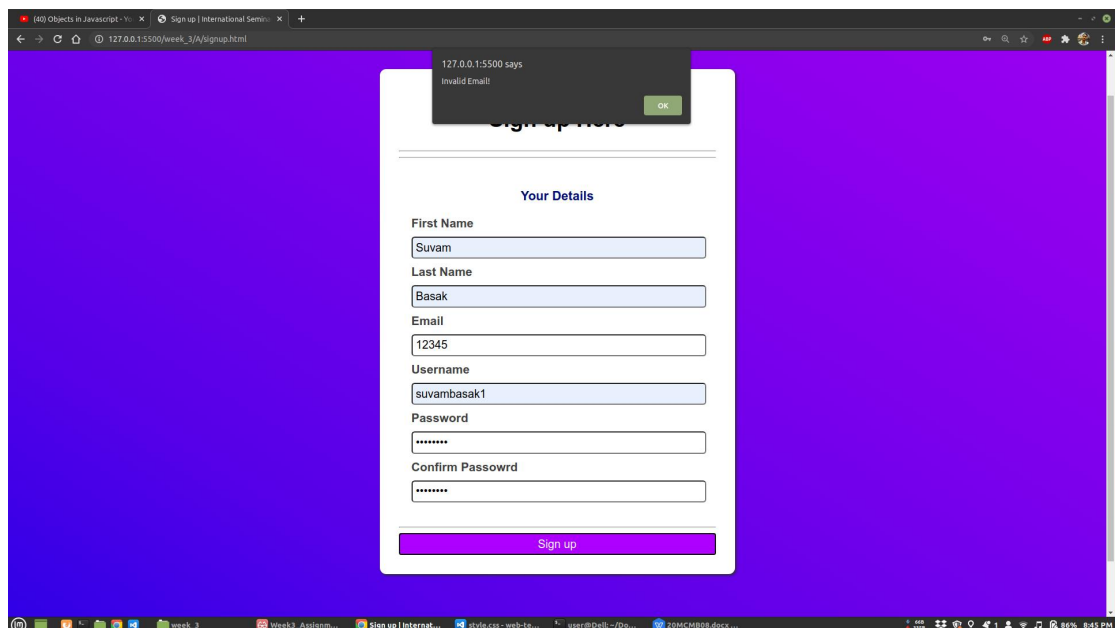
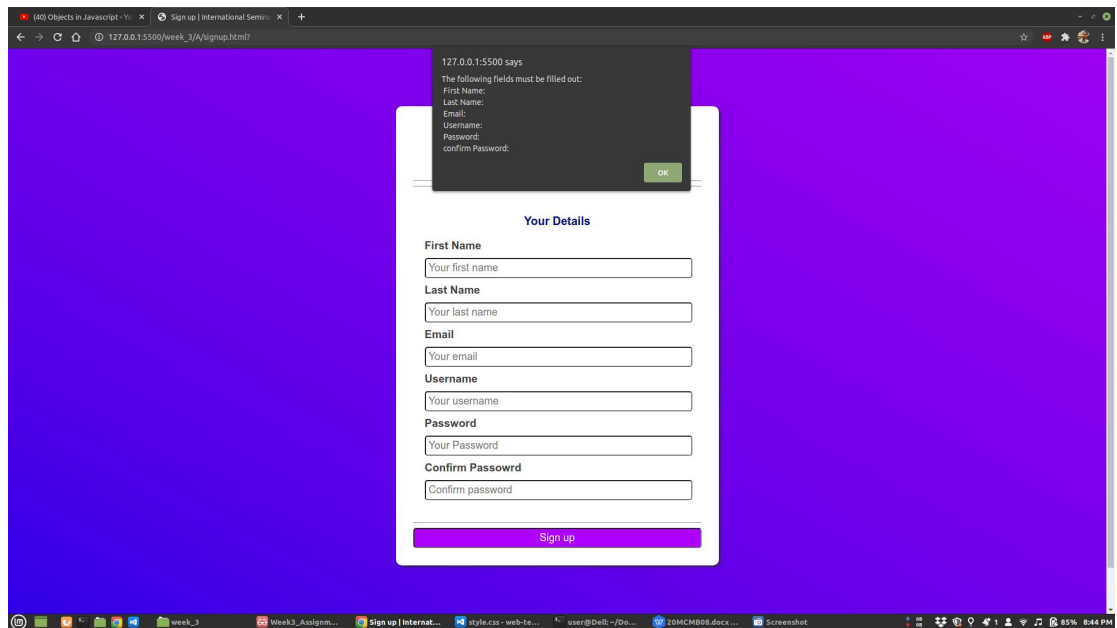


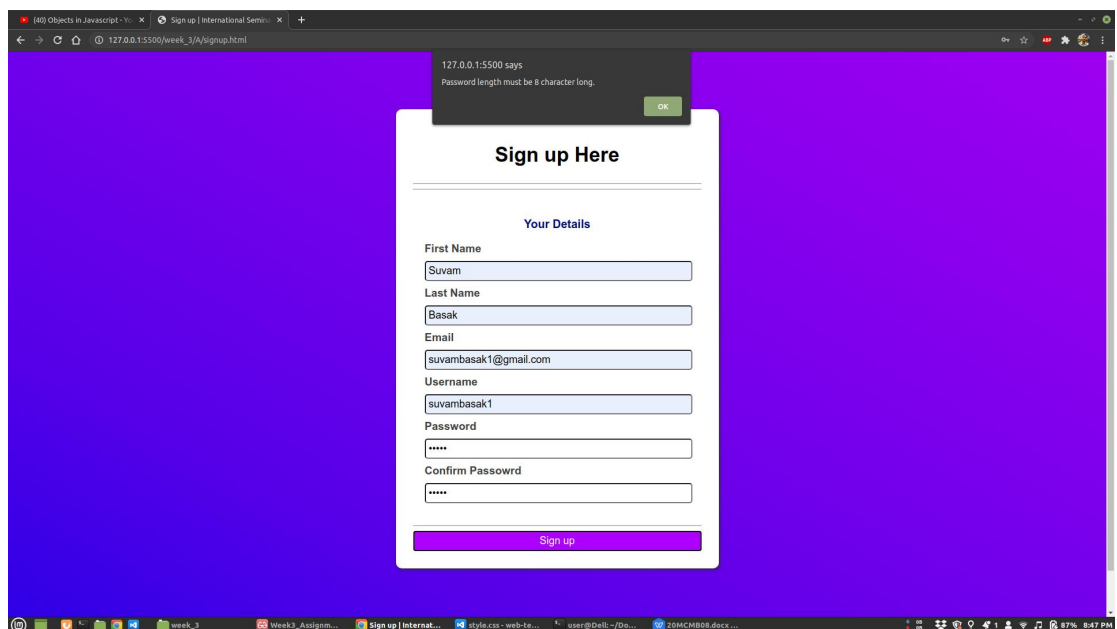
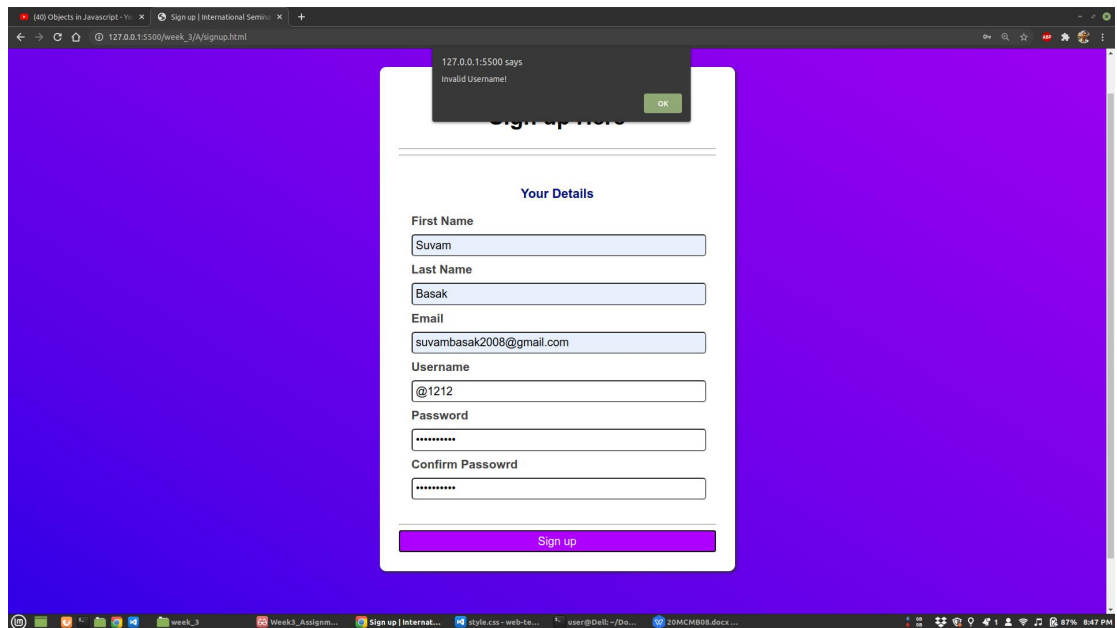
IT LAB II – Week 3

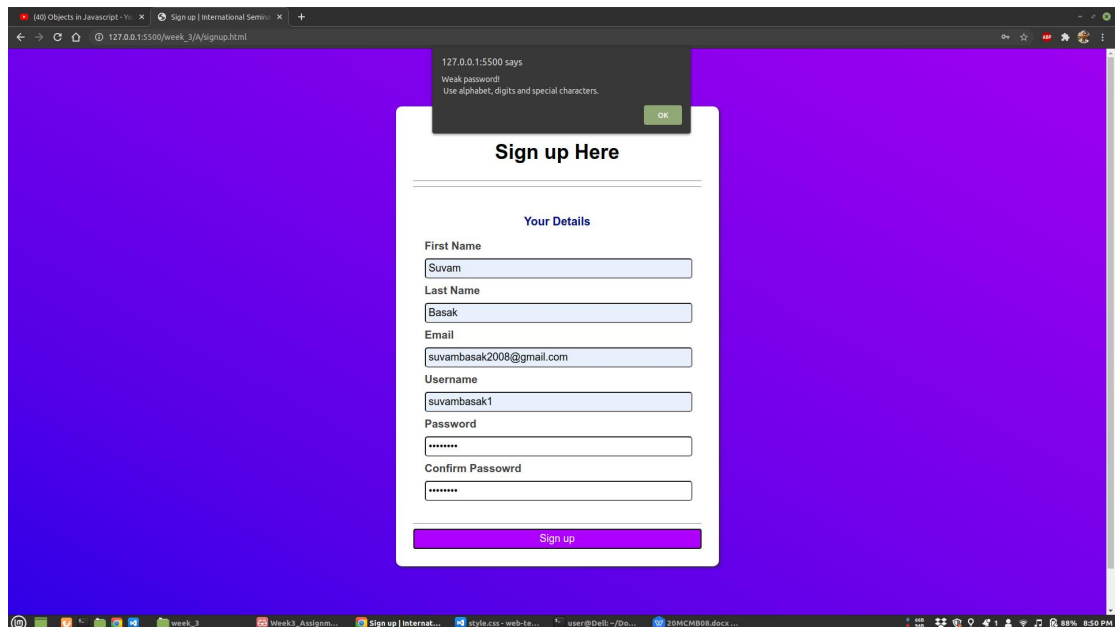
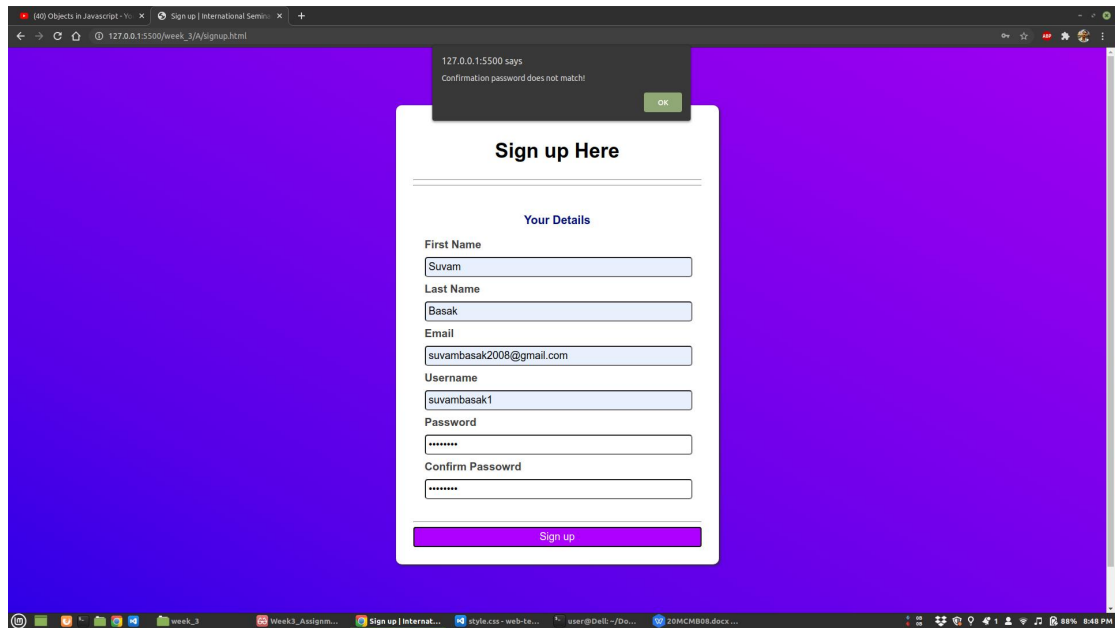
Suvam Basak
MTech IT
20MCMB08

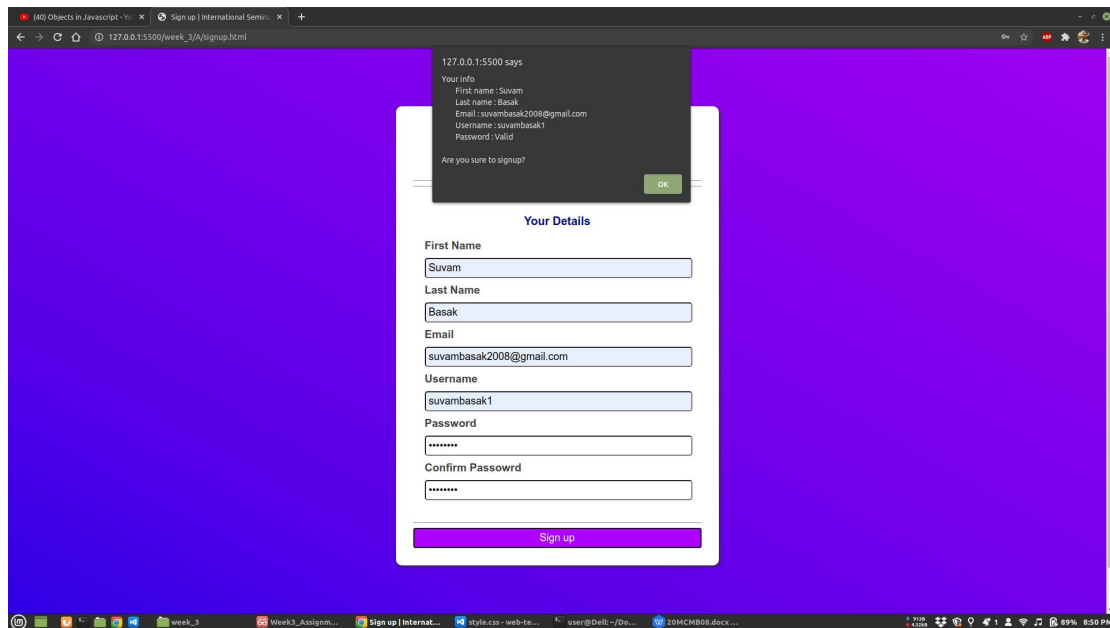
Question A











Source Code

index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width,
initial-scale=1.0">
  <!-- style -->
  <link rel="stylesheet" href="style.css">
  <title>Home Page</title>
</head>
<body>
  <div class="container">
    <h2>Welcome To This Page</h2>
    <hr>
    <hr><br>
    <!-- Link to sign up page -->
    <a href="signup.html"><input type="submit" value="Signup
(Lab_3_js)" class="btn"></a>
    <br>
  </div>
</body>
</html>
```

signup.html

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width,
initial-scale=1.0">

  <!-- style -->
  <link rel="stylesheet" href="style.css">

  <title>Sign up | International Seminar</title>
</head>

<body>
  <div class="container">
    <h2>Sign up Here</h2>
    <hr>
    <hr>
    <!-- from for Signup -->
    <form>
      <div class="section" id="signupform">
        <h3>Your Details</h3>
        <div>
          <label for="firstname">First Name</label>
          <input type="text" id="firstname"
placeholder="Your first name" class="txt">
        </div>
        <div>
          <label for="lastname">Last Name</label>
          <input type="text" id="lastname"
placeholder="Your last name" class="txt">
        </div>
        <div>
          <label for="email">Email</label>
          <input type="email" id="email"
placeholder="Your email" class="txt">
        </div>
        <div>
          <label for="username">Username</label>
          <input type="text" id="username"
placeholder="Your username" class="txt">
        </div>
        <div>
          <label for="address">Password</label>
```

```

        <input type="password" id="password"
placeholder="Your Password" class="txt">
    </div>
    <div>
        <label for="phone">Confirm Passowrd</label>
        <input type="password" id="confirmpassword"
placeholder="Confirm password" class="txt">
    </div>
</div>
<hr>
<!-- signup button -->
<input type="submit" value="Sign up" class="btn"
onclick="validate()">
</form>

</div>

<!-- External JS file for validation. -->
<script type="text/javascript"
src="validate_signup.js"></script>
</body>
</html>

```

validate_signup.js

```

// Validation function.
function validate() {
    // Taking all data from the form.
    var firstName = document.getElementById('firstname').value;
    var lastName = document.getElementById('lastname').value;
    var email = document.getElementById('email').value;
    var username = document.getElementById('username').value;
    var password = document.getElementById('password').value;
    var confirmPassword =
document.getElementById('confirmpassword').value;

    // Empty report.
    var emptyReport = 'The following fields must be filled out: ';
    var emptyFlag = false;
    if ('' === firstName) {
        emptyFlag = true;
        emptyReport += '\n First Name: ';
    }
}

```

```

    if ('' === lastName) {
        emptyFlag = true;
        emptyReport += '\n Last Name: ';
    }

    if ('' === email) {
        emptyFlag = true;
        emptyReport += '\n Email: ';
    }

    if ('' === username) {
        emptyFlag = true;
        emptyReport += '\n Username: ';
    }

    if ('' === password) {
        emptyFlag = true;
        emptyReport += '\n Password: ';
    }

    if ('' === confirmPassword) {
        emptyFlag = true;
        emptyReport += '\n confirm Password: ';
    }

    if (emptyFlag) {
        alert(emptyReport);
        return;
    }

    // Validation of all field.
    if (validEmail(email) && validUsername(username) &&
    validPassword(password, confirmPassword)) {

        // Showing
        alert(`Your info
        First name : ${firstName}
        Last name : ${lastName}
        Email : ${email}
        Username : ${username}
        Password : Valid
        \nAre you sure to signup?`);
    }

}

// function to validate username
function validEmail(email) {
    // length check

```



```

    if (email.length > 60) {
        alert('Email length exceed!');
        return false;
    }

    // validate email.
    var regx =
/^([a-z0-9\.-]+)@([a-z0-9-]+).([a-z]+)(.[a-z]+)?$/;
    if (regx.test(email))
        return true;

    alert('Invalid Email!');
    return false;
}

// function to validate username
function validUsername(username) {
    // length check
    if (username.length > 40) {
        alert('Username length exceed!');
        return false;
    }

    // validate username
    var regx = /^([a-z\.-]+)([0-9]+)?$/;
    if (regx.test(username))
        return true;

    alert('Invalid Username!');
    return false;
}

// Function to validate password
function validPassword(password, confirmPassword) {
    // length.
    if (8 != password.length) {
        alert('Password length must be 8 character long.');
```

return false;

```
    }
    // Match with confirm password.
    if (password != confirmPassword) {
        alert('Confirmation password does not match!');
```

return false;

```
    }

    // Strength of the password.
    var alpha = /[a-zA-Z]+/;
    var num = /[0-9]+/;
```

```
var special = /[!@#$$%^&*()_+=`~]+/;

if (alpha.test(password) && num.test(password) &&
special.test(password))
    return true;

alert('Weak password!\n Use alphabet, digits and special
characters.');
```

style.css

```
/* Style sheet */

body {
    font-family: Arial, Helvetica, sans-serif;
    margin-top: 100px;
    padding-bottom: 100px;
    background-image: linear-gradient(to right top, #2800e5,
#5400e8, #7000eb, #8800ed, #9d00f0);
}

h2 {
    text-align: center;
    font-size: 35px;
}

h3 {
    font-size: 20px;
    text-align: center;
    color: rgb(0, 12, 119);
}

a {
    font-size: 30px;
}

.container {
    margin-top: 50px;
    margin-bottom: 50px;
    width: 500px;
    display: block;
    margin-left: auto;
    margin-right: auto;
    background-color: white;
    padding: 30px;
}
```

```
        border-radius: 10px;

        box-shadow: 2px 2px 4px #2c2c2c;
    }

    .section {
        padding: 20px;
    }

    label {
        font-size: 19px;
        font-weight: bold;
        color: rgb(65, 65, 65);
    }

    .txt {
        font-size: 18px;
        padding: 5px;
        width: 98%;
        border-radius: 5px;
        margin-top: 10px;
        margin-bottom: 10px;
    }

    .btn {
        font-size: 18px;
        padding: 5px;
        width: 100%;
        border-radius: 5px;
        color: white;
        background-color: rgb(75, 0, 145);
    }

    .btn:hover {
        background-color: rgb(174, 0, 255);
    }
```

Question B



My First Web Tool

Length Conversion

From

To

Input form

Output to

Convert

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My First Web Tool

Length Conversion

Kilometers

To

Input form

Meters

Convert

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My First Web Tool

Length Conversion

Kilometers

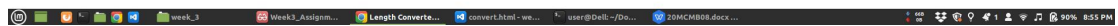
Milimeters

80

80000000

Convert

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My First Web Tool

Length Conversion

Milimeters

Meters

80

0.08

Convert

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Source Code

convert.html

```
<!doctype html>
<html lang="en">

<head>
  <!-- Required meta tags -->
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width,
initial-scale=1">
  <!-- Bootstrap CSS -->
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta3/dist/
css/bootstrap.min.css" rel="stylesheet"

integrity="sha384-e0JMYsd53ii+sc0/bJGFsiCZc+5NDVN2yr8+0RDqr0Ql
0h+rP48ckxlpbzKgwra6" crossorigin="anonymous">
  <!-- Style -->
  <style>
    .container {
      margin-top: 200px;
    }

    .form-style {
      width: 220px;
      margin-top: 10px;
      margin-bottom: 10px;

      margin-left: 20px;
      margin-right: 20px;
    }
  </style>
  <title>Length Converter</title>
</head>

<body>
  <div class="container">
    <!-- Card layout -->
    <div class="card text-center">
      <!-- Heading -->
      <div class="card-header">My First Web Tool</div>
      <div class="card-body">
        <h5 class="card-title">Length Conversion</h5>
        <!-- Conversion inputs -->
        <p class="card-text">
          <!-- Unit of conversion -->
          <div class="row d-flex justify-content-center">
```

```

        <!-- From -->
        <select class="form-select form-style"
aria-label="Default select example" id="from_select">
            <option value="0" selected>From</option>
            <option value="1">Kilometers</option>
            <option value="2">Meters</option>
            <option value="3">Milimeters</option>
        </select>

        <!-- To -->
        <select class="form-select form-style"
aria-label="Default select example" id="to_select">
            <option value="0" selected>To</option>
            <option value="1">Kilometers</option>
            <option value="2">Meters</option>
            <option value="3">Milimeters</option>
        </select>
    </div>

    <!-- Value of conversion -->
    <div class="row d-flex justify-content-center">
        <!-- Input -->
        <input type="number" class="form-control
form-style" placeholder="Input form" id="input_value">
        <!-- Output -->
        <input type="number" class="form-control
form-style" placeholder="Output to" id="output_value">
    </div>
</p>

    <!-- Button to convert -->
    <a href="#" class="btn btn-primary"
onclick="convert()">Convert</a>
</div>

    <!-- Copyright details -->
    <div class="card-footer text-muted">
        All right reserved. Copyright &copy; 2021. By Suvam
Basak!
    </div>
</div>

</div>

    <!-- External JavaScript file -->
    <script type="text/javascript" src="convert.js"></script>
</body>
</html>

```

convert.js

```
// Function for validation and calling right function based on unit.
function convert() {
    // Taking conversion unit and value.
    var fromUnit =
    parseInt(document.getElementById("from_select").value);
    var toUnit =
    parseInt(document.getElementById("to_select").value);
    var inputValue =
    parseInt(document.getElementById("input_value").value);

    // Log
    console.log(`From ${fromUnit} To ${toUnit}`);
    console.log(`Input value : ${inputValue}`);

    // Validation of unit.
    if (!(fromUnit && toUnit)) {
        alert("Please select the conversion unit!");
        return;
    }
    // Validation of input value.
    if (isNaN(inputValue)) {
        alert("Input missing!");
        return;
    }

    // Calling function based on input unit.
    switch (fromUnit) {
        case 1:
            kmToOther(toUnit, inputValue);
            break;

        case 2:
            mToOther(toUnit, inputValue);
            break;

        case 3:
            mmToOther(toUnit, inputValue);
            break;

        default:
            break;
    }
}

// Function for convert from kilometer to any other unit.
```



```

function kmToOther(toUnit, inputValue) {
    var output;

    switch (toUnit) {
        case 1:
            output = inputValue
            break;
        case 2:
            output = inputValue * 1000;
            break;
        case 3:
            output = inputValue * 1000000;
            break;

        default:
            break;
    }
    // Log.
    console.log(`KM to other : ${toUnit} | value(input):
    ${inputValue} | value(output):  ${output}`);
    // Update the output with converted value
    document.getElementById("output_value").value = output;
}

// Function for convert from meter to any other unit.
function mToOther(toUnit, inputValue) {
    var output;

    switch (toUnit) {
        case 1:
            output = inputValue / 1000;
            break;
        case 2:
            output = inputValue;
            break;
        case 3:
            output = inputValue * 1000;
            break;

        default:
            break;
    }

    // log.
    console.log(`M to other : ${toUnit} | value(input):
    ${inputValue} | value(output):  ${output}`);
    // Update the output with converted value.
    document.getElementById("output_value").value = output;
}

```

```
// Function for convert from millimeter to any other unit.
function mmToOther(toUnit, inputValue) {
    var output;

    switch (toUnit) {
        case 1:
            output = inputValue / 1000000;
            break;
        case 2:
            output = inputValue / 1000;
            break;
        case 3:
            output = inputValue;
            break;

        default:
            break;
    }

    // Log.
    console.log(`MM to other : ${toUnit} | value(input):
    ${inputValue} | value(output):  ${output}`);
    // Update the output with converted value.
    document.getElementById("output_value").value = output;
}
```
