**Taskno01**

Course: CP - AM

Marks: 10

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| **S. No** | **Code** | **Output** |
| **1** | **int a[3][3], b[3][3], sum[3][3], i, j;**    **printf("\nEnter elements of 1st matrix:\n");**  **for (i = 0; i < 3; ++i)**  **for (j = 0; j < 3; ++j) {**  **scanf("%d", &a[i][j]);**  **}**  **printf("Enter elements of 2nd matrix:\n");**  **for (i = 0; i < 3; ++i)**  **for (j = 0; j < 3; ++j) {**  **scanf("%d", &b[i][j]);**  **}**  **for (i = 0; i < 3; ++i)**  **for (j = 0; j < 3; ++j) {**  **sum[i][j] = a[i][j] + b[i][j];**  **}**  **printf("\nSum of two matrices: \n");**  **for (i = 0; i < 3; ++i){**  **printf("\n");**  **for (j = 0; j < 3; ++j) {**  **printf("%d ", sum[i][j]);**  **}**  **}** |
| **2** | int a[3][3], b[3][3], difference[3][3], i, j;  printf("\nEnter elements of 1st matrix:\n");  for (i = 0; i < 3; ++i)  for (j = 0; j < 3; ++j) {  scanf("%d", &a[i][j]);  }  printf("Enter elements of 2nd matrix:\n");  for (i = 0; i < 3; ++i)  for (j = 0; j < 3; ++j) {  scanf("%d", &b[i][j]);  }    for (i = 0; i < 3; i++)  {  for (j = 0; j < 3; j++)  {  difference[i][j] = a[i][j] - b[i][j];  printf("%d\t", difference[i][j]);  }  printf("\n");  } |  |
| **3.** | nt A[3][3];  int num, row, col;  for(row=0; row<3; row++)  {  for(col=0; col<3; col++)  {  scanf("%d", &A[row][col]);  }  }  printf("Enter any number to multiply with matrix A: ");  scanf("%d", &num);  for(row=0; row<3; row++)  {  for(col=0; col<3; col++)  {  A[row][col] = num \* A[row][col];  }  }  printf("\nResultant matrix c.A = \n");  for(row=0; row< 3; row++)  {  for(col=0; col<3 ; col++)  {  printf("%d ", A[row][col]);  }  printf("\n");  } |  |
| **4.** | int m, n, p, q, c, d, k, sum = 0;  int first[3][3], second[3][3], multiply[3][3];    printf("Enter the elements of first matrix\n");    for ( c = 0 ; c < 3 ; c++ )  for ( d = 0 ; d < 3 ; d++ )  scanf("%d", &first[c][d]);      printf("Enter the elements of second matrix\n");    for ( c = 0 ; c < 3 ; c++ )  for ( d = 0 ; d < 3 ; d++ )  scanf("%d", &second[c][d]);    for ( c = 0 ; c < 3 ; c++ )  {  for ( d = 0 ; d < 3 ; d++ )  {  for ( k = 0 ; k < 3 ; k++ )  {  sum = sum + first[c][k]\*second[k][d];  }    multiply[c][d] = sum;  sum = 0;  }  }    printf("Product of entered matrices:-\n");    for ( c = 0 ; c < 3 ; c++ )  {  for ( d = 0 ; d < 3 ; d++ )  printf("%d\t", multiply[c][d]);    printf("\n");  } |  |
| **5.** | int a[10][10], b[10][10];  int i, j, row1, column1, row2, column2, flag = 1;    printf("Enter the order of the matrix A \n");  scanf("%d %d", &row1, &column1);    printf("Enter the order of the matrix B \n");  scanf("%d %d", &row2, &column2);    printf("Enter the elements of matrix A \n");  for (i = 0; i < row1; i++)  {  for (j = 0; j < column1; j++)  {  scanf("%d", &a[i][j]);  }  }    printf("Enter the elements of matrix B \n");  for (i = 0; i < row2; i++)  {  for (j = 0; j < column2; j++)  {  scanf("%d", &b[i][j]);  }  }    printf("MATRIX A is \n");  for (i = 0; i < row1; i++)  {  for (j = 0; j < column1; j++)  {  printf("%3d", a[i][j]);  }  printf("\n");    }    printf("MATRIX B is \n");  for (i = 0; i < row2; i++)  {  for (j = 0; j < column2; j++)  {  printf("%3d", b[i][j]);  }  printf("\n");    }    /\* Comparing two matrices for equality \*/    if (row1 == row2 && column1 == column2)  {  printf("Matrices can be compared \n");  for (i = 0; i < row1; i++)  {  for (j = 0; j < column2; j++)  {  if (a[i][j] != b[i][j])  {  flag = 0;  break;  }  }  }  }    else  {  printf(" Cannot be compared\n");  exit(1);  }    if (flag == 1)  printf("Two matrices are equal \n");  else  printf("But, two matrices are not equal \n"); |  |