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**Assignment 1:** Create a JavaScript object representing a user with properties for name, email, and age. Write functions that manipulate this object, such as changing the name, updating the email, and calculating the user's birth year.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Assignment 1: JavaScript Object and Functions</title>
<script>

    let user = {
        name: "harry styles",
        email: "harry@gamil.com",
        age: 30,

        changeName: function(newName) {
            this.name = newName;
        },

        updateEmail: function(newEmail) {
            this.email = newEmail;
        },

        calculateBirthYear: function() {
            const currentYear = new Date().getFullYear();
            return currentYear - this.age;
        }
    };

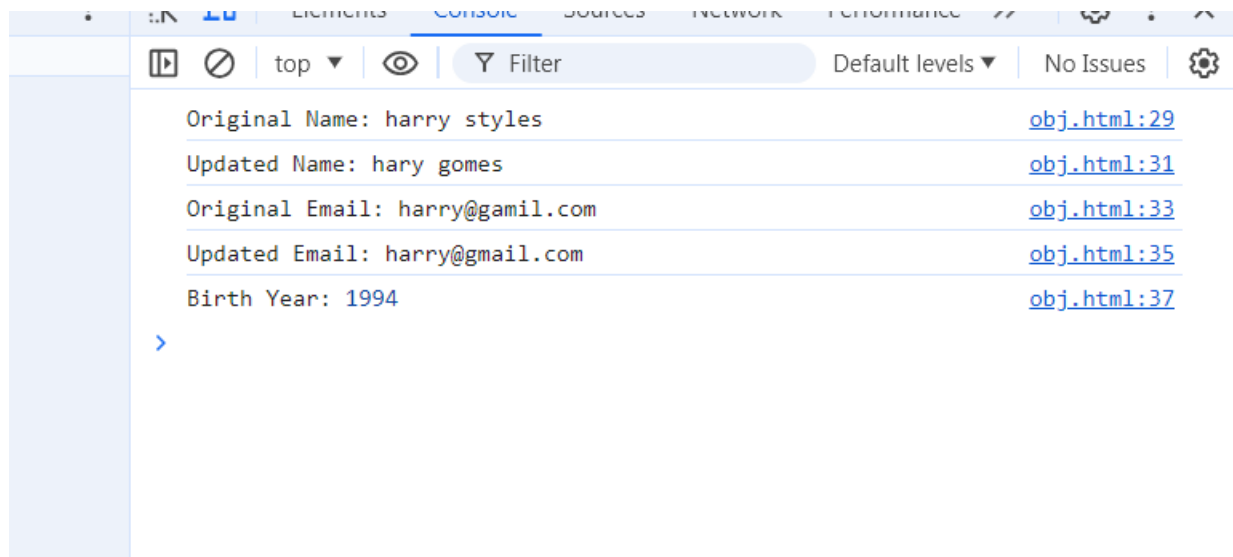
    console.log("Original Name:", user.name);
    user.changeName("hary gomes");
    console.log("Updated Name:", user.name);

    console.log("Original Email:", user.email);
    user.updateEmail("harry@gmail.com");
    console.log("Updated Email:", user.email);

    console.log("Birth Year:", user.calculateBirthYear());
```

```
</script>
</head>
<body>

</body>
</html>
```



**Assignment 2:** Use regular expressions in JavaScript to validate the email address entered in the form. It should check for the correct format of the email and display a message to the user if the format is incorrect.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Assignment 2: Email Validation</title>
```

```
<style>
  body {
    font-family: Arial, sans-serif;
    margin: 20px;
  }

  form {
    max-width: 400px;
    margin: 0 auto;
  }

  .message {
    margin-top: 10px;
    padding: 10px;
    background-color: #f0f0f0;
    border: 1px solid #ccc;
  }

  .error {
    color: red;
  }

  .success {
    color: green;
  }
</style>
<script>
  function validateEmail(email) {
    const emailRegex = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;
    return emailRegex.test(email);
  }

  function submitForm() {
    const emailInput = document.getElementById("email").value;

    if (validateEmail(emailInput)) {
      displayMessage("Email is valid.", "success");
    } else {
      displayMessage("Invalid email format! Please enter a valid email address.", "error");
    }
  }
</script>
```

```
function displayMessage(message, messageType) {
    const messageContainer = document.getElementById("message-container");
    messageContainer.innerHTML = `<div class="message
${messageType}">${message}</div>`;
}
</script>
</head>
<body>
    <h2>Email Validation</h2>
    <form>
        <label for="email">Email:</label>
        <input type="email" id="email" required><br><br>

        <button type="button" onclick="submitForm()">Validate Email</button>
    </form>

    <div id="message-container"></div>
</body>
</html>
```

## Email Validation

Email:

Email is valid.

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

```
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Assignment 1: JavaScript Object and Functions</title>
<script>

    let user = {
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        age: 30,

        changeName: function(newName) {
            this.name = newName;
        },

        updateEmail: function(newEmail) {
            this.email = newEmail;
        },

        calculateBirthYear: function() {
            const currentYear = new Date().getFullYear();
            return currentYear - this.age;
        }
    };

    console.log("Original Name:", user.name);
    user.changeName("hary gomes");
    console.log("Updated Name:", user.name);

    console.log("Original Email:", user.email);
    user.updateEmail("harry@gmail.com");
    console.log("Updated Email:", user.email);

    console.log("Birth Year:", user.calculateBirthYear());
</script>
</head>
<body>

</body>
</html>
```