

C++ Online B2

Write a C++ class “Random” encapsulating a two-dimensional random integer matrix objects. The class should have the following member functions

1. A **constructor** which takes four integer arguments (number of row, number of column, minimum, maximum) and is responsible for necessary memory allocation (you should use malloc() and free() function for memory allocation).
2. A **destructor** with the responsibility of freeing memory
3. A **print** function with the responsibility of displaying matrix
4. A **randomize** function with the responsibility of setting the values of a matrix element with random number (you can use rand() function).
5. A **get** function which takes two integer arguments (row, column) with the responsibility of returning the values of a matrix element.
6. An **add** function which takes an integer argument (n) which is added with each element of the matrix encapsulated by the object accessing add function
7. Another overloaded **add** function which add all the element of the matrix encapsulated by the object accessing add function and return the sum

You can use the following main function

```
int main()
{
    cout<<"Hello World"<<"\n";

    Matrix m(3,3,100,200);
    m.randomize();
    m.print();
    cout<<m.get(0,0)<<"\n";
    m.add(100);
    m.print();
    cout<<m.add()<<"\n";

    return 0;
}
```

Your output should be like the following:

```
Hello World
183 186 177
115 193 135
186 192 149
183
283 286 277
215 293 235
286 292 249
2416
```