

**1)**

**A. print odd numbers in array code:-**

```
//creating a array  
  
let arr = [1,2,3,4,5,6,7,8,9,10];  
  
// do filter  
  
let odd = arr.filter( n=>n %2);  
  
//display output  
  
console.log(odd);
```

**B.covert string to in little case code:-**

```
function titleCase(string) {  
  
    var sentence = string.toLowerCase().split(" ");  
  
    for(var i = 0; i< sentence.length; i++){  
  
        sentence[i] = sentence[i][0].toUpperCase() + sentence[i].slice(1);  
  
    }  
  
    console.log(sentence.join(" "));  
  
    return sentence;  
  
}  
  
// take input here of string as titlecase  
  
titleCase("guvi is one of best e-platforms");
```

### **C.sum of all numbers in array code:-**

```
//create a array  
  
var arr = [4, 50, 17, 15, 20];  
  
//create a variable name sum to store the sum  
  
var sum = 0;  
  
//here we are using for loop for do sum of all numbers of array  
  
for(let i = 0;i<arr.length;i++){  
    sum += arr[i];  
}  
  
// this sentence display sum of all numbers which are in array  
  
console.log("sum of array" + sum);
```

Output:-

```
168 var arr = [14, 50, 17, 15, 20];
169 //create a variable name sum to store the sum
170 var sum = 0;
171 //here we are using for loop for do sum of all numbers of array
172 for(let i = 0;i<arr.length;i++){
173     sum += arr[i];
174 }
175 // this sentence display sum of all numbers which are in array
176 console.log("sum of array:-" + sum);
177
178
179
```

---

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```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node exe.js
sum of array:-106
```

```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node exe.js
sum of array:-116
```

```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █
```

## D.Return all the prime numbers in an array

//creating a array:-

Output:-

```
130 function findPrime(arr){
131     let sortArray = [];
132     arr.forEach((num)=>{
133         let factor = 0;
134         for(let i = 0;i<=num;i++){
135             if((num%i) === 0){
136                 factor++
137             }
138         }
139         if(factor === 2){
140             sortArray.push(num)
141         }
142     })
143     console.log(sortArray);
144 }
145 findPrime([1,2,3,7,5,66,77,55,99])
146
147
148
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node exe.js

[ 2, 3, 5 ]

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node exe.js

[ 2, 3, 7, 5 ]

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## E.Find Palindrom from an array

### Code&Output:-

```
147 const arr = ['Raccarecar', 13444, 1123211, 'Rushi', 'cannot', '45954'];
148 const isPalindrome = el => {
149     const str = String(el);
150     let i = 0;
151     let j = str.length - 1;
152     while(i < j) {
153         if(str[i] === str[j]) {
154             i++;
155             j--;
156         }
157         else {
158             return false;
159         }
160     }
161     return true;
162 };
163 const findPalindrome = arr => {
164     return arr.filter(el => isPalindrome(el));
165 };
166 console.log(findPalindrome(arr));
167
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node exe.js

[ 1123211, '45954' ]

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## **F.Return median of two array.**

```
let median=function(ar1, ar2, n){  
  
  {  
  
    var i = 0; /* Current index of i/p array ar1[] */  
    var j = 0; /* Current index of i/p array ar2[] */  
  
    var count;  
  
    var k1 = -1, k2 = -1;  
  
    /* Since there are 2n elements, median will be average  
    of elements at index n-1 and n in the array obtained after  
    merging ar1 and ar2 */  
  
    for (count = 0; count <= n; count++)  
    {  
  
      /*Below is to handle case where all elements of ar1[] are  
      smaller than smallest(or first) element of ar2[]*/  
  
      if (i == n)  
      {  
  
        k1 = m2;  
  
        k2 = ar2[0];  
  
        break;  
      }  
  
      /*Below is to handle case where all elements of ar2[] are  
      smaller than smallest(or first) element of ar1[]*/  
  
      else if (j == n)  
      { k1 = k2;
```

```

k2 = ar1[0];

break;

}

/* equals sign because if two
arrays have some common elements */
if (ar1[i] <= ar2[j])
{
    m1 = m2; /* Store the prev median */
    m2 = ar1[i];
    i++;
}
else
{
    m1 = m2; /* Store the prev median */
    m2 = ar2[j];
    j++;
}

return (m1 + m2)/2;
}}

median()

/* Driver program to test above function */

var ar1 = [1, 12, 15, 26, 38];

var ar2 = [2, 13, 17, 30, 45];

```

```
var n1 = ar1.length;

var n2 = ar2.length;

if (n1 == n2)

console.log("Median is "+ median(ar1, ar2, n1));

else

console.log("Doesn't work for arrays of unequal size");
```

### G). remove same element from two array.

Code:-

```
112     var arr = ["Rushi", "mango", "pineapple",
113             | "Banana", "Rushi", "mango"];
114
115     function removeDuplicates(arr) {
116         return arr.filter((item,
117             | index) => arr.indexOf(item) === index);
118     }
119
120     console.log(removeDuplicates(arr));
121
122
123
124
125
```

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```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js
[ 'apple', 'mango', 'orange' ]
```

```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js
[ 'Rushi', 'mango', 'pineapple', 'Banana' ]
```

```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> 
```



## H).Rotate an array by k times.

Code:-

```
122   const rotateArray=function(arr,k){
123       const mod=k%arr.length;
124       return arr.map((e,i)=>{
125           return arr[(mod+i)%arr.length];
126       });
127   }
128   console.log(rotateArray([1,2,3,4,5,6,7,8,9,10],3));
129
130
131
```

---

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```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js
[
  6, 7, 8, 9, 10,
  1, 2, 3, 4, 5
]
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js
[
  4, 5, 6, 7, 8,
  9, 10, 1, 2, 3
]
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █
```

## Convert String to Integer:-

```
130   var num=5;
131   function addFive(num1){
132     return num+num1;
133   }
134   let num1;
135   var result=addFive(5)
136   console.log(result);
137   var result=addFive(8)
138   console.log(result);
139   var result=addFive(-9)
140   console.log(result);
141
```

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```
[
  4, 5, 6, 7, 8,
  9, 10, 1, 2, 3
]
```

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js

10

5

0

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js

10

13

-4

-

Create a func which takes a string and return it as an integer.

```
142  var mystr="10";
143  function tointeger(mtstr){
144      if(mystr==mystr){
145          return mystr;
146      }
147  }
148  var mystr = tointeger(mystr)
149  console.log(mystr);
150
```

---

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js  
10

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## Convert min to seconds:-

```
151  var min = 5;
152  function toSeconds(min){
153      return min*60;
154  }
155  var secs = toSeconds(min)
156  console.log(secs);
```

---

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300

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Create a Func that take a number as an argument, increments the number by +1 and then return the result.

Code:-

```
158 var myint = 45;
159 function nextNumber(myint){
160     return ++myint;
161 }
162 var myNextint = nextNumber(myint)
163 console.log(myNextint);
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js

46

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Create a function that return hours in to Seconds.

Code:-

```
165  var hour = 5;  
166  function hourToSeconds(hour){  
167      return hour*3600;  
168  }  
169  var data = hourToSeconds(hour)  
170  console.log(data);
```

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```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js  
18000
```

```
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```

## Return FirstElementOf an Array.

Code:-

```
172 var arr = [-25,10,45];
173 function getFirstElement(arr){
174     return arr[0];
175 }
176 var data = getFirstElement(arr)
177 console.log(data);
```

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```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js
-25
```

```
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```

Number is less than 100 or not !!

Code:-

```
179 function lessThan100(num1,num2){
180     let sum=num1+num2;
181     if(sum<100){
182         return true;
183     }else{
184         return false;
185     }
186 }
187 var less = lessThan100(45,25)
188 console.log(less);
```

---

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day06.js  
true

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Find the parameter of a rectangle.

Code:-

```
190 function findPerameter(num1,num2){  
191 |   return 2*(num1+num2);  
192 }  
193 var peri = findPerameter(15,20)  
194 console.log(peri);
```

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70

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There is a single operator in JavaScript, capable of providing the remainder of a division operation. Two numbers are passed as parameters. The first parameter divided by the second parameter will have a remainder, possibly zero. Return that value.

Code:-

```
195  function remainder(num1,num2){
196      if(num1%num2===num1){
197          return num1;
198      }
199
200  }
201  var rem = remainder(-33,99)
202  console.log(rem);
203
```

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```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js
-33
```

```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █
```

Old macdonald had a farm: MacDonald is asking you to tell him how many legs can be counted among all his animals. The farmer breeds

three species:

turkey = 2 legs

horse = 4 legs

pigs = 4 legs

The farmer has counted his animals and he gives you a subtotal for each species. You have to implement a function that returns the total number of legs of all the animals.

**Code:-**

```
204 function CountAnimalsleg(tur,horse,pigs){
205     return 2*tur+4*horse+4*pigs;
206 }
207 var legs = CountAnimalsleg(2,3,5)
208 console.log(legs);
209
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js

36

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**Frames Per Second** Create a function that returns the number of frames shown in a given number of minutes for a certain FPS.

**Code:-**

```
210 function frames(num1,num2){
211     return num1*num2*60;
212 }
213 var fps = frames(25,30)
214 console.log(fps);
215
216
```

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```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js
45000
```

```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █
```

Check if integer is divisible by five or not.

Code:-

```
216 function divisibleByFive(num1){
217     if(num1%5===0){
218         return true;
219     }
220     else{
221         return false;
222     }
223 }
224 var divisible = divisibleByFive(45)
225 console.log(divisible);
226
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js  
true

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**Return isEven if number is even.**

**Code:-**

```
227 function isEven(num1){
228     if(num1%2===0){
229         return console.log('isEven')
230     }else{
231         return console.log('it s odd number');
232     }
233 }
234
235 }
236 var num = isEven(4)
237
238
239
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js  
it s odd number

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js  
isEven

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> □

**Code:-**

**A).**

**Code:-**

```
371 let oddnumber =(odd)=>{
372   if(odd%2!==0){
373     console.log("odd");
374   }
375 }
376 let n=5;
377 console.log(oddnumber(n));
```

---

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js  
odd

undefined

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █

B).

Code:-

```
379  ✓ let lilcaps =(str)=>{
380      str = str.toLowerCase().split('');
381  ✓   for(var i =0;i<str.length;i++){
382      |   str[i] = str[i].charAt(0).toUpperCase()+str[i].slice(1);
383      |   }
384      return str.join('');
385  }
386  console.log(lilcaps(("it is main boot started")));
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js

IT IS MAIN BOOT STARTED

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █



C).

```
389 let sumarry=(arr)=>{
390   let sum = 0;
391   for(let i = 0;i<arr.length;i++){
392     console.log(sum=sum+arr[i]);
393   }
394 }
395 let arr=[10,20,30,40];
396 console.log(sumarry(arr));
```

---

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js

10

30

60

100

undefined

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D).

Write a function called “getFullName”. Given a first and a last name, “getFullName” returns a single string with the given first and last names separated by a single space.

Code:-

```
238 function getFullName(firstName,lastName){  
239     return firstName+' '+lastName;  
240 }  
241 console.log(getFullName('Rushi','Bhuva'));  
242  
243
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js

Rushi Bhuva

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> □

E).

Write a function called “getLengthOfWord”. Given a word, “getLengthOfWord” returns the length of the given word.

Code:-

```
243 function isSameLength(word1,word2){
244     if(word1.length===word2.length){
245         return true;
246     }else{
247         return false;
248     }
249 }
250 console.log(isSameLength("Ishan","Kisan"));
251
252
```

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```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js
true
```

```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █
```

F).

Create a function to calculate the distance between two points defined by their x, y coordinates

Code:-

```
255 //Create function
256 function distance(x1, y1, x2, y2)
257 {
258     // Calculating distance
259     return Math.sqrt(Math.pow(x2 - x1, 2) +
260     | | | Math.pow(y2 - y1, 2) * 1.0);
261 }
262
263 // Main Code
264 console.log(distance(5, 4, 2, 1));
265
266
267
268
269
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js  
4.242640687119285

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █

G).

Write a function called “addProperty”. Given an object and a key, “addProperty” adds a new property on the given object with a value of true.

Code:-

```
266 var obj = {  
267   myvalue:"value"  
268 };  
269 function addProperty(obj,key){  
270   return obj.mykeys="true";  
271 }  
272 console.log(addProperty(obj,"mykey"));  
273 console.log(obj);  
274  
275  
276  
277  
278
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js

true

{ myvalue: 'value', mykeys: 'true' }

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █

H).

Write a function called “getProperty”. Given an object and a key, “getProperty” returns the value of the property at the given key. If there is no property at the given key, it should return undefined.

Code:-

```
275 var obj ={
276   myvalue:"key"
277 };
278 function getProperty(obj,key){
279   if(key===true){
280     return undefined;
281   }else{
282     return obj[key];
283   }
284 }
285 console.log(getProperty(obj,"mykey"));
286
287
288
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js  
undefined

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █

l).

Write a function called “addProperty”. Given an object and a key, “addProperty” adds a new property on the given object with a value of true.

Code:-

```
288 var obj ={  
289   myvalue:"key"  
290 };  
291 function addProperty(obj,key){  
292   return obj.mykey="true";  
293 }  
294 console.log(addProperty(obj,"mykey"));  
295 console.log(obj);  
296  
297  
298
```

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```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js  
true  
{ myvalue: 'key', mykey: 'true' }  
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █
```

Return an array, where the first element is the count of positives numbers and the second element is sum of negative numbers. var arr = [-5, 10, -3, 12, -9, 5, 90, 0

Code:-

```
297 var arr = [-3,5,0,14,-10,15,-8];
298 function countpositiveSumNegative(arr){
299     let i;
300     arr=arr.sort();
301     console.log(arr);
302     let sum=0;
303     let count=0;
304     let result;
305     for(i=0;i<=arr.length;i++){
306         if(arr[i]<0){
307             sum=sum+[i];
308         }
309         else if(arr[i]>0){
310             count=count+1;
311         }
312     }
313     result=console.log(sum,count);
```

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```
[
  -10, -3, -8, 0,
  14,  5,  5
]
0012 3
undefined
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js
[
  -10, -3, -8, 0,
  14, 15,  5
]
0012 3
undefined
```



**Return all power of 2 from 0 to n.**

**Code:-**

```
319 function powerOfTwo(n){
320     var myArray = [];
321     for(var i =0;i<=n;i++){
322         myArray.push(2**i);
323     }
324     return myArray
325 }
326 const result = powerOfTwo(2)
327 console.log(result)
328
329
330
```

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[ 1, 2, 4 ]

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**Find max from array.**

**Code:-**

```
330 function findMax(ar){  
331 |   return Math.max(...ar);  
332 }  
333 var ar = [-2,-5,-9,5,15,-20,9,55,45];  
334 var max = findMax(ar);  
335 console.log("max:",max)  
336  
337
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js

max: 55

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## Reverse a String.

### Code:-

```
337 var A = reverseString("Python");
338 console.log(A);
339 function reverseString(A){
340     return A.split("").reverse().join("");
341 }
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js  
nohtyP

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**Create a function which is merge two array.**

**Code:-**

```
344 var array_1=[1,2,3];
345 var array_2=[11,12,13];
346 var array = mergeArrays(array_1,array_2);
347 console.log(array);
348 function mergeArrays(array_1,array_2){
349 // it will add both array in result
350 var result = [];
351 for(let el of array_1){
352 | result.push(el);
353 }
354 for(let el of array_2){
355 | result.push(el);
356 }
357 return result;
358 }
359
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js

[ 1, 2, 3, 11, 12, 13 ]

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Calculate the sum of numbers received in a comma delimited string.

Code:-

```
361 console.log(sumCSV("2.5","1.5","5","9","1.1","2","3"));
362 function sumCSV(A)
363 {
364     let sum=A.split(",").reduce(function(total,num){
365         return parseFloat(total)+parseFloat(num);
366     });
367     return sum;
368 }
369
```

---

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js  
2.5

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### 3. . Do the below programs in arrow functions

1. Print odd numbers in an array
2. Convert all the strings to title caps in a string array
3. Sum of all numbers in an array
4. Return all the prime numbers in an array
5. Return all the palindromes in an array

Code:-

1).

Print odd number in an array.

Code:-

```
371 let oddnumber =(odd)=>{
372   if(odd%2!==0){
373     console.log("odd");
374   }
375 }
376 let n=5;
377 console.log(oddnumber(n));
378
```

Output :-

```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js
odd
undefined
```

## 2). . Convert all the strings to title caps in a string array

Code:-

```
379 let lilcaps =(str)=>{
380   str = str.toLowerCase().split('');
381   for(var i =0;i<str.length;i++){
382     str[i] = str[i].charAt(0).toUpperCase()+str[i].slice(1);
383   }
384   return str.join('');
385 }
386 console.log(lilcaps(("it is main boot started")));
387
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js

IT IS MAIN BOOT STARTED

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █

### 3). Sum of all numbers in an array

Code:-

```
389 let sumarry=(arr)=>{
390   let sum = 0;
391   for(let i = 0;i<arr.length;i++){
392     console.log(sum=sum+arr[i]);
393   }
394 }
395 let arr=[10,20,30,40];
396 console.log(sumarry(arr));
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js

10

30

60

100

undefined

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#### 4). Return all the prime numbers in an array

##### Code:-

```
399 let primes=(arr)=>{
400   return arr.filter((e)=>{
401     for(let i=2;i<e;i++){
402       if(e%i===0){
403         return false;
404       }
405     }
406     return e>1;
407   });
408 };
409 console.log(primes([3,711,5,909,44,15,89]));
```

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```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js
[ 3, 7, 5, 89 ]
```

```
PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █
```

## 5).palindrom using arrow function.

### Code:-

```
433 console.log('With arrow Function check palindrom or not');
434 let a=(arr)=>{
435   let arr1=[];
436   for(let i in arr){
437     //console.log(arr[i]);
438     //console.log(arr[i].split(""));
439     if(arr[i].split("").reverse().join("")===arr[i]){
440       arr1.push(arr[i]);
441     }
442   }
443   return arr1;
444 };
445 console.log(123);
446 console.log(a(["aba","abc","111"]));
447
448
```

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PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> node day05.js  
With arrow Function check palindrom or not

123

[ 'aba', '111' ]

PS C:\Users\Mahadev\OneDrive\Desktop\IIT Madras\Index> █