1. Do the below programs in anonymous function & IIFE
   1. Print odd numbers in an array

**const** arr = [45, 60, 47, 81, 56, 97, 72, 55, 77, 99];

*// Anonymous function*

**let** odd = **function** (ele) {

if ((ele % 2) != 0) { return true }

}

for (**let** i = 0; i < arr.length; i++) {

if (odd(arr[i])) { console.log(arr[i]); }

}

*//IIFE*

(**function** () {

console.log("This is using IIFE");

arr.forEach(el **=>** { if (el % 2 != 0) console.log(el) })

})();

* 1. Convert all the strings to title caps in a string array

*//Convert all the strings to title caps in a string array*

**let** st = ["chennai", "bangalore", "hyderbad", "delhi"];

*//Anonymous function*

**let** upper = **function** (sst) {

for (**let** s of sst) {

console.log(s.toUpperCase());

}

}

upper(st);

*//IIFE*

(**function** () {

for (**let** s of st) {

console.log(s.toUpperCase());

}

})();

* 1. Sum of all numbers in an array

*//Sum of all numbers in an array*

**const** arr = [45, 60, 47, 81, 56, 97, 72, 55, 77, 99];

*//Anonymous function*

**let** sum\_of\_arr = **function** (arr) {

**let** sum = 0;

for (**let** key of arr) { sum += Number(key) }

return sum;

}

console.log(sum\_of\_arr(arr));

*//IIFE*

(**function** () {

**let** sum = 0;

for (**let** key of arr) { sum += Number(key) };

console.log(sum);

})();

* 1. Return all the prime numbers in an array

*// Return all the prime numbers in an array*

**const** allNum = [3, 5, 12, 18, 13, 11, 17, 29, 14, 34];

*//Anonymous function*

**let** isprime = **function** (numb) {

for (i = 2; i < numb; i++)

{ if ((numb % i) == 0) { return false } }

return true;

}

newPrime = [];

allNum.forEach(num **=>** { if (isprime(num)) { newPrime.push(num) } })

console.log(newPrime);

*//IIFE*

(**function**()

{

for (**let** key in allNum) {

flag=1;

for(i=2;i<key;i++)

{

if ((key % i) == 0) { console.log("the number is not a prime:", +key);flag=0; }

}

if( flag==1) {console.log(key)};

}

})();

* 1. Return all the palindromes in an array

*// Return all the palindromes in an array*

**const** str = ["mama", "malayalam", "mom", 1234, 121];

*//Anonymous function*

**const** palindrom = **function** (str) {

str.forEach(element **=>** {

s = element.toString();

rev = s.split("").reverse().join("");

console.log(s, rev);

if (JSON.stringify(s) == JSON.stringify(rev)) { console.log("palindron") } else { console.log("not a palindrom") }

});

}

palindrom(str);

*//IIFE*

(**function**()

{

str.forEach(element **=>** {

s = element.toString();

rev = s.split("").reverse().join("");

console.log(s, rev);

if (JSON.stringify(s) == JSON.stringify(rev)) { console.log("palindron") } else { console.log("not a palindrom") }

});

})();

* 1. Return median of two sorted arrays of the same size

**var** getMedian= **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** m1 = -1, m2 = -1;

for (count = 0; count <= n; count++)

{

if (i == n)

{

m1 = m2;

m2 = ar2[0];

break;

}

else if (j == n)

{

m1 = m2;

m2 = 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;

}

*/\* Driver program to test above function \*/*

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

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

**var** n = ar1.length;

**var** n2 = ar2.length;

if (n1 == n2)

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

else

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

*//IIFE*

(**function**(){

**var** i = 0; */\* Current index of i/p array ar1[] \*/*

**var** j = 0; */\* Current index of i/p array ar2[] \*/*

**var** count;

**var** m1 = -1, m2 = -1;

for (count = 0; count <= n; count++)

{

if (i == n)

{

m1 = m2;

m2 = ar2[0];

break;

}

else if (j == n)

{

m1 = m2;

m2 = 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++;

}

}

console.log("Median is "+ (m1 + m2)/2);

})();

* 1. Remove duplicates from an array

*// Remove duplicates from an array*

**const** arr8 = [3, 5, 12, 14, 18, 13, 13, 11, 11, 17, 29, 14, 34];

**const** unique1 = [];

*//Anonymous function*

**const** findunique=**function**()

{arr8.forEach(num **=>** {

if (!unique1.includes(num))

unique1.push(num);

}

)

console.log(unique1);}

findunique();

*//IIFE*

**const** unique2 = [];

(**function**(){

{arr8.forEach(num **=>** {

if (!unique2.includes(num))

unique2.push(num);

}

)

console.log("the array is with unique is:" +unique2);}

})();

* 1. Rotate an array by k times

*// Rotate an array by k times*

**const** arr9 = [3, 5, 12, 14, 18, 13, 13, 11, 11, 17, 29, 14, 34];

**var** k = 2;

*//Anonymous function*

**let** y;

**const** an= **function**() {

for (**let** i = 1; i <= k; i++) {

y = arr9.shift();

arr9.push(y);

}

console.log("Array after shift" +arr9);

}

an(arr9,k);

*//IIFE*

(**function**(){

for (**let** i = 1; i <= k; i++) {

y = arr9.shift();

arr9.push(y);

}

console.log("Array after shift" +arr9);

})();

1. <https://medium.com/@reach2arunprakash/guvi-zen-class-javascript-warm-up-programming-problems-15973c74b87f>
2. 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

*// Print odd numbers in an array*

**const** arr10 = [45, 60, 47, 81, 56, 97, 72, 55, 77, 99];

arr11 = [];

arr10.forEach(num **=>** {

if (num % 2 != 0) {

arr11.push(num);

}

})

console.log("odd number list is")

console.log(arr11)

*// Convert all the strings to title caps in a string array*

**const** str3 = ["welcom", " to", "zen", "class"];

**var** str4 = [];

str3.map(el **=>** { str4.push(el.toUpperCase()); }

);

console.log("Uppercase list is")

console.log(str4);

*// Sum of all numbers in an array*

**const** arr12 = [45, 60, 47, 81, 56, 97, 72, 55, 77, 99];

**let** sum = 0;

arr12.reduce(num **=>** sum += num)

console.log(" Sum of the number in arry is :" + sum);

*// Return all the prime numbers in an array*

**let** isprime = **function** (numb) {

for (i = 2; i < numb; i++) { if ((numb % i) == 0) { return false } }

return true;

}

**const** prime = arr12.filter(num **=>** isprime(num))

console.log(prime);

*// Return all the palindromes in an array*

**var** ispal = **function** (str) {

s = str.toString();

rev = s.split("").reverse().join("");

if (JSON.stringify(s) == JSON.stringify(rev)) { return true } else {return false }

}

**const** str5 = ["mama", "malayalam", "mom", 1234, 121];

**const** pal = str5.filter(st **=>** ispal(st));

console.log(pal);