# DSA Assignment-1

## Q1

C_Programming — vi Assignment-1_Q1.c — 97×28

```
#include <stdio.h>


int main(){
int arr[10];
int sum,i,sq;
printf("Enter the Elements for array \n");
for(i=0;i<=9;i++){
  scanf("%d",&arr[i]);
}
sum=0;
for(i=0;i<=9;i++){
  sq=arr[i]*arr[i];
  sum = sum+sq;
}
printf("The Sum of Squares is: %d",sum);
return 0;
}

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```

C_Programming — -zsh — 97×28

```
rohitshidid@Rohits-MacBook-Air C_Programming % gcc Assignment-1_Q1.c
rohitshidid@Rohits-MacBook-Air C_Programming % ./a.out
Enter the Elements for array
1
2
3
4
5
6
6
7
8
9
The Sum of Squares is: 321%
rohitshidid@Rohits-MacBook-Air C_Programming %
```

# Q2

C_Programming — vi Assignment-1_Q2.c — 97×28

```
#include <stdio.h>

int main(){
int arr[10],i;
printf("Enter Elements of Array \n");
for(i=0;i<=9;i++){
    scanf("%d",&arr[i]);
}

printf("Printing Elements in reverse order :\n");
for(i=9;i>=0;i--){
    printf("%d \t",arr[i]);
}


return 0;
}
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~
"Assignment-1_Q2.c" [noeol] 17L, 244B
```

C_Programming — -zsh — 97×28

```
[rohitshidid@Rohits-MacBook-Air C_Programming % gcc Assignment-1_Q2.c
[rohitshidid@Rohits-MacBook-Air C_Programming % ./a.out
Enter Elements of Array
12
23
44
42
53
52
2
3
5
52
Printing Elements in reverse order :
52      5       3       2       52      53      42      44      23      12      %
rohitshidid@Rohits-MacBook-Air C_Programming %
```

# Q3

C_Programming — vi Assignment-1_Q3.c — 88×28

```
#include <stdio.h>

int main(){
    int i,j,m;
    printf("Enter the size of Array: ");
    scanf("%d",&m);
    printf ("Enter Array elements: \n");
    int arr[m];
    for(i=0;i<m;i++){
        scanf("%d",&arr[i]);
    }
    printf("Printing Elements: \n");
    for(i=0;i<m;i++){
        for(j=0;j<=i;j++){
            printf("%d \t",arr[j]);
        }
        printf("\n");
    }
    return 0;

}
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~
"Assignment-1_Q3.c" [noeol] 21L, 398B
```

C_Programming — -zsh — 88×28

```
[rohitshidid@Rohits-MacBook-Air C_Programming % vi Assignment-1_Q3.c                ]
[rohitshidid@Rohits-MacBook-Air C_Programming % gcc Assignment-1_Q3.c               ]
[rohitshidid@Rohits-MacBook-Air C_Programming % ./a.out                             ]
Enter the size of Array: 5
Enter Array elements:
12
44
65
23
145
Printing Elements:
12
12      44
12      44      65
12      44      65      23
12      44      65      23      145
rohitshidid@Rohits-MacBook-Air C_Programming %
```

# Q4

C_Programming — vi Assignment-1_Q4.c — 107×46

```
#include <stdio.h>
int main(){
    int i;
    int odd =0;
    int even=0;
    int zero=0;
    int pos=0;
    int neg = 0;
    int arr[20];
    printf("Enter 20 Elements for the array");
    for(i=0;i<20;i++){
        printf("Enter element %d : ",i);
        scanf("%d",&arr[i]);

        if(arr[i]>0){
            pos++;
        }
         if(arr[i]<0){
            neg++;
        }
         if(arr[i]%2==0){
            even++;
        }
         if(arr[i]==0){
            zero++;
        }
         if(arr[i]%2 != 0){
            odd++;
        }
    }

    printf("Even Numbers are %d \n Odd Numbers are %d \n Positive Numbers are %d \n Negative Numbers %d \n
Zeros are %d", even,odd,pos,neg,zero);



    return 0;
}
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~
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~
~
~
~
```

C_Programming — -zsh — 107×46

```
rohitshidid@Rohits-MacBook-Air C_Programming % gcc Assignment-1_Q4.c
rohitshidid@Rohits-MacBook-Air C_Programming % ./a.out
Enter 20 Elements for the arrayEnter element 0 : 12
Enter element 1 : 0
Enter element 2 : -12
Enter element 3 : -3
Enter element 4 : -5
Enter element 5 : 23
Enter element 6 : 43
Enter element 7 : 55
Enter element 8 : 21
Enter element 9 : 56
Enter element 10 : 32
Enter element 11 : 34
Enter element 12 : 13
Enter element 13 : 78
Enter element 14 : 0
Enter element 15 : 0
Enter element 16 : -6
Enter element 17 : 86
Enter element 18 : 97
Enter element 19 : -75
Even Numbers are 11
 Odd Numbers are 9
 Positive Numbers are 12
 Negative Numbers 5
 Zeros are 3%
rohitshidid@Rohits-MacBook-Air C_Programming %
```

# Q5

C_Programming — vi Assignment-1_Q5.c — 107×46

```
#include <stdio.h>
int main(){

    int size,i,j,false=0;
    printf("Enter the size of the array: ");
    scanf("%d",&size);
    int arr[5];
    int rev_arr[size];
    for(i=0;i<size;i++){
        printf("Enter for the %d element: ",i);
        scanf("%d",&arr[i]);
    }
    j=0;
    for(i=size-1;i>=0;i--){

        rev_arr[j]=arr[i];
        j++;

    }

    for(i=0;i<size;i++){
        if(arr[i]!=rev_arr[i]){
            false++;
        }
    }
    if(false>0){
        printf("The Array is not a Palindrome Array");
    }else{
        printf("The Array is a Palindrome Array");
    }

    return 0;
}
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~
"Assignment-1_Q5.c" [noeol] 33L, 622B
```

C_Programming — -zsh — 107×46

```
rohitshidid@Rohits-MacBook-Air C_Programming % vi Assignment-1_Q5.c
rohitshidid@Rohits-MacBook-Air C_Programming % gcc Assignment-1_Q5.c
rohitshidid@Rohits-MacBook-Air C_Programming % ./a.out
Enter the size of the array: 5
Enter for the 0 element: 12
Enter for the 1 element: 3
Enter for the 2 element: 4
Enter for the 3 element: 3
Enter for the 4 element: 12
The Array is a Palindrome Array%
rohitshidid@Rohits-MacBook-Air C_Programming % ./a.out
Enter the size of the array: 4
Enter for the 0 element: 1
Enter for the 1 element: 2
Enter for the 2 element: 3
Enter for the 3 element: 4
The Array is not a Palindrome Array%
rohitshidid@Rohits-MacBook-Air C_Programming %
```