ASSIGNMENT 8: matrix multiplication
DATE: 24/03/2021

CODE:

```
#include<iostream>
using namespace std;
int main ()
{
   int r1, c1, r2, c2, i, j, k;
   int A[5][5], B[5][5], C[5][5];
   cout << "Enter number of rows and columns of matrix A : ";
   cin >> r1 >> c1;
   cout << "Enter number of rows and columns of matrix B : ";
   cin >> r2 >> c2;
   if (c1 != r2)
   {
      cout << "Matrices cannot be multiplied!";
      exit(0);
   }
   cout << "Enter elements of matrix A : ";
   for (i = 0; i < r1; i++)
      for (j = 0; j < c1; j++)
         cin >> A[i][j];
   cout << "Enter elements of matrix B : ";
   for (i = 0; i < r2; i++)
      for (j = 0; j < c2; j++)
         cin >> B[i][j];
   for (i = 0; i < r1; i++)
   {
      for (j = 0; j < c2; j++)
      {
         C[i][j] = 0;
         for (k = 0; k < r2; k++)
         {
            C[i][j] += A[i][k] * B[k][j];
         }
      }
   }
   cout << "Product of matrices\n";
   for (i = 0; i < r1; i++)
   {
      for (j = 0; j < c2; j++)
         cout << C[i][j] << "  ";
```

```
        cout << "\n";
    }
    return 0;
}
```

OUTPUT: