

# Array

1. Write a code for a simple array to calculate the AVG of a Quiz of ten students?

```
#include<stdio.h>
```

```
int main( ) {
```

```
    int avg, sum = 0 ;
```

```
    int i ;
```

```
    int marks[10] ;// size of 10 array
```

```
    /*array declaration */
```

```
    for ( i = 0 ; i <10 ; i++ ) {
```

```
        printf ( "\nEnter marks " ) ;
```

```
        scanf( "%d", &marks[i] ) ; /* store data in array */
```

```
    }
```

```
    // calculate sum
```

```
    for ( i = 0 ; i <10 ; i++ ) {
```

```
        sum = sum + marks[i] ;
```

```
    }
```

```
    printf("\nThe sum is %d", sum);
```

```
    avg = sum / 10 ;
```

```
    printf ( "\nAverage marks = %d", avg ) ;
```

```
}
```

## 2. C program to demo array location

```
// simple program in array
#include<stdio.h>
int main () {
int n[ 10 ]; /* n is an array of 10 integers */
int i,j; /* initialize elements of array n to 0 */
for ( i = 0; i < 10; i++ ) {
n[ i ] = i + 100; /* set element at location i to i + 100 */
}
/* output each array element's value */
for(j = 0; j < 10; j++ ) {
printf("Element[%d] = %d\n", j, n[j] );
}

}
```

### 3. Copy odd and even elements of an array to arrays - OAR and EAR

```
#include <stdio.h>
void main() {
    long int ARR[10], OAR[10], EAR[10];
    int i, j = 0, k = 0, n;
    printf("Enter the size of array AR \n");
    scanf("%d", &n);
    printf("Enter the elements of the array \n");
    for (i = 0; i < n; i++) {
        scanf("%d", &ARR[i]);
    }

    /*Copy odd and even elements into their respective arrays */

    for (i = 0; i < n; i++) {

        if (ARR[i] % 2 == 0) {
            EAR[j] = ARR[i];
            printf("EAR[%d]= %d\n",j,EAR[j]);
            j++;
        }
        else {
            OAR[k] = ARR[i];
            printf("OAR[%d] = %d\n",k,OAR[k]);
            k++;
        }
    }
    printf("\n");
    printf("The elements of OAR are \n");
    printf("\n");
    for (i = 0; i < k; i++) {
        printf("%d\n", OAR[i]);
    }
    printf("\n");
    printf("The elements of EAR are \n");
    printf("\n");
    for (i = 0; i < j; i++) {
```

```
        printf("%d\n", EAR[i]);  
    }  
}
```