JAVASCRIPT

Task 3

Do the below programs in anonymous function and IIFE function

- **Print odd numbers in an array**

  Anonymous

```
let odd = function (a) {
  for(let i=0;i<a.length;i++) {
        if(i%2!=0) {
          console.log(i);
        }
  }
}
```

  IIFE

```
(function (a) {
  for(let i=0;i<a.length;i++) {
        if(i%2!=0) {
          console.log(i);
        }
  }
})(a);
```

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

  Anonymous

```
let title_caps = function(s) {
    let a = s.split(' ');
    let b = [];
    for(let i in a) {
        b.push(a[i].charAt(0).toUpperCase()+a[i].slice(1));
    }
    return b.join(' ');
}
```

IIFE

```
(function(s) {
    let a = s.split(' ');
    let b = [];
    for(let i in a) {
        b.push(a[i].charAt(0).toUpperCase()+a[i].slice(1));
    }
    document.write(b.join(' '));
})(s);
```

- **Sum of all numbers in an array**

Anonymous

```
let sum_of_array = function(a) {
    let sum = 0;
    for(let i in a) {
        sum += parseInt(a[i]);
    }
    return sum;
}
```

IIFE

```
(function(a) {
    let sum = 0;
    for(let i in a) {
        sum += a[i];
    }
    console.log(sum);
})([2, 4, 6]);
```

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

Anonymous

```
let prime = function (a) {
    let b = a.filter((n) => {
        for(let i=2;i<= Math.sqrt(n);i++) {
            if(n%i === 0) {
                return false;
            }
        }
        return true;
    })
    return b;
}
```

IIFE

```
(let prime = function (a) {
    let b = a.filter((n) => {
        for(let i=2;i<= Math.sqrt(n);i++) {
            if(n%i === 0) {
                return false;
            }
        }
        return true;
    })
    console.log(b);
})([2, 3, 4, 6]);
```

- **Return all the palindromes in an array**

Anonymous

```
let palindrome = function (a) {
    return a.filter((m) => {
            const s = String(m);
            let i = 0;
            let j = s.length - 1;
            while(i<j) {
                if(s[i] === s[j]) {
                    i++;
                    j--;
                }
                else {
                    return false;
                }
            }
            return true;
        }
    )
}
console.log(palindrome(['sandy', 544, 121, 'mam', 'guvi']))
```

IIFE

```
(function (a) {
    let b = a.filter((m) => {
            const s = String(m);
            let i = 0;
            let j = s.length - 1;
            while(i<j) {
                if(s[i] === s[j]) {
                    i++;
                    j--;
                }
                else {
                    return false;
                }
            }
            return true;
        }
    )
    console.log(b);
}(['sandy', 544, 121, 'mam', 'guvi']);
```

- **Return median of two sorted arrays of same size**

  Anonymous

```
let findMedian = function(a, b) {
    let n = a.length;
    let i = 0, j = 0, m1 = -1, m2 = -1, count = 0;
    while(count < n+1) {
        count++;
        if(i==n) {
            m1 = m2;
            m2 = b[0];
            break;
        }
        else if (j == n) {
            m1 = m2;
            m2 = a[0];
            break;
        }
        if(a[i] <= b[j]) {
            m1 = m2;
            m2 = a[i];
            i++;
        }
        else {
            m1 = m2;
            m2 = b[j];
            j++;
        }
    }
    return Math.floor((m1+m2)/2);

}
console.log(findMedian([1, 2], [5, 6]));
```

IIFE

```
(function(a, b) {
    let n = a.length;
    let i = 0, j = 0, m1 = -1, m2 = -1, count = 0;
    while(count < n+1) {
        count++;
        if(i==n) {
            m1 = m2;
            m2 = b[0];
            break;
        }
        else if (j == n) {
            m1 = m2;
            m2 = a[0];
            break;
        }
        if(a[i] <= b[j]) {
            m1 = m2;
            m2 = a[i];
            i++;
        }
        else {
            m1 = m2;
            m2 = b[j];
            j++;
        }
    }
    console.log(Math.floor((m1+m2)/2));

}([1, 2], [5, 6]);
```

- **Remove duplicates from an array**

  Anonymous

```
let removeDuplicate = function (array) {
    return Array.from(new Set(array));
}
document.write(removeDuplicate([1, 2, 2, 3, 4, 1]));
```

  IIFE

```
(function (array) {
    console.log(Array.from(new Set(array)));
})([1, 2, 2, 3, 4, 1]);
```

- **Rotate an array by k times and return the rotated array**

  Anonymous

```
let rotate = function(array, k) {
    for(let i=0;i<k;i++) {
        array.unshift(array.splice(-1));
    }
    return array;
}
console.log(rotate([1, 1, 3, 4, 5, 2, 2], 3));
```

  IIFE

```
(function(array, k) {
    for(let i=0;i<k;i++) {
        array.unshift(array.splice(-1));
    }
    console.log(array);
})([1, 1, 3, 4, 5, 2, 2], 3));
```