Finding Pairs in the array which sum to S

Geetha.M
Department of CSE
Amrita Vishwa VidyaPeetham

Loop Exercises- Try the code and observe how i and j varies

Read an array **array[ ]** with 5 elements and do the below nested loop and observe how **i** and **j** varies

```
for(i=0;i<5;i++)
      for(j=0;j<5;j++)
      {
            printf("Array[%d]=%d, Array[%d]=%d\n",i,array[i],j,array[j]);
      }
```

2	3	2	3	

i=0	J=0,1,2,3,4
i=1	J=0,1,2,3,4
i=2	J=0,1,2,3,4
i=3	J=0,1,2,3,4
i=4	J=0,1,2,3,4

Loop Exercises- Try the code and observe how i and j varies

Read an array **array[ ]** with 5 elements and do the below nested loop and observe how **i** and **j** varies

```
for(i=0;i<5;i++)
        for(j=i+1;j<5;j++)
        {
                printf("Array[%d]=%d, Array[%d]=%d\n",i,array[i],j,array[j]);
        }
```

i=0	J=1,2,3,4
i=1	J=2,3,4
i=2	J=3,4
i=3	J=4
i=4	Not executed

Find pairs in an array with sum S

- void FindPair(int arr[],int limit,int S)
- { int i,j;
- for(i=0; i<limit; i++)
-    {
-       for(j=i+1; j<limit; j++)
-       {
-                      if(arr[i]+arr[j]==S)
-                         printf("(%d %d)",arr[i],arr[j]);
-               }
-
- }

Try this!

- **void FindPair(int arr[],int limit,int S)**
- **{ int i,j;**
- **for(i=0; i<limit; i++)**
- **{**
- **for(j=0; j<limit; j++)**
- **{**
- **if(arr[i]+arr[j]==S)**
- **printf("(%d %d)",arr[i],arr[j]);**
- **}**
-
- **}**

Try this!

```
void FindPair(int arr[],int limit,int S)
{ int i,j;
 for(i=0; i<limit; i++)
   {
      for(j=0; j<limit; j++)
      {
                          if((arr[i]+arr[j]==S) && i!=j)
                              printf("(%d %d)",arr[i],arr[j]);
                   }

   }
   }
```

Namah Shivaya