

SAINI TECHNOLOGIES



ADVANCED C PROGRAMMING WITH SAINI TECHNOLOGIES

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Integer Array

```
void main()
{
int a[]={ 12,34,54,45,34,34};

clrscr();

printf("%d",a[0]);
printf(" %d",a[1]);
printf(" %d",a[2]);
printf(" %d",a[3]);

getch();
}
```

Input element of Array Runtime and Print the array

```
void main()
{
int a[100],i,n;

clrscr();

printf("Enter the Number of Elements");

scanf("%d",&n);

printf("Enter the Element of Array");

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

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

printf("\n The Element of Array");

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

printf(" %d",a[i]);

getch();
}
```

Find the highest element of Array

```
void main()
{
int a[100],i,n,hi;
clrscr();
printf("Enter the Number of Elements");
scanf("%d",&n);

printf("Enter the Element of Array");
for(i=0;i<n;i++)
scanf("%d",&a[i]);

printf("\n The Element of Array");
for(i=0;i<n;i++)
printf(" %d",a[i]);
hi=a[0];
for(i=1;i<n;i++)
{
if(a[i]>hi)
hi =a[i];
}
printf("\n The Highest element is %d",hi);

getch();
}
```

Find the Lowest element of Array

```
void main()
{
int a[100],i,n,lo;
clrscr();
printf("Enter the Number of Elements");
scanf("%d",&n);
printf("Enter the Element of Array");
for(i=0;i<n;i++)
scanf("%d",&a[i]);
printf("\n The Element of Array");
for(i=0;i<n;i++)
printf(" %d",a[i]);
lo=a[0];
for(i=1;i<n;i++)
{
if(a[i]<lo)
lo =a[i];
}
printf("\n The Lowest element is %d",lo);
getch();
}
```

Sequential Search in Array

```
void main()
{
int a[100],i,n,num;
clrscr();
printf("Enter the Number of Elements");
scanf("%d",&n);
printf("Enter the Element of Array");
for(i=0;i<n;i++)
scanf("%d",&a[i]);
printf("\n The Element of Array");
for(i=0;i<n;i++)
printf(" %d",a[i]);
printf("Enter the number to search");
scanf("%d",&num);
for(i=0;i<n;i++)
{
if(a[i]==num)
break;
}
if(i!=n)
printf("\n element found on position %d",i);
else
printf("\n element not found ");
getch();
}
```

Bubble Sorting technique for sorting element of Array

```
void main()
{
int a[100],i,n,j,tmp;
clrscr();
printf("Enter the Number of Elements");
scanf("%d",&n);

printf("Enter the Element of Array");
for(i=0;i<n;i++)
scanf("%d",&a[i]);

printf("\n The Element of Array");
for(i=0;i<n;i++)
printf(" %d",a[i]);
for(i=0;i<n;i++)
{
for(j=0;j<n-1;j++) //bubble sorting tech.
{
if(a[j]>a[j+1])
{
```

```

        tmp=a[j];
        a[j]=a[j+1];
        a[j+1]=tmp;
    }
}
printf("\n The Element of Array");
for(i=0;i<n;i++)
printf(" %d",a[i]);
getch();
}

```

Print element of Array in Reverse Order

```

void main()
{
int a[100],i,n;
clrscr();
printf("Enter the Number of Elements");
scanf("%d",&n);

printf("Enter the Element of Array");
for(i=0;i<n;i++)
scanf("%d",&a[i]);

printf("\n The Element of Array");
for(i=0;i<n;i++)
printf(" %d",a[i]);

printf("\n The Element of Array in reverse order");
for(i=n-1;i>=0;i--)
printf(" %d",a[i]);
getch();
}

```

Find the No. of Even, Odd, Negative and Positive No. in Array List.

```

void main()
{
int a[100],i,n,p=0,ng=0,z=0,e=0,o=0;
clrscr();
printf("Enter the Number of Elements");
scanf("%d",&n);

printf("Enter the Element of Array");
for(i=0;i<n;i++)
scanf("%d",&a[i]);

```

```

printf("\n The Element of Array");
for(i=0;i<n;i++)
printf(" %d",a[i]);

for(i=0;i<n;i++)
{if(a[i]>0)
p++;
if(a[i]<0)
ng++;
if(a[i]==0)
z++;
if(a[i]%2==0)
e++;
if(a[i]%2!=0)
o++;
}
printf("\n The number of positive are %d",p);
printf("\n The number of negative are %d",ng);
printf("\n The number of zero are %d",z);
printf("\n The number of odd are %d",o);
printf("\n The number of even are %d",e);
getch();
}

```

Delete N Elements from a Array

```

void main()
{
int a[100],b[100],i,n,num,k,t;
clrscr();
printf("Enter the Number of Elements");
scanf("%d",&n);

printf("Enter the Element of Array");
for(i=0;i<n;i++)
scanf("%d",&a[i]);

printf("\n The Element of Array");
for(i=0;i<n;i++)
printf(" %d",a[i]);

printf("\n Enter the number you want to delete");
scanf(" %d",&num);

k=0;
t=n;
for(i=0;i<n;i++)
{
if(a[i]==num)

```

```

{
t--;
continue;
}
else
b[k++]=a[i];
}

printf("\n The Element of Array");
for(i=0;i<t;i++)
printf(" %d",b[i]);

getch();
}

```

Sum of Two matrix

```

void main()
{

int a[2][2],b[2][2],c[2][2];
int i,j;
clrscr();
printf("Enter the Element of First Matrix");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
scanf("%d",&a[i][j]);
}
}

printf("Enter the Element of Second Matrix");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
scanf("%d",&b[i][j]);
}
}
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
c[i][j]=a[i][j]+b[i][j];
}
}

printf("\nElement of First Matrix \n");

```



```

for(i=0;i<2;i++)
{
printf("\n");
for(j=0;j<2;j++)
{
printf(" %d",a[i][j]);
}
}
printf("\nElement of Second Matrix \n");
for(i=0;i<2;i++)
{
printf("\n");
for(j=0;j<2;j++)
{
printf(" %d",b[i][j]);
}
}
printf("\n Element of Third Matrix \n");
for(i=0;i<2;i++)
{
printf("\n");
for(j=0;j<2;j++)
{
printf(" %d",c[i][j]);
}
}
getch();
}

```

Diagonal Sum of Matrix

```

void main()
{

int a[2][2],b[2][2],c[2][2];
int i,j;
clrscr();
printf("Enter the Element of First Matrix");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
scanf("%d",&a[i][j]);
}
}

printf("Enter the Element of Second Matrix");
for(i=0;i<2;i++)

```



```

{
for(j=0;j<2;j++)
{
scanf("%d",&b[i][j]);
}
}
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
if(i==j)
c[i][j]=a[i][j]+b[i][j];
else
c[i][j]=0;
}
}

printf("\nElement of First Matrix \n");
for(i=0;i<2;i++)
{
printf("\n");
for(j=0;j<2;j++)
{
printf(" %d",a[i][j]);
}
}
printf("\nElement of Second Matrix \n");
for(i=0;i<2;i++)
{
printf("\n");
for(j=0;j<2;j++)
{
printf(" %d",b[i][j]);
}
}
printf("\n Element of Third Matrix \n");
for(i=0;i<2;i++)
{
printf("\n");
for(j=0;j<2;j++)
{
printf(" %d",c[i][j]);
}
}
getch();
}

```

Multiplication of Matrix

```
void main()
```

```

{

int a[2][2],b[2][2],c[2][2];
int i,j,k;
clrscr();
printf("Enter the Element of First Matrix");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
scanf("%d",&a[i][j]);
}
}

printf("Enter the Element of Second Matrix");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
scanf("%d",&b[i][j]);
}
}
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
c[i][j]=0;
for(k=0;k<2;k++)
{
c[i][j]=c[i][j]+a[i][k]*b[k][j];
}
}
}

printf("\nElement of First Matrix \n");
for(i=0;i<2;i++)
{
printf("\n");
for(j=0;j<2;j++)
{
printf(" %d",a[i][j]);
}
}
printf("\nElement of Second Matrix \n");
for(i=0;i<2;i++)
{
printf("\n");
for(j=0;j<2;j++)
{
printf(" %d",b[i][j]);
}
}
}

```



```

}
}
printf("\n Element of Third Matrix \n");
for(i=0;i<2;i++)
{
printf("\n");
for(j=0;j<2;j++)
{
printf(" %d",c[i][j]);
}
}
getch();
}

```

Transpose of Matrix

```

void main()
{
int a[2][2],b[2][2];
int i,j,k;
clrscr();
printf("Enter the Element of First Matrix");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
scanf("%d",&a[i][j]);
}
}

for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
b[i][j]=a[j][i];
}
}

printf("\nElement of First Matrix \n");
for(i=0;i<2;i++)
{
printf("\n");
for(j=0;j<2;j++)
{
printf(" %d",a[i][j]);
}
}

printf("\nElement of Second Matrix \n");
for(i=0;i<2;i++)
{

```

```
printf("\n");  
for(j=0;j<2;j++)  
{  
printf(" %d",b[i][j]);  
}  
}  
getch();  
}
```

