

Working with Arrays in C**Code:**

```
//to get 10 numbers as input from the user and store them in array CSE1
#include <stdio.h>

int main(){
    int CSE1[10],i;
    printf("Enter 10 numbers.\n");
    for (i=0; i<10; i++){
        printf("Enter num: ");
        scanf("%d",&CSE1[i]);
    }

    //to print the array
    printf("Array: ");
    for (i=0; i<10; i++)
        printf("%d\t",CSE1[i]);
    printf("\n");

    //to print the even numbers
    printf("Even elements: ");
    for (i=0; i<10; i++){
        if(CSE1[i]%2==0)
            printf("%d\t",CSE1[i]);
    }
    printf("\n");

    //to print the odd numbers
    printf("Odd elements: ");
    for (i=0; i<10; i++){
        if(CSE1[i]%2==1)
            printf("%d\t",CSE1[i]);
    }
    printf("\n");

    //to print the numbers divisible by 5
    printf("Elements divisible by 5: ");
    for (i=0; i<10; i++){
        if(CSE1[i]%5==0)
            printf("%d\t",CSE1[i]);
    }
    printf("\n");

    //to print the numbers divisible by 3
    printf("Elements divisible by 3: ");
    for (i=0; i<10; i++){
        if(CSE1[i]%3==0)
            printf("%d\t",CSE1[i]);
    }
}
```

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printf("\n");

//to calculate the sum of the array elements
int sum=0;
for (i=0; i<10; i++){
    sum+=CSE1[i];
}
printf("Sum: %d\n",sum);

//to print the mean of the array elements
float mean=sum/10;
printf("Mean: %.2f\n",mean);

//to print mode of the array elements
int count, max_count=0, mode;
for (i=0; i<10; i++){
    count=0;
    for (int j=0; j<10; j++){
        if (CSE1[i]==CSE1[j])
            count++;
    }
    if (count>max_count){
        max_count=count;
        mode=CSE1[i];
    }
}

return 0;
}

```

Output:

```

> gcc -o array.out array.c
> ./array.out
Enter 10 numbers.
Enter num: 1
Enter num: 2
Enter num: 4
Enter num: 6
Enter num: 7
Enter num: 4
Enter num: 2
Enter num: 9
Enter num: 3
Enter num: 2
Array: 1    2    4    6    7    4    2    9    3    2
Even elements: 2    4    6    4    2    2
Odd elements: 1 7    9    3
Elements divisible by 5:
Elements divisible by 3: 6    9    3
Sum: 40
Mean: 4.00

```