Syntax Errors In Array Decl

① `int arr[10];` → allowed by every compiler

```
int n = 10;
int arr[n];
```
→ error → TC
→ OK → MinGW, GCC

② `int arr[0];` ✗

③ `int arr[ ];` ✗ Not allowed except in L sp cond

Initializing An Array

Initializer list OR Initializes

① `int months[12];`

```
months[0] = 31;
months[1] = 28;
months[2] = 31;
 .
 .
months[11] = 31;
```

② `int months[12] = {31, 28, 31, 30, ..31};`

③ `int arr[5];`

✗ `arr = {10, 20, 30, 40, 50};`

✗ `arr[5] = { - - - - - };`

④ int arr[5] = {10, 20, 30, 40, 50};

⑤ int arr[5] = {10, 20, 30};

⑥ int arr[5] = {10, , 30, 40};

X hole

⑦ int arr[3] = {10, 20, 30, 40, 50};

error - in TC

not error in Highe but extra data will be replaced with garbage

⑧ int arr[] = {10, 20, 30, 40, 50, 60}; ✓

WAP to create an integer array of size 10 and accept values from the user in it. Now calculate and display the sum and average of all the elements of the array.

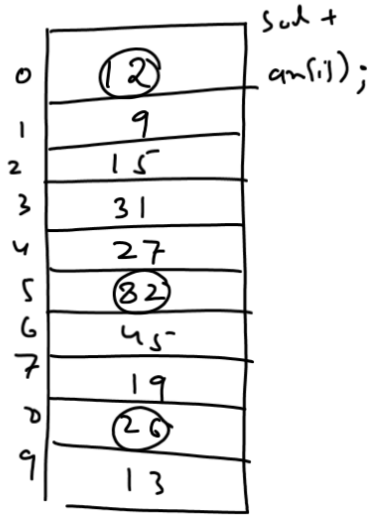
```
#include <stdio.h>
int main()
{
  int arr[10],i,sum=0;
  for(i=0;i<=9;i++)
  {
     printf("Enter no:");
     scanf("%d",&arr[i]);
     sum=sum+arr[i];
  }
  printf("Sum is %d",sum);
  printf("\nAvg is %f",(float)sum/10);
  return 0;
}
```

WAP to create an integer array of size 10 and accept values from the user in it. Now calculate and display the sum of EVEN NUMBERS as well as the SUM OF ODD NUMBERS of the array separately.

```
#include <stdio.h>
int main()
{
  int arr[10],i,soe=0,sod=0;
  for(i=0;i<=9;i++)
  {
     printf("Enter no:");
     scanf("%d",&arr[i]);
      if(arr[i]%2==0)
            soe=soe+arr[i];
     else
           sod=sod+arr[i];
  }
  printf("Sum of even is %d",soe);
  printf("\nSum of odd is %d",sod);
  return 0;
}
```

OR

```
(arr[i]%2==0) ? (soe=soe+arr[i]) : (sod = sod + arr[i]);
```



Modify the previous code so that along with sum your program also displays the average of EVEN and ODD numbers separately.

```
#include <stdio.h>
int main()
{
  int arr[10],i,soe=0,sod=0,x=0;
  for(i=0;i<=9;i++)
  {
      printf("Enter no:");
      scanf("%d",&arr[i]);
       if(arr[i]%2==0)
         {
              soe=soe+arr[i];
              x++;
          }
      else
             sod=sod+arr[i];
  }
  printf("Sum of even is %d,avg is %f",soe,(float)soe/x);
  printf("\nSum of odd is %d,avg is %f",sod,(float)sod/(10-x));
  return 0;
}
```

Soe = 0 + 12 => 12
12 + 82 => 94

Sod = 0 + 9 => 9
9 + 15 => 24
24 + 31 => 55

x = old + 2 3