//1. Array in reverse order

#include <stdio.h>

int main() {

int arr[100],n,i;

printf("Enter the size of array: ");

scanf("%d",&n);

printf("Enter array elements:\n");

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

{

scanf("%d",&arr[i]);

}

printf("Array elements are:\n");

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

{

printf("%d\t",arr[i]);

}

printf("\n Array elements in reverse order are:\n");

for(i=n-1;i>=0;i--)

{

printf("%d\t",arr[i]);

}

return 0;

}

// 2. arrays, merge them and sort them

#include <stdio.h>

void main() {

int arr[100],brr[100],n1,n2,i,j,temp;

printf("Enter the size of first array: ");

scanf("%d",&n1);

printf("Enter array elements:\n");

for(i=0;i<n1;i++)

{

scanf("%d",&arr[i]);

}

printf("Enter the size of second array: ");

scanf("%d",&n2);

printf("Enter array elements:\n");

for(i=0;i<n2;i++)

{

scanf("%d",&brr[i]);

}

j=0;

for(i=n1;i<n1+n2;i++)

{

arr[i]=brr[j];

j++;

}

printf("After Merging:\n");

for(i=0;i<n1+n2;i++)

{

printf("%d\n",arr[i]);

}

for(i=0;i<n1+n2;i++)

{

for(int j=i+1;j<n1+n2;j++)

{

if(arr[i]>arr[j])

{

temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

}

printf("After Sorting:\n");

for(i=0;i<n1+n2;i++)

{

printf("%d\t",arr[i]);

}

}

// 3. Equilibrium index

#include <stdio.h>

int main() {

int arr[100],n,i,j,suml,sumr,flag;

printf("Enter the size of array: ");

scanf("%d",&n);

printf("Enter array elements:\n");

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

{

scanf("%d",&arr[i]);

}

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

{

suml=0;

if(i==0)

{

suml=arr[i];

}

else

{

for(j=0;j<i;j++)

{

suml+=arr[j];

}

}

sumr=0;

if(i==n-1)

{

sumr=arr[i];

}

else

{

for(j=i+1;j<n;j++)

{

sumr+=arr[j];

}

}

if(suml==sumr)

{

printf("Equilibrium value is %d at %d \n",arr[i],i);

flag=0;

}

}

if(flag==1)

{

printf("No equilibrium index found");

}

return 0;

}

//4. Missing number from 0 to n

#include <stdio.h>

int main() {

int arr[100],n,i,j,temp,missele=0;

printf("Enter the size of array: ");

scanf("%d",&n);

printf("Enter array elements:\n");

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

{

scanf("%d",&arr[i]);

}

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

{

for(j=i+1;j<n;j++)

{

if(arr[i]>arr[j])

{

temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

}

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

{

if((arr[i+1]-arr[i])>1)

{

missele=arr[i]+1;

break;

}

}

printf("Missing element: %d\t",missele);

}

//Separate odd and even elements

#include <stdio.h>

#include<string.h>

int main()

{

int arr[100];

int n,i,j,temp;

printf("Enter array size:");

scanf("%d",&n);

printf("\nEnter array elements:");

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

{

scanf("%d",&arr[i]);

}

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

{

for(j=i+1;j<n;j++)

{

if(arr[i]%2==0 && arr[j]%2!=0)

{

temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

}

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

{

printf("%d\t", arr[i]);

}

}