Name	Anand Tiwari
Roll.no	2021700068
Branch	CSE-DS(D-4)

Programme	#include <stdio.h>
	#include <limits.h>
	
	int matrixChainOrder(int p[], int n) {
	  int m[n][n];
	  int i, j, k, L, q;
	
	  for (i = 1; i < n; i++)
	  m[i][i] = 0;
	
	  for (L = 2; L < n; L++) {
	  for (i = 1; i < n - L + 1; i++) {
	  j = i + L - 1;
	  m[i][j] = INT_MAX;
	
	  for (k = i; k <= j - 1; k++) {
	  q = m[i][k] + m[k + 1][j] + p[i - 1] * p[k] * p[j];
	  if (q < m[i][j])
	  m[i][j] = q;
	  }
	  }
	  }
	
	  return m[1][n - 1];
	}
	
	int main() {
	  int arr[] = {10, 20, 30, 40, 30};
	  int size = sizeof(arr) / sizeof(arr[0]);
	
	  printf("Minimum number of multiplications is %d ",
	matrixChainOrder(arr, size));
	
	  return 0;
	}

Output	Minimum number of multiplications is 30000

CONCLUSION:Understood concept of matrix chain multiplication using dynamic programminf