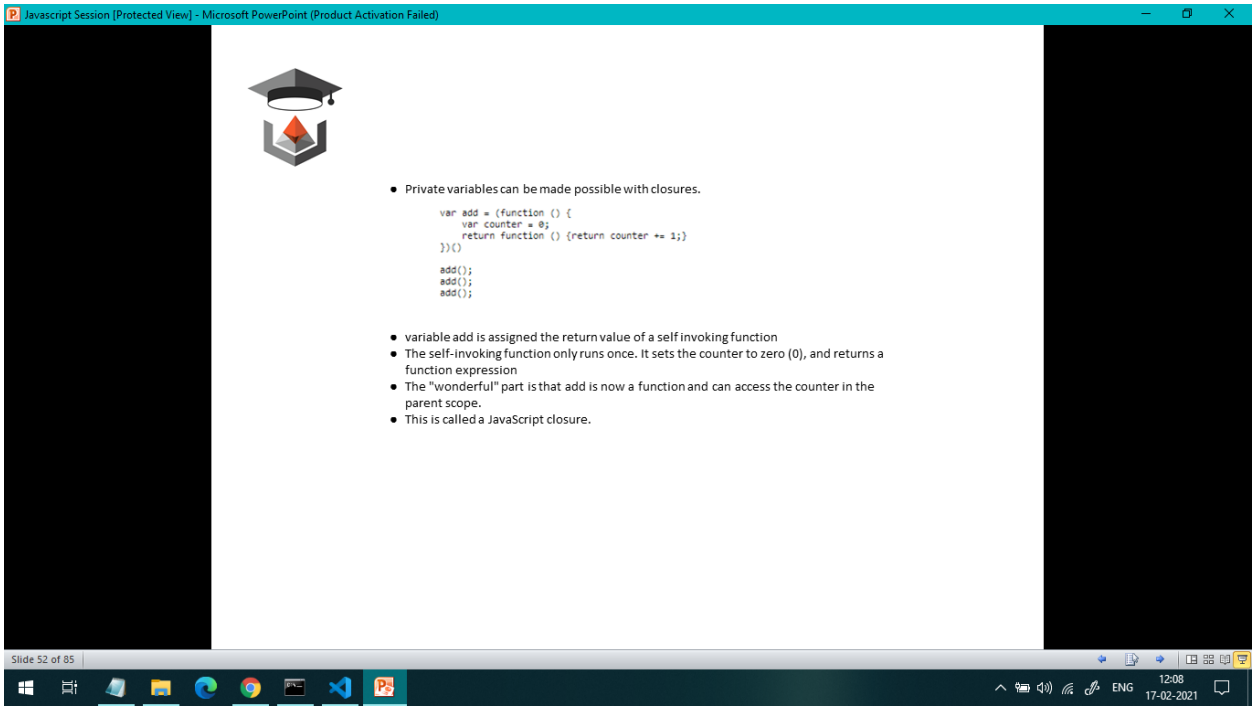
JavaScript

1)Explaination for slide no 52



Ans) Here counter var is closure to the function and we are assign the the function to a object add, so its like now counter is bind with add function so when we call it again and again the counter get incremented and returned

Suppose if you assign the function to “add1” then again one more counter variable is bind with add1 there it is initialized to zero. If we call add1 again it will be incremented.

2. Array methods

```
> var arr1 =[1,3,5,7,9];
< undefined
> var arr2 =[2,4,6,8];
< undefined
> var arr3=arr1.concat(arr2);
< undefined
> arr3
< ▸ (9) [1, 3, 5, 7, 9, 2, 4, 6, 8]
> function fun1(n){
  if(n%2==0) return true;
  else return false;
  }
< undefined
> arr3.every(fun1);
< false
> arr2.every(fun1);
< true
> arr3.filter(fun1);
< ▸ (4) [2, 4, 6, 8]
> function fun2(item,index){
      console.log(""+index+item+"+"+(index*item));
  }
< undefined
> arr3.forEach(fun2);
  01+0
  13+3
  25+10
  37+21
  49+36
  52+10
  64+24
  76+42
  88+64
< undefined
> arr3.indexOf(3);
< 1
> arr3.join();
< "1,3,5,7,9,2,4,6,8"
```

3)Create a code/function where I give an input as a string

And it returns true if

a) string starts with lion

b) string ends with cat

c) string has abc (b can be n times, where n >=1) anywhere in between the string and prints the location

```
function myfun(a){
var res=false;
if(res=(/^Lion/.test(a))){console.log("matched at location "+a.match(/^Lion/).index);}
else if(res=(/cat$/.test(a))){console.log("matched at location "+a.match(/cat$/).index);}
else if(res=(/ab+c/.test(a))){console.log("matched at location "+a.match(/ab+c/).index);}
return res;
}
undefined
str="Lion is mani";
"Lion is mani"
str1="mani is Lion";
"mani is Lion"
str2="Toin is cat";
"Toin is cat"
str3="mani abbc  hrudhay";
"mani abbc  hrudhay"
myfun(str);
myfun(str1);
myfun(str2);
myfun(str3);
matched at location 0
matched at location 8
matched at location 5
true
myfun(str1);
false
```

4. Type a function which takes array as an input

a) it'll sort array in ascending order

b) it'll multiply each number by 10

c) it'll return those numbers which are divisible by 3

```
> function myfun(arr){
  arr.sort(function(a, b){return a-b});
  console.log("after sorting");
  console.log(arr);
  arr.forEach(fun1);
  console.log("after multiplying with 10");
  console.log(arr);
  var a=arr.filter(fun2);
  console.log("multiples of 3 are");
  console.log(a);
  }

  function fun1(num,i) {
  arr[i]=num*10;}
  function fun2(item) {
   if(item%3==0) return true;
   else return false;
  }
< undefined
> var arr=[1,2,3,4,5];
  myfun(arr);
  after sorting
  ▸ (5) [1, 2, 3, 4, 5]
  after multiplying with 10
  ▸ (5) [10, 20, 30, 40, 50]
  multiples of 3 are
  ▸ [30]
< undefined
>
```

5) Difference between == and === with a small example

“==” will check that values are equal;

“===” will check that values are equal and also check the variable types are equal;

```
> a=0;
< 0
> b="0";
< "0"
> a==b
< true
> a===b
< false
```