

Question 1 : Answer the following questions (10 points)

- 1- Difference between var and let keyword in javascript.
- 2- Difference between "==" and "===" operators
- 3- Difference between while and for loop
- 4- Difference between if and switch

Question 2 : What is the output (5 points)

```
function test() {  
  return {  
    x : 1  
  }  
}  
console.log(typeof(test()))
```

output:
object

```
function sum(a, b) {  
  return a + b;  
}  
console.log(sum(1, '2'));
```

output:
12

```
let x = 10  
let y = x  
x = 20  
console.log(y);
```

output:
10

```
let arr = ['foo' , 'bar'];  
for(let x in arr) {  
    console.log(arr[x])  
    console.log(arr['x'])  
}
```

output:
foo
undefined
bar
undefined

```
for(var i = 1; i <= 10; i *= 2){  
  
}  
console.log(i);
```

output:
16

Question 3 : Write Js Code to solve these problems (50 points)

1- Check if string is palindrome or not

Hint : A palindrome is a word or sentence that's spelled the same way both forward and backward

For example : eye is palindrome

Welcome isn't palindrome

2- Create a function to check if the given number is even

Hint : return true if number is even and false if not .

Solve this problem in two ways

1- Use only if statement without else

2- Use ternary operator

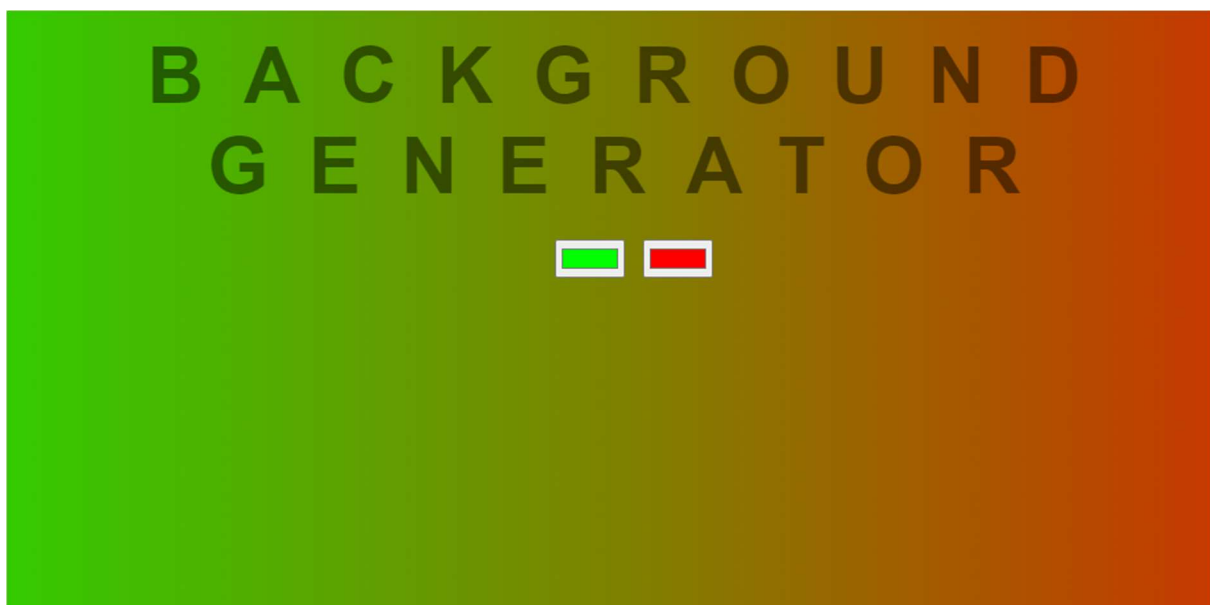
3- Find Largest Number In Array

Ex: [10 , 100 , 50 , 4] => output : 100

4- Write a function that takes an integer hours and converts it to seconds.

5- Write a JS code to find the power of a number using for loop

Question 4 : Using html , css and js make this possible (15 points)



Question 5 : (20 points)

1- Refactor this code by doing it in another two ways

```
const keyNum = Number(prompt('enter key num : '))
if(keyNum === 1) {
  console.log("The key is on")
}else{
  console.log("The key is off")
}
```

2- Refactor this code using for loop

```
let i = 5 ;  
while(i >= 1) {  
    console.log(i);  
    i--;  
}
```

3- True or false

1- Javascript is async , blocking and single threaded language → false

2- Const arr = [1 , 2 , 3 , 4]

The output of console.log(typeof(arr)) will be array → false

Good Luck 😊

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