

```
1  #include<iostream>
2  #include<string>
3  #include<iomanip>
4  using namespace std;
5
6  int RandomNumber(int From, int To)
7  {
8      //Function to generate a random number
9      int randNum = rand() % (To - From + 1) + From;
10     return randNum;
11 }
12 void FillMatrixWithRandomNumbers(int arr[3][3], short Rows, short Cols)
13 {
14     for (short i = 0; i < Rows; i++)
15     {
16         for (short j = 0; j < Cols; j++)
17         {
18             arr[i][j] = RandomNumber(1, 100);
19         }
20     }
21 }
22
23 void PrintMatrix(int arr[3][3], short Rows, short Cols)
24 {
25
26     for (short i = 0; i < Rows; i++)
27     {
28         for (short j = 0; j < Cols; j++)
29         {
30             cout << setw(3) << arr[i][j] << "    ";
31         }
32         cout << "\n";
33     }
34 }
35
36 int RowSum(int arr[3][3], short RowNumber, short Cols)
37 {
38     int Sum = 0;
39
40     for (short j = 0; j <= Cols - 1; j++)
41     {
42         Sum += arr[RowNumber][j];
43     }
44     return Sum;
45 }
46
47 void SumMatixRowsInArry(int arr[3][3], int arrSum[3], short Rows, short Cols)
48 {
49     for (short i = 0; i < Rows; i++)
50     {
51         arrSum[i] = RowSum(arr, i, Cols);
52     }
```

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53 }
54
55 void PrintRowsSumArray(int arr[3], short Rows)
56 {
57     cout << "\nThe the following are the sum of each row in the matrix:\n";
58     for (short i = 0; i < Rows; i++)
59     {
60         cout << " Row " << i + 1 << " Sum = " << arr[i] << endl;
61     }
62 }
63
64 int main()
65 { //Seeds the random number generator in C++, called only once
66     srand((unsigned)time(NULL));
67     int arr[3][3];
68     int arrSum[3];
69     FillMatrixWithRandomNumbers(arr, 3, 3);
70
71     cout << "\nThe following is a 3x3 random matrix:\n";
72     PrintMatrix(arr, 3, 3);
73
74     PrintRowsSumArray(arrSum, 3);
75
76     system("pause>0");
77 }
```