Fundamentals of Programming
ME-15
Section B
1st Semester
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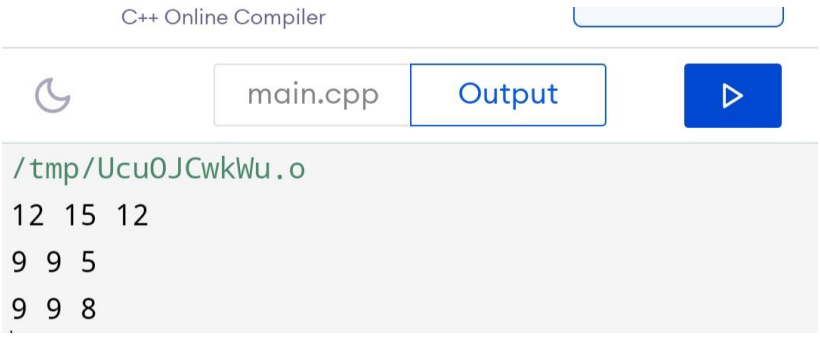
```
#include <iostream>
using namespace std;
void add(int arr1[3][3], int arr2[3][3], int sum[3][3]) {
   for (int i = 0; i < 3; ++i) {
      for (int j = 0; j < 3; ++j) {
      sum[i][j] = arr1[i][j]+arr2[i][j];}
}
}
int main() {
   int arr1[3][3] =
{{1, 6, 9},
{7, 8, 2},
{5, 3,4}};
   int arr2[3][3] =
{{11, 9, 3},
{2, 1, 3},
{4, 6, 4}};
   int sum[3][3];
   add(arr1, arr2, sum);
   for(int i = 0; i < 3; ++i){
      for(int j = 0; j < 3; ++j){
      cout<<sum[i][j] << " ";}
      cout<<endl;
   }
   return 0;
}
```




```
#include <iostream>

Using namespace std;

int main() {

int leftDiagonal = 0, rightDiagonal= 0;
```

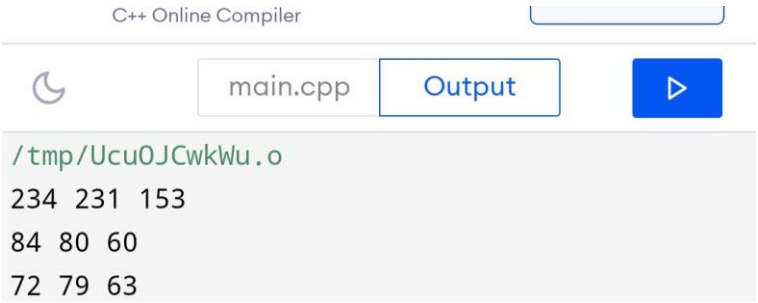
```
   int arr1[3][3] =
   {{12, 15, 18},
   {4, 8, 6},
   {2, 7, 9}};
   For (int i = 0; i < 3; i++) {
     rightDiagonal += arr1[i][i];
     leftDiagonal += arr1[i][2 – i];
   }
cout <<"Sum of left:  "<<leftDiagonal <<endl;
cout <<"Sum of right:  "<< rightDiagonal<<endl;
return 0;
}
```


```
#include <iostream>
using namespace std;

void multiplyMatrices(int arr1[3][3], int arr2[3][3], int product[3][3]) {
   for (int i = 0; i < 3; i++) {
      for (int j = 0; j < 3; j++) {
         product[i][j] = 0;
         for (int k = 0; k < 3; k++) {
            product[i][j] += arr1[i][k] * arr2[k][j];}}}}

int main() {
   int arr1[3][3] = {{12, 15, 18},
                     {4, 8, 6},
                     {2, 7, 9}};
   int arr2[3][3] = {{11, 9, 3},
                     {2, 1, 3},
                     {4, 6, 4}};
   int product[3][3];
```

```
    multiplyMatrices(arr1, arr2, product);
    for (int i = 0; i < 3; i++) {
        for (int j = 0; j < 3; j++) {
            cout << product[i][j] << " ";
        }
        cout << endl;
    }
    return 0;
}
```



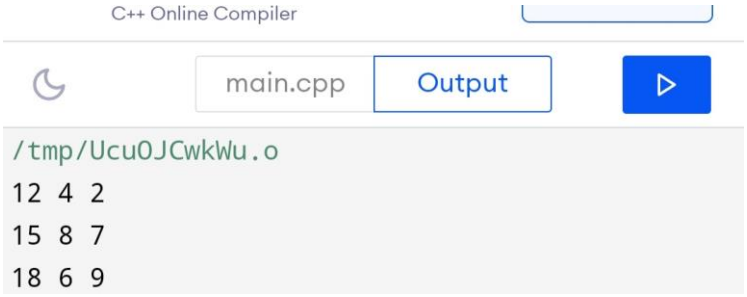

```
#include <iostream>
using namespace std;
void trans(int arr1[3][3], int finalmatrix[3][3]) {
    for (int i = 0; i < 3; ++i) {
        for (int j = 0; j < 3; ++j) {
            finalmatrix[j][i] = arr1[i][j]  }}}

int main() {
    int arr1[3][3] = {{12, 15, 18}, {4, 8, 6}, {2, 7, 9}};
    int finalmatrix[3][3];

    trans(arr1, finalmatrix);

    for (int i = 0; i < 3; ++i) {
        for (int j = 0; j < 3; ++j) {
        cout << finalmatrix[i][j] << " ";
        }
        cout << endl;
    }
```

```
    return 0;
}
```




```
#include<iostream>
using namespace std;
void multiples(int x, int y){
if (y>10) return;
cout<<x<<"*"<<y<<"="<<x*y<<endl;
return multiples(x,y+1);}
int main(){
int x=15;
multiples(x,1);
return 0;}
```