

INT222 Quiz 5

Name: Solution

Instructions:

Complete all questions in the spaces provided (the number of lines provided does not indicate the length of the code required). This quiz is worth 5% of your final mark and you will have exactly 30 minutes to complete it.

Question 1 – JavaScript Validation (20 Marks):

Given the provided HTML Code (listed on the following page under "**HTML Reference**"), write the validation function "**validateForm**" used by the main "**quizForm**" <form> element using the blank lines provided under "**JavaScript Code (quiz-5-validation.js)**". Please ensure that all validation logic you write falls within the correct comment (//) sections in the spaces provided and that your errors are **meaningful to the user** (ie, simply stating "error" isn't going to help the user). See the "**Validation Rules & Error List**" instructions below for a list of Validation Rules and how your function should output errors.

Validation Rules

Name	The user must enter some value (spaces only does not count)
Comments	The user must enter a minimum of 10 characters (spaces only does not count)
Favourite Colours	The user must pick at least 2 colours
Vehicle Owned	The user must pick at least 1 vehicle
Residence Type	The user must pick a residence type
Favourite Fruit	The user must select a favourite fruit (choosing "-select-" does not count)

Error List

All errors must be listed as separate <p>...</p> elements within the <div id="errors">...</div> element. **For example**, if the user fails to enter anything for the "Name" field and "Comments" field, the <div id="errors">...</div> would look like this:

```
<div id="errors">
  <p>Name: must not be empty</p>
  <p>Comments: must contain at least 10 characters</p>
</div>
```

HTML Reference

```
<!doctype html>
<html>
  <head><title>Quiz 5</title></head>
  <body>

    <form action="https://httpbin.org/post" method="post"
    name="quizForm" onsubmit="return validateForm(this)">

      <label for="name">Name</label><br />
      <input type="text" name="name" id="name">

      <label for="comments">Comments:</label><br />
      <textarea name="comments" id="comments"></textarea>

      <label for="colour">Favourite Colours:</label><br />
      <select name="colour" id="colour" multiple>
        <option value="red">Red</option>
        <option value="green">Green</option>
        <option value="blue">Blue</option>
        <option value="orange">Orange</option>
      </select>

      Vehicle Owned<br />
      <label><input type="checkbox" name="vehicle" value="car"> Car</label><br />
      <label><input type="checkbox" name="vehicle" value="motorcycle">
      Motorcycle</label><br />

      Residence type<br />
      <label><input type="radio" name="residence" value="house"> House</label><br />
      <label><input type="radio" name="residence" value="apartment">
      Apartment</label><br />

      <label for="fruit">Favourite fruit:</label><br />
      <select name="fruit" id="fruit">
        <option value="0">-select-</option>
        <option value="apple">Apple</option>
        <option value="orange">Orange</option>
        <option value="banana">Banana</option>
      </select>

      <input type="submit" value="Submit Form">

    </form>

    <div id="errors"></div>

    <script src="quiz-5-validation.js"></script>

  </body>
</html>
```

JavaScript Code (quiz-5-validation.js)

```
function validateForm(frm){

    // declare a variable to store the full error string

    var errorHTML = "";

    // validate Name (if invalid, add errors to the full error string):

    if(frm.name.value.trim().length == 0){
        errorHTML += "<p>Name: must not be empty</p>";
    }


    // validate comments (if invalid, add errors to the full error string):

    if(frm.comments.value.trim().length < 10){
        errorHTML += "<p>Comments: must contain at least 10 characters</p>";
    }


    // validate colours (if invalid, add errors to the full error string):

    var numColours = 0;

    for(var i=0; i<frm.colour.options.length; i++){
        if(frm.colour.options[i].selected)
            numColours++;
    }

    if(numColours < 2){
        errorHTML += "<p>Favourite Colours: must have at least 2 values</p>";
    }


    // validate Vehicles (if invalid, add errors to the full error string):

    var numVehicle = 0;

    for(var i=0; i<frm.vehicle.length; i++){
        if(frm.vehicle[i].checked)
            numVehicle++;
    }

    if(numVehicle == 0){
        errorHTML += "<p>Vehicle: must have at 1 value</p>";
    }
}
```

```
// validate Residence (if invalid, add errors to the full error string):
```

```
var numResidence = 0;
```

```
for(var i=0; i<frm.residence.length; i++){  
    if(frm.residence[i].checked)  
        numResidence++;  
}
```

```
if(numResidence == 0){  
    errorHTML += "<p>Residence: must be selected</p>";  
}
```

```
// validate favourite fruit (if invalid, add errors to the full error string):
```

```
if(frm.fruit.selectedIndex == -1 || frm.fruit.selectedIndex == 0 ){  
    errorHTML += "<p>Favourite Fruit: must be selected</p>";  
}
```

```
// check if there are any errors present in the full error string  
// if there are errors present, write them to the div with id="errors"  
// and return false  
// if there are no errors present, return true
```

```
if(errorHTML.length > 0){  
    document.querySelector("#errors").innerHTML = errorHTML;  
    return false;  
}else{  
    return true;  
}
```

```
}
```