## Matrix multiplication:

#include <stdio.h>

int main() {

int a[10][10],b[10][10],c[10][10],i,j,k;

int m,n,p,q;

printf("Enter row and column for first-matrix\n");

scanf("%d %d",&m,&n);

printf("Enter row and column for second-matrix\n");

scanf("%d %d",&p,&q);

if(n!=p)

{

printf("Multiplication can not be performed");

}

else

{

printf("Enter elements for matrix-A\n");

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

{

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

{

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

}

}

printf("Enter elements for matrix-B\n");

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

for(j=0;j<q;j++) {

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

}

}

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

{

for(j=0;j<q;j++) {

c[i][j]=0;

for(k=0;k<p;k++)

{

c[i][j]=c[i][j]+a[i][k]\*b[k][j];

}

}

}

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

for(j=0;j<q;j++) {

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

}

printf("\n");}

}

return 0;

}

## Program for reversing digits and sum of digits in the given number

#include <stdio.h>

int main()

{

int n,rev=0,r,sum=0;

scanf("%d",&n);

//program for reversing digits and sume of digits in the given number

while(n!=0)

{

r=n%10;

rev=rev\*10+r;

sum=sum+r;

n=n/10;

}

printf("\nReverse digits=%d",rev);

printf("\nSum of given digits=%d",sum);

return 0;

}

# Array Operations:

## Array Traversing

#include &lt;stdio.h&gt;

int main() {

int a[5]={2,4,5,6,7};

int i;

//code for Traversing

printf(&quot;Elements in the array are\n&quot;);

for(i=0;i&lt;5;i++) {

printf(&quot;%d\n&quot;,a[i]);

}

return 0;

}

## Array Copying

#include &lt;stdio.h&gt;

int main()

{

int a[5]={2,4,5,6,7};

int b[5];

int i;

//code for Copying

printf(&quot;Elements in the array are\n&quot;);

for(i=0;i&lt;5;i++)

{

b[i]=a[i];

printf(&quot;%d\t&quot;,b[i]);

}

return 0;

}

## Array Reversing

#include &lt;stdio.h&gt;

int main()

{

int a[5]={2,4,5,6,7};

int b[5];

int i,j;

int n=sizeof(a)/sizeof(a[0]);

printf(&quot;Elements in the array a[] are\n&quot;);

for(i=0;i&lt;n;i++)

{

printf(&quot;%d\t&quot;,a[i]);

}

//code for Reversing Array elements

printf(&quot;\nElements in the array b[] are\n&quot;);

for(i=n-1,j=0;i&gt;=0;i--,j++)

{

b[j]=a[i];

printf(&quot;%d\t&quot;,b[j]);

}

return 0;

}

## Array Insertion

#include &lt;stdio.h&gt;

int main() {

int a[5]={5,3,7,6,1},temp,pos,value;

int n=sizeof(a)/sizeof(a[0]);

printf(&quot;Elements in the array before insertion\n&quot;);

for(int i=0;i&lt;n;i++) {

printf(&quot;a[%d]=%d\n&quot;,i,a[i]);

}

//Array insertion need two inputs(position and value)

printf(&quot;\n Enter position and value: &quot;);

scanf(&quot;%d %d&quot;,&amp;pos,&amp;value);

//Code for insertion

for(int i=n-1;i&gt;=pos-1;i--) {

a[i+1]=a[i];

}

a[pos-1]=value;

printf(&quot;Elements in the array after Insertion\n&quot;);

for(int i=0;i&lt;=n;i++) {

printf(&quot;a[%d]=%d\n&quot;,i,a[i]);

}

return 0;

}

## Array deletion

#include &lt;stdio.h&gt;

int main()

{

int a[5]={5,3,7,6,1},temp,pos,value;

int n=sizeof(a)/sizeof(a[0]);

printf(&quot;Elements in the array before Deletion\n&quot;);

for(int i=0;i&lt;n;i++)

{

printf(&quot;a[%d]=%d\n&quot;,i,a[i]);

}

printf(&quot;Enter the position\n&quot;);

scanf(&quot;%d&quot;,&amp;pos);

//code for deletion

for(int i=pos-1;i&lt;n-1;i++) {

a[i]=a[i+1];

}

printf(&quot;Elements in the array After Deletion\n&quot;);

printf(&quot;Elements in the array after Insertion\n&quot;);

for(int i=0;i&lt;n-1;i++) {

printf(&quot;a[%d]=%d\n&quot;,i,a[i]);

}

return 0;

}

## Array Sorting

#include &lt;stdio.h&gt;

int main() {

int a[5]={5,3,7,6,1},temp;

int n=sizeof(a)/sizeof(a[0]);

printf(&quot;Elements in the array-Before sorting\n&quot;);

for(int i=0;i&lt;n;i++) {

printf(&quot;%d &quot;,a[i]);

}

printf(&quot;\nElements in the array-After sorting\n&quot;);

//code for sorting

for(int i=0;i&lt;n;i++) {

for(int j=i+1;j&lt;n;j++) {

if(a[i]&gt;a[j]) {

temp=a[i];

a[i]=a[j];

a[j]=temp;

} } }

for(int i=0;i&lt;n;i++) {

printf(&quot;%d &quot;,a[i]);

}

return 0;

}

## Array Searching

#include &lt;stdio.h&gt;

int main() {

int a[5]={5,3,7,6,1},temp,pos,value,found=0,i;

int n=sizeof(a)/sizeof(a[0]);

printf(&quot;Elements in the array before Deletion\n&quot;);

for(int i=0;i&lt;n;i++) {

printf(&quot;a[%d]=%d\n&quot;,i,a[i]);

}

printf(&quot;Enter element to search\n&quot;);

scanf(&quot;%d&quot;,&amp;value);

//code for searching

for(i=0;i&lt;n;i++) {

if(a[i]==value) {

found=1;

break;

} }

if(found==1) {

printf(&quot;\n%d is found at position %d&quot;, value,i + 1);

}

else {

printf(&quot;\n%d is not found in the array&quot;, value); }

return 0;

}

# Calculator

## Simple calculator using else if

#include <stdio.h>

int main() {

int num1,num2;

char op;

printf("Choose the operator(+,-,\*,/,%%): ");

scanf("%c",&op);

printf("Enter two numbers: ");

scanf("%d %d",&num1,&num2);

if(op=='+') {

printf("%d + %d =%d\n",num1,num2,num1+num2);

}

else if(op=='-') {

printf("%d - %d =%d\n",num1,num2,num1-num2);

}

else if(op=='\*') {

printf("%d \* %d =%d\n",num1,num2,num1\*num2);

}

else if(op=='/') {

if(num2==0)

{

printf("Re-enter Number-2");

return (-1);

}

printf("%d / %d =%d\n",num1,num2,num1/num2);

}

else if(op=='%')

{

if(num2==0)

{

printf("Re-enter Number-2");

return (-1);

}

printf("%d mod %d =%d\n",num1,num2,num1%num2);

}

else

{

printf("Operator in invalid");

}

return 0;

}

Sample Output:

Choose the operator(+,-,\*,/,%): /

Enter two numbers: 2

0

Re-enter Number-2

Choose the operator(+,-,\*,/,%): /

Enter two numbers: 10

4

10 / 4 =2

## 

## 

## 

## 

## 

## 

## 

## 

## 

## 

## Simple Calculator Program in C

#include <stdio.h>

int main()

{

int num1,num2;

char op;

printf("Choose the operator(+,-,\*,/,%%): ");

scanf("%c",&op);

printf("Enter two numbers: ");

scanf("%d %d",&num1,&num2);

switch(op) {

case '+':

printf("%d + %d =\t%d\n",num1,num2,num1+num2);

break;

case '-':

printf("%d - %d =\t%d\n",num1,num2,num1-num2);

break;

case '\*':

printf("%d \* %d =\t%d\n",num1,num2,num1\*num2);

break;

case '/':

printf("%d / %d =\t%d\n",num1,num2,num1/num2);

break;

case '%':

printf("%d %% %d =\t%d\n",num1,num2,num1%num2);

break;

default:

printf("Error! Invalid Operator.");

}

return 0;

}

Sample Output:

Choose the operator(+,-,\*,/,%): /

Enter two numbers: 5 5

5 / 5 = 1