**Contents**

**JAVASCRIPT**

**Functions:**

* **Introduction:**
* **Programming Question: travel agency vehicle count**
* **Code:**

let vehicles = {

"SUV" : 10,

"Sedan" : 27,

"Luxury" : 5

};

function travelAgency(vehicleType) {

if (vehicles[vehicleType] != undefined) {

console.log(`We provide ${vehicles[vehicleType]} vehicles of the type ${vehicleType}.`);

} else {

console.log('Sorry. We only provide the following types of vehicle:');

for (var key in vehicles) {

console.log(key);

}

}

}

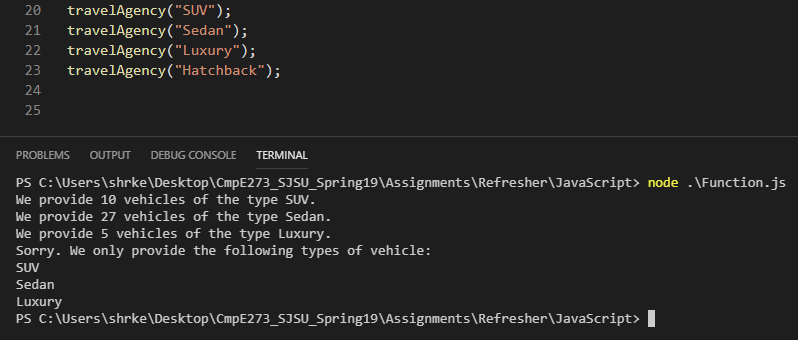
travelAgency("SUV");

travelAgency("Sedan");

travelAgency("Luxury");

travelAgency("Hatchback");

* **Output:**

****

**Events:**

* **Introduction:**
* **Programming Question: button colour change on click event**
* **Code:**

<!DOCTYPE html>

<html>

<head>

<script>

function decimalToHex(decimal) {

hex = decimal.toString(16);

if (hex.length % 2) {

hex = '0' + hex;

}

return hex;

}

function randomColourHexValue() {

var decimalValue = Math.random() \* 255;

decimalValue = Math.floor(decimalValue);

var hexValue = decimalToHex(decimalValue);

return hexValue;

}

function setColor(button) {

var red = randomColourHexValue();

var green = randomColourHexValue();

var blue = randomColourHexValue();

var property = document.getElementById(button);

property.style.backgroundColor = `#${red}${blue}${green}`;

alert('Colour changed!');

}

</script>

</head>

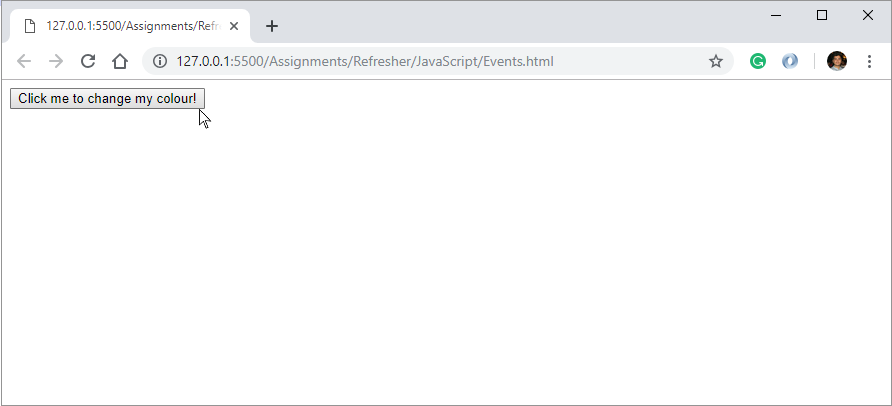
<body>

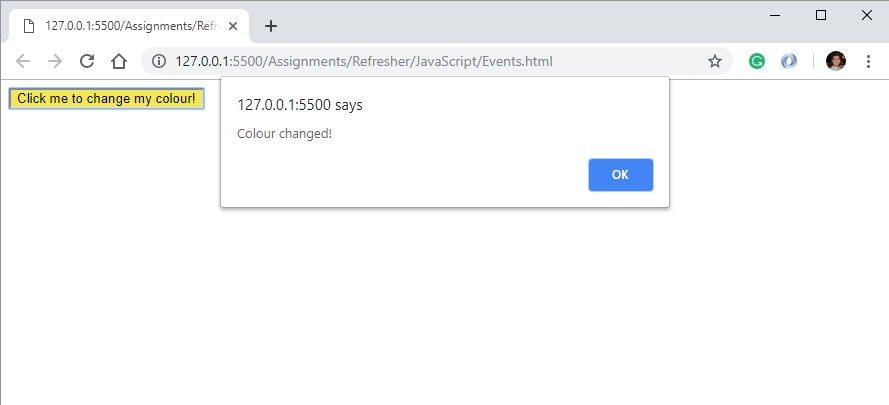
<input type="button" id="button" value = "Click me to change my colour!" style= "color : black" onclick="setColor('button')";/>

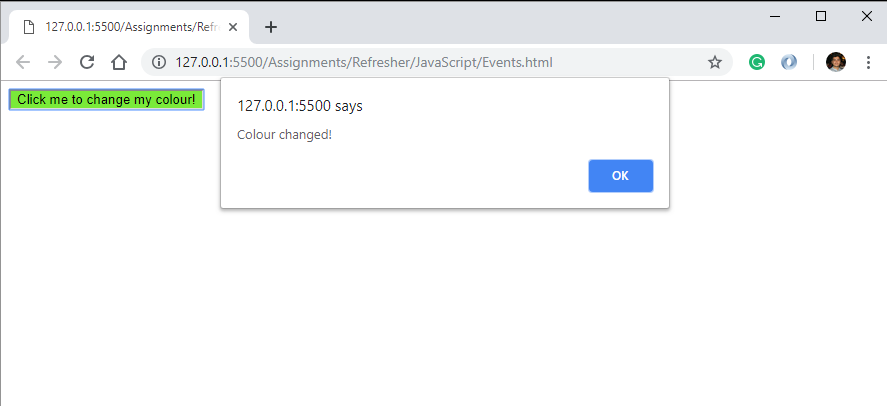
</body>

</html>

* **Output:**

****

****

****

**Arrays:**

* **Introduction:**
* **Programming Question: male and female candidates in exam**
* **Code:**

let candidates = {

"John" : "M",

"Alexa" : "F",

"Bryan" : "M",

"Cindy" : "F",

"Roy" : "M",

"Evan" : "M"

};

let male = [];

let female = [];

for (key in candidates) {

if(candidates[key] == "M") {

male.push(key);

} else if (candidates[key] == "F") {

female.push(key);

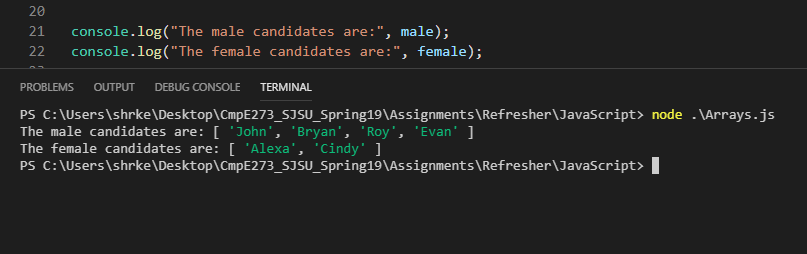
}

}

console.log("The male candidates are:", male);

console.log("The female candidates are:", female);

* **Output:**

****

**Regular Expressions:**

* **Introduction:**
* **Programming Question: check email id and convert to sjsu edu**
* **Code:**

function emailValidity(emailId) {

let checkEmail = emailId.match(/\S+@\S+/);

let validity = checkEmail? 'valid' : 'invalid';

console.log(`The email id is ${validity}`);

return validity;

}

function convertToEdu(emailId = 'xyz') {

if(emailValidity(emailId) == 'valid') {

let regex = '[^@]\*$';

let convertThis = emailId.match(regex);

let eduId = emailId.replace(convertThis[0],'sjsu.edu');

console.log(`New SJSU Edu ID for the student is ${eduId}`);

} else {

console.log('Please enter a valid email id.');

}

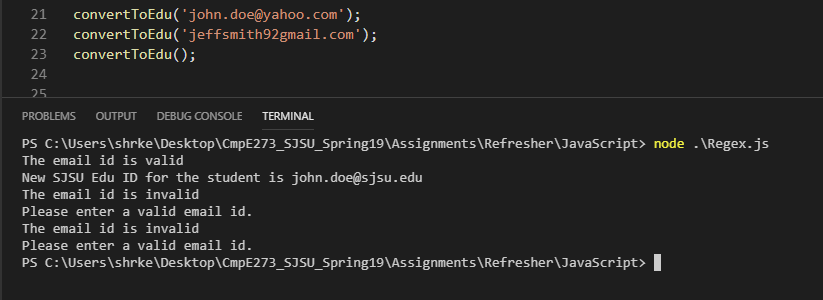
}

convertToEdu('john.doe@yahoo.com');

convertToEdu('jeffsmith92gmail.com');

convertToEdu();

* **Output:**

****

**Strict mode:**

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**fetch() ( Use any open-source API for fetching data):**

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**HTML5**

**Local Storage:**

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**Input Type (make use of different input property options in HTML5 like patterns, autofocus, required, email etc. Place types you want, mention the properties used in your Introduction to Topic section):**

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**JAVA** **(Use JUnit Framework for testing the application):**

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