1. Demonstrate the addition and multiplication of 2X2, 2X3, 3X3 matrix

#include <stdio.h>

int main()

{

printf("Let's perform Matrix multiplication and addition\n");

int row1,col1,row2,col2;

printf("Enter the rows of Matrix 1: \n");

scanf("%d",&row1);

printf("Enter the columns of Matrix 1: \n");

scanf("%d",&col1);

printf("Enter the rows of Matrix 2: \n");

scanf("%d",&row2);

printf("Enter the columns of Matrix 2: \n");

scanf("%d",&col2);

// Condition to check if the matrix Multiplication is possible or not

if (col1!=col2 || row1!= row2)

{

printf("matrix multiplication is not possible, please enter valid number of rows and columns\n");

return 0;

}

int Matrix1[row1][col1],Matrix2[row2][col2],sum[row1][col1],product[row1][col2];

printf("Enter the elements of the Matrix 1: \n");

for (int i = 0; i < row1; i++) {

for (int j = 0; j < col1; j++) {

printf("Enter element at position (%d, %d): ", i, j);

scanf("%d", &Matrix1[i][j]);

}

}

printf("Enter the elements of the Matrix 2: \n");

for ( int i = 0 ; i < row2 ; i++ )

{

for ( int j = 0 ; j < col2 ; j++)

{

printf("Enter element at position (%d, %d): ", i, j);

scanf("%d",&Matrix2[i][j]);

}

}

// Performing Addition

for ( int i = 0 ; i < row1 ; i++ )

{

for ( int j = 0 ; j < col1 ; j++)

{

sum[i][j] = Matrix1[i][j]+Matrix2[i][j];

}

}

// Performing Multiplication

for(int i=0;i<row1;i++)

{

for(int j=0; j<col2; j++)

{

product[i][j] = 0 ;

for(int k=0;k<col1;k++)

{

product[i][j] += Matrix1[i][k]\*Matrix2[k][j];

}

}

}

// Print the Addition and Multiplication

printf("Addition of the matrix is : \n");

for ( int i = 0 ; i < row1 ; i++ )

{

for ( int j = 0 ; j < col1 ; j++)

{

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

}

printf("\n");

}

printf("Multiplication of the matrix is : \n");

for ( int i = 0 ; i < row1 ; i++ )

{

for ( int j = 0 ; j < col2 ; j++)

{

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

}

printf("\n");

}

return 0;

}

2. Expected output:

|  |
| --- |
| #include <stdio.h> int main() { int x[4]={1,3,5,7}; int i; int \*ptr; for(i = 0; i < 4; ++i) { ptr=&x[i]; printf("x[%d] is %d\n",i,\*(ptr+i)); } return 0; }What would be the printed? |

3, 7, garbage, garbage

3. What are different bitwise operators?

& AND

| OR

^ XOR

~ NOT

<< Left shift

>> Right Shift

4. Which bitwise operator is suitable for checking whether a particular bit is on or off

& AND operator

5. How to set/unset 17 and 18 bit of a given number?

//How to set/unset 17 and 18 bit of a given number?

#include <stdio.h>

int main()

{

unsigned int number;

unsigned int set,unset;

printf("Enter a number: \n");

scanf("%d",&number);

unsigned int mask = 1;

mask = (mask<<17)|(mask<<18);

set = number | mask;

printf(" Set value is : %d ",set);

unset = number & ~mask;

printf(" Unset value is : %d ",unset);

}

6. Endian Topic and its programs are still in progress