

TASK 1

The screenshot shows a C++ IDE with the file 'programming task9.cpp' open. The code is as follows:

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int i,j,arr[3][3];
6     cout<<" enter the values " ;
7     for( int i=0;i<3;i++)
8     {
9         for(int j=0;j<3;j++)
10        {
11            cin>>arr[i][j];
12        }
13    }
14    for(int i=0;i<3;i++)
15    {
16        for( int j=0;j<3;j++)
17        {
18            cout<<arr[i][j]<<" ";
19        }
20        cout<<endl;
21    }
```

The console output shows the program running and prompting for input:

```
enter the values 1 2 3 4 5 6 7 8 9
1 2 3
4 5 6
7 8 9

-----
Process exited after 6.437 seconds with return value 0
Press any key to continue . . .
```

A 'Snip & Sketch' window is also visible in the bottom right corner, indicating a screenshot was taken.

TASK 2

The screenshot shows the same C++ IDE with the file 'programming task9.cpp' open. The code is as follows:

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int arr[3][3]={9,8,7}, {6,5,4} , {3,2,1}};
6     for(int i=0;i<3;i++)
7     {
8         for(int j=0;j<3;j++)
9         {
10            cout<<arr[i][j];
11        }
12        cout<<endl;
13    }
14 }
15
```

The console output shows the program running and displaying the array values:

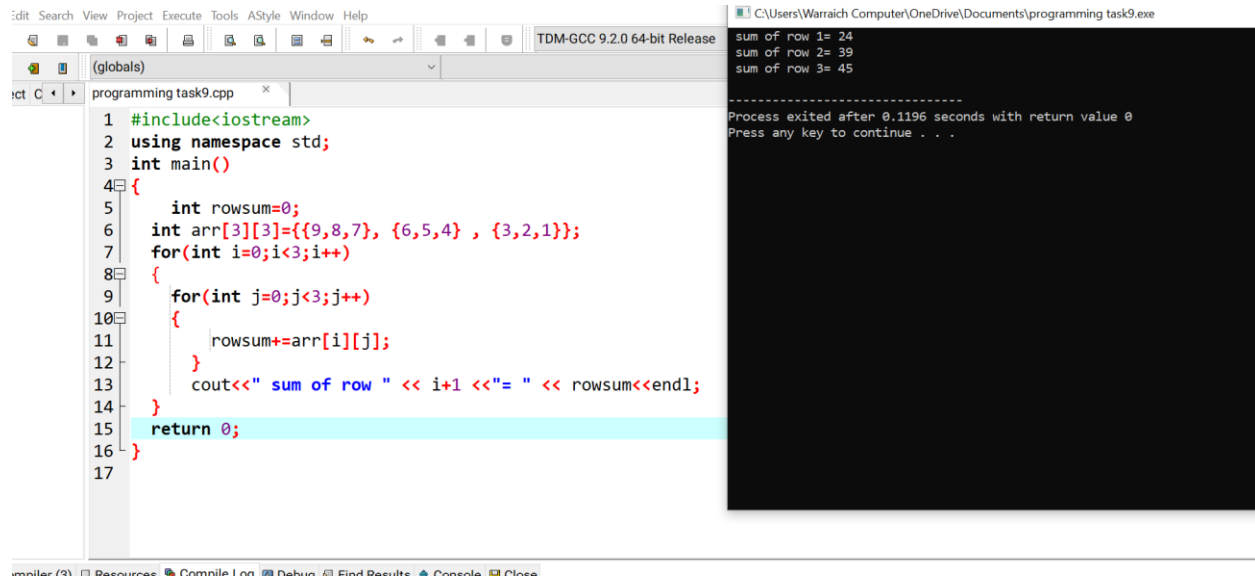
```
987
654
321

-----
Process exited after 0.1107 seconds with return value 0
Press any key to continue . . .
```

The IDE's status bar at the bottom shows compilation details:

- Output Filename: C:\Users\Warraich Computer\OneDrive\Documents\programming task9.exe
- Output Size: 2.98875522613525 MiB
- Compilation Time: 1.41s

TASK 3



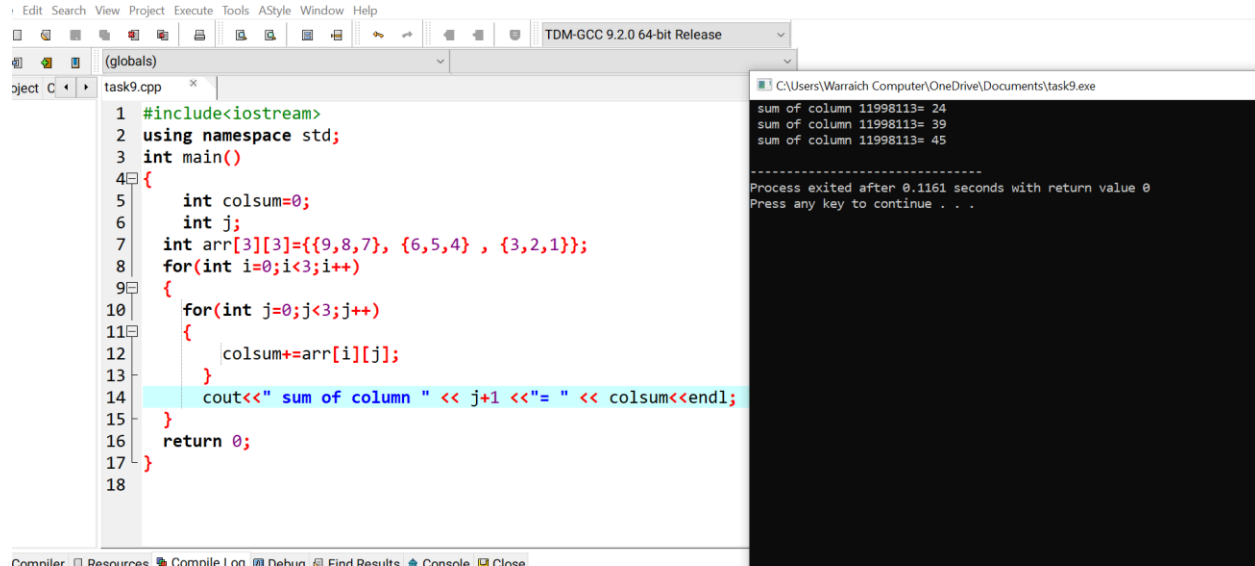
The screenshot shows a C++ IDE with the file 'programming task9.cpp' open. The code calculates the sum of each row in a 3x3 matrix. The output window shows the results: 'sum of row 1= 24', 'sum of row 2= 39', and 'sum of row 3= 45'. The process exited after 0.1196 seconds.

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int rowsum=0;
6     int arr[3][3]={{9,8,7}, {6,5,4} , {3,2,1}};
7     for(int i=0;i<3;i++)
8     {
9         for(int j=0;j<3;j++)
10        {
11            rowsum+=arr[i][j];
12        }
13        cout<<" sum of row " << i+1 <<"= " << rowsum<<endl;
14    }
15    return 0;
16 }
17
```

```
sum of row 1= 24
sum of row 2= 39
sum of row 3= 45

-----
Process exited after 0.1196 seconds with return value 0
Press any key to continue . . .
```

TASK 4



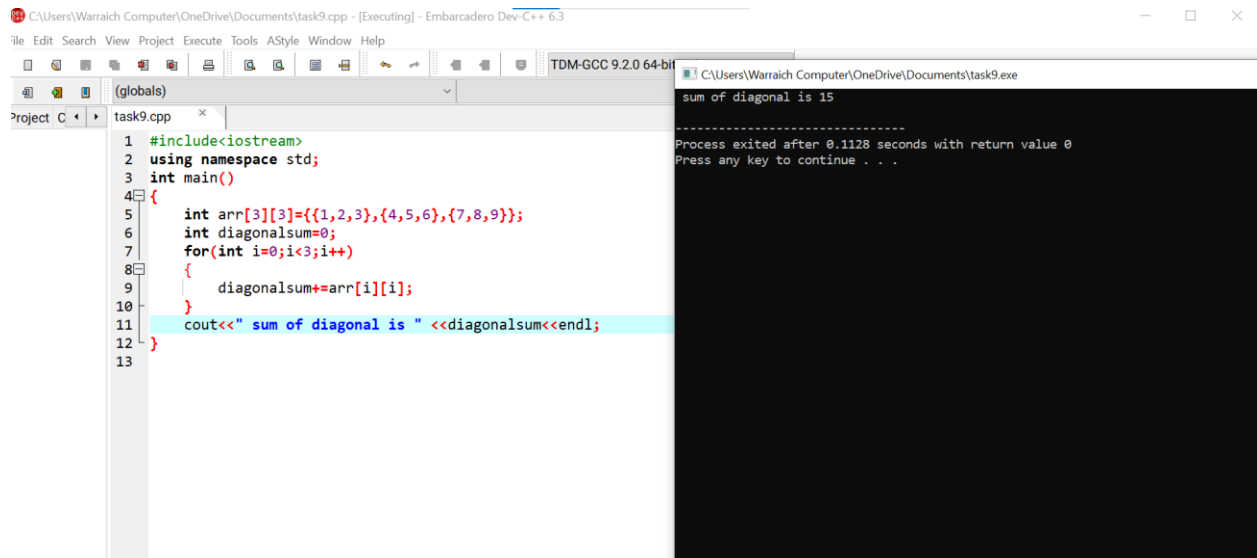
The screenshot shows a C++ IDE with the file 'task9.cpp' open. The code calculates the sum of each column in a 3x3 matrix. The output window shows the results: 'sum of column 11998113= 24', 'sum of column 11998113= 39', and 'sum of column 11998113= 45'. The process exited after 0.1161 seconds.

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int colsum=0;
6     int j;
7     int arr[3][3]={{9,8,7}, {6,5,4} , {3,2,1}};
8     for(int i=0;i<3;i++)
9     {
10        for(int j=0;j<3;j++)
11        {
12            colsum+=arr[i][j];
13        }
14        cout<<" sum of column " << j+1 <<"= " << colsum<<endl;
15    }
16    return 0;
17 }
18
```

```
sum of column 11998113= 24
sum of column 11998113= 39
sum of column 11998113= 45

-----
Process exited after 0.1161 seconds with return value 0
Press any key to continue . . .
```

Task 5

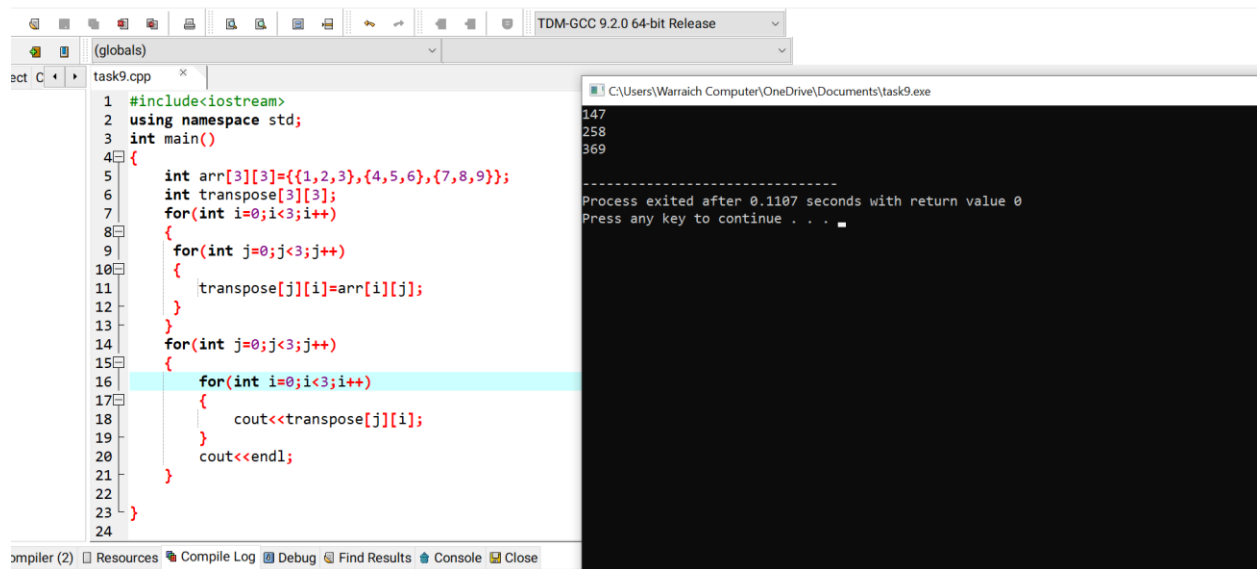


```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int arr[3][3]={{1,2,3},{4,5,6},{7,8,9}};
6     int diagonalsum=0;
7     for(int i=0;i<3;i++)
8     {
9         diagonalsum+=arr[i][i];
10    }
11    cout<<" sum of diagonal is " <<diagonalsum<<endl;
12 }
13
```

sum of diagonal is 15

Process exited after 0.1128 seconds with return value 0
Press any key to continue . . .

Task6

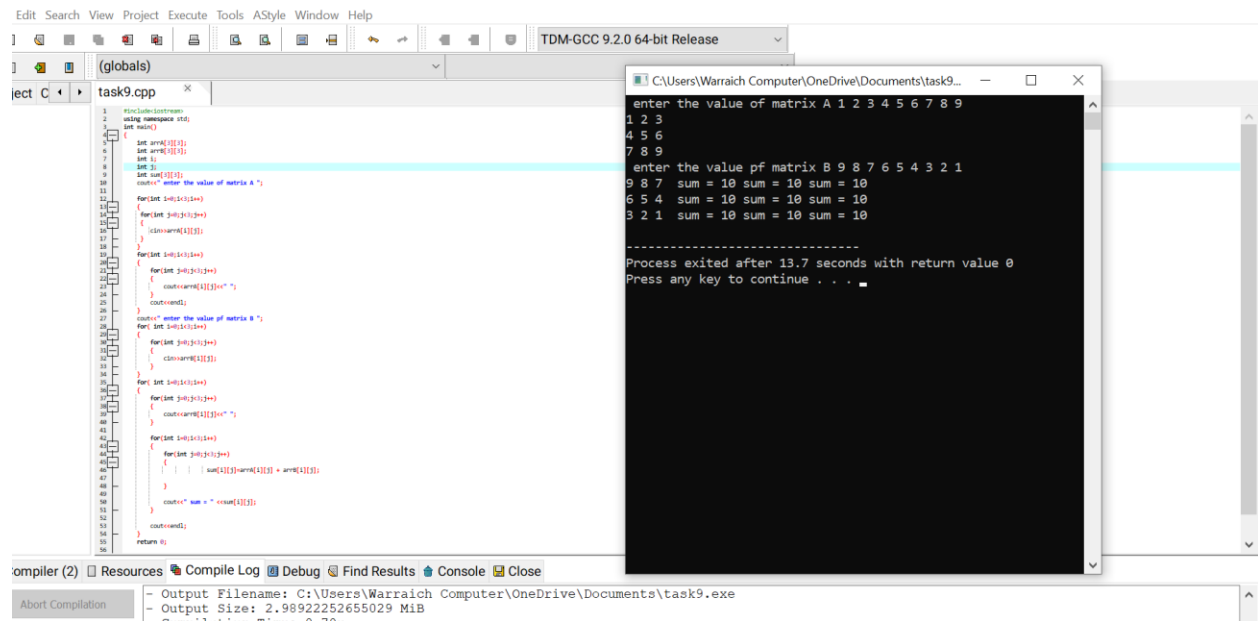


```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int arr[3][3]={{1,2,3},{4,5,6},{7,8,9}};
6     int transpose[3][3];
7     for(int i=0;i<3;i++)
8     {
9         for(int j=0;j<3;j++)
10        {
11            transpose[j][i]=arr[i][j];
12        }
13    }
14    for(int j=0;j<3;j++)
15    {
16        for(int i=0;i<3;i++)
17        {
18            cout<<transpose[j][i];
19        }
20        cout<<endl;
21    }
22 }
23
```

147
258
369

Process exited after 0.1107 seconds with return value 0
Press any key to continue . . .

Task 7



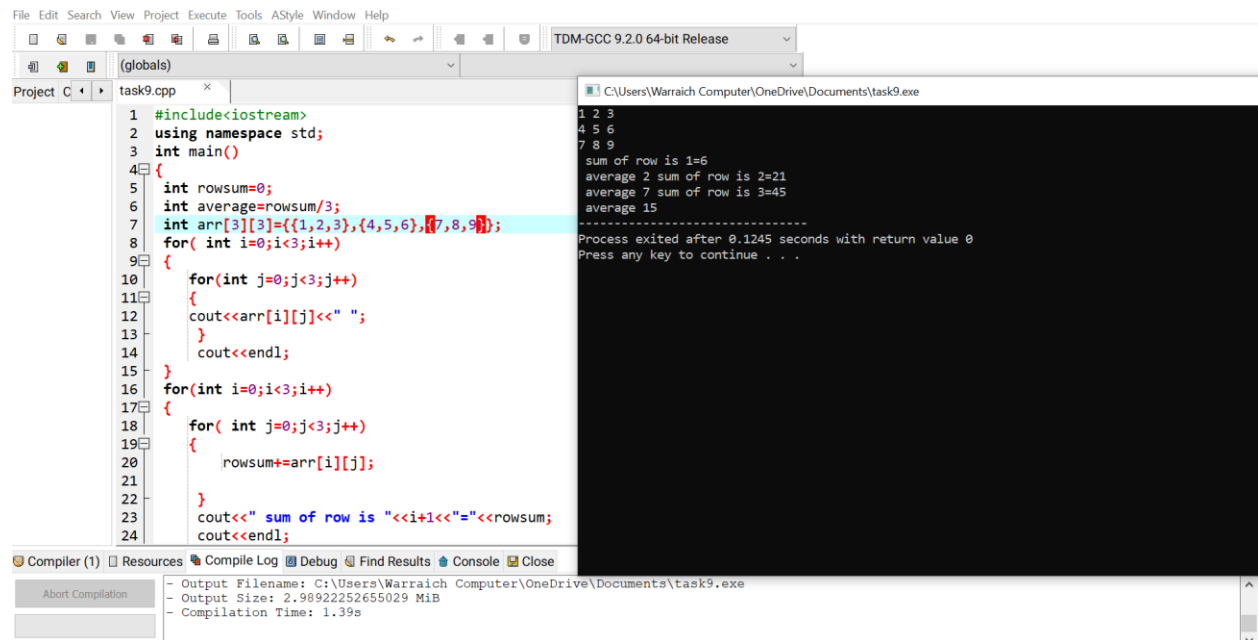
```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int arrA[3][3];
6     int arrB[3][3];
7     int sum[3][3];
8     cout<<"enter the value of matrix A:"<<endl;
9     for(int i=0;i<3;i++)
10     {
11         for(int j=0;j<3;j++)
12         {
13             cin>>arrA[i][j];
14         }
15     }
16     cout<<"enter the value of matrix B:"<<endl;
17     for(int i=0;i<3;i++)
18     {
19         for(int j=0;j<3;j++)
20         {
21             cin>>arrB[i][j];
22         }
23     }
24     for(int i=0;i<3;i++)
25     {
26         for(int j=0;j<3;j++)
27         {
28             sum[i][j]=arrA[i][j]+arrB[i][j];
29         }
30     }
31     cout<<"sum = " <<endl;
32     for(int i=0;i<3;i++)
33     {
34         for(int j=0;j<3;j++)
35         {
36             cout<<sum[i][j]<<" ";
37         }
38         cout<<endl;
39     }
40     return 0;
41 }
```

```
enter the value of matrix A 1 2 3 4 5 6 7 8 9
1 2 3
4 5 6
7 8 9
enter the value pf matrix B 9 8 7 6 5 4 3 2 1
9 8 7 sum = 10 sum = 10 sum = 10
6 5 4 sum = 10 sum = 10 sum = 10
3 2 1 sum = 10 sum = 10 sum = 10
-----
Process exited after 13.7 seconds with return value 0
Press any key to continue . . .
```

Compiler (2) | Resources | Compile Log | Debug | Find Results | Console | Close

Output Filename: C:\Users\Warrach Computer\OneDrive\Documents\task9.exe
Output Size: 2.98922252655029 MIB
Compilation Time: 0.70s

Task 8



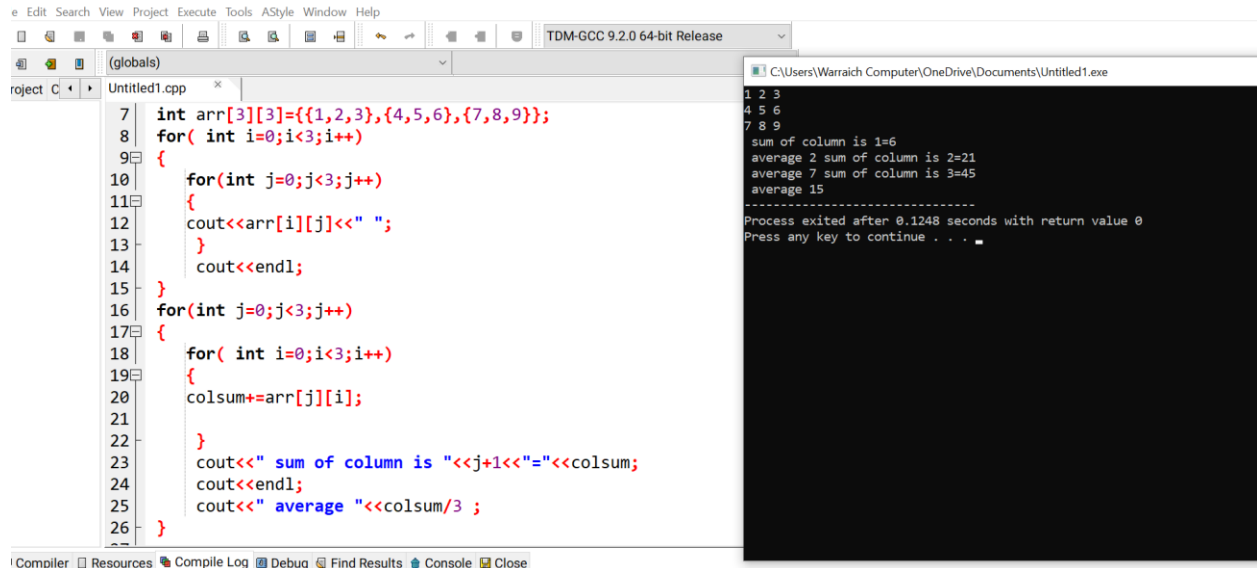
```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int rowsum=0;
6     int average=rowsum/3;
7     int arr[3][3]={1,2,3},{4,5,6},{7,8,9};
8     for( int i=0;i<3;i++)
9     {
10         for(int j=0;j<3;j++)
11         {
12             cout<<arr[i][j]<<" ";
13         }
14         cout<<endl;
15     }
16     for(int i=0;i<3;i++)
17     {
18         for( int j=0;j<3;j++)
19         {
20             rowsum+=arr[i][j];
21         }
22         cout<<" sum of row is "<<i+1<<"="<<rowsum;
23         cout<<endl;
24     }
25 }
```

```
1 2 3
4 5 6
7 8 9
sum of row is 1=6
average 2 sum of row is 2=21
average 7 sum of row is 3=45
average 15
-----
Process exited after 0.1245 seconds with return value 0
Press any key to continue . . .
```

Compiler (1) | Resources | Compile Log | Debug | Find Results | Console | Close

Output Filename: C:\Users\Warrach Computer\OneDrive\Documents\task9.exe
Output Size: 2.98922252655029 MIB
Compilation Time: 1.39s

Task 9



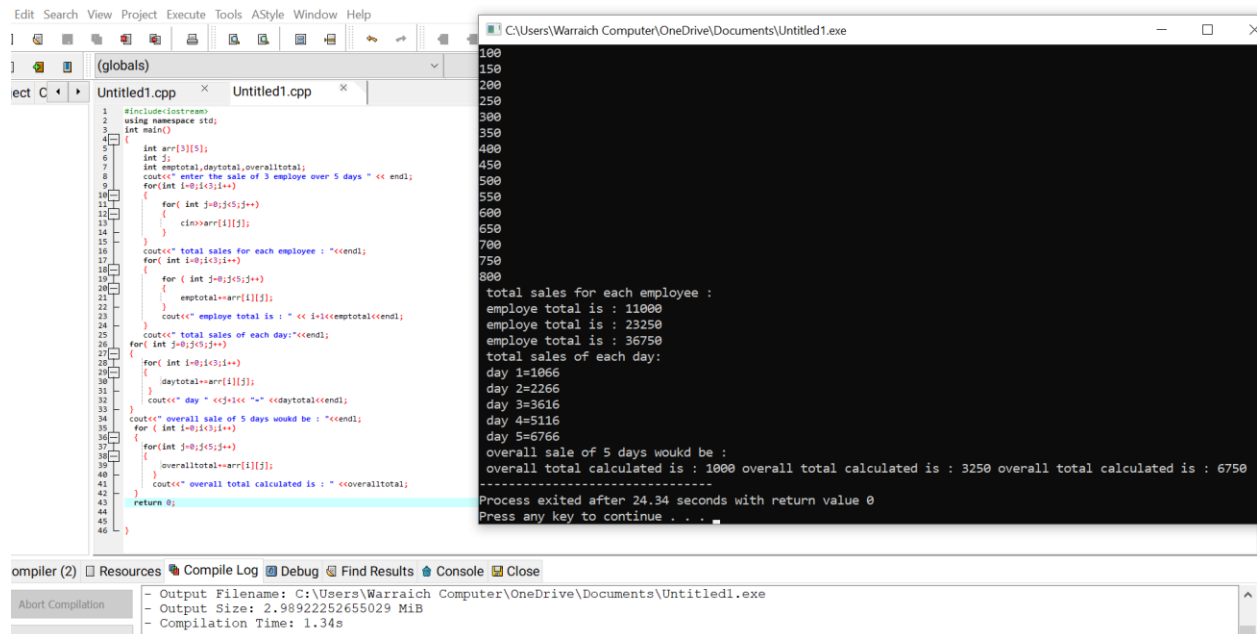
The screenshot shows a C++ IDE with a file named 'Untitled1.cpp' and its output window. The code defines a 3x3 array and calculates the sum and average of each column.

```
7 int arr[3][3]={{1,2,3},{4,5,6},{7,8,9}};
8 for( int i=0;i<3;i++)
9 {
10     for(int j=0;j<3;j++)
11     {
12         cout<<arr[i][j]<<" ";
13     }
14     cout<<endl;
15 }
16 for(int j=0;j<3;j++)
17 {
18     for( int i=0;i<3;i++)
19     {
20         colsum+=arr[j][i];
21     }
22     cout<<" sum of column is "<<j+1<<"="<<colsum;
23     cout<<endl;
24     cout<<" average "<<colsum/3 ;
25 }
26 }
```

Output:

```
1 2 3
4 5 6
7 8 9
sum of column is 1=6
average 2 sum of column is 2=21
average 7 sum of column is 3=45
average 15
-----
Process exited after 0.1248 seconds with return value 0
Press any key to continue . . .
```

Task 10



The screenshot shows a C++ IDE with a file named 'Untitled1.cpp' and its output window. The code calculates the total sales for each employee over 5 days and the overall total.

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int arr[3][5];
6     int empTotal, dayTotal, overallTotal;
7     cout<<" enter the sale of 3 employee over 5 days " << endl;
8     for(int i=0;i<3;i++)
9     {
10         for( int j=0;j<5;j++)
11         {
12             cin>>arr[i][j];
13         }
14     }
15     cout<<" total sales for each employee : "<<endl;
16     for( int i=0;i<3;i++)
17     {
18         for ( int j=0;j<5;j++)
19         {
20             empTotal+=arr[i][j];
21         }
22         cout<<" employee total is : " << i+1<<empTotal<<endl;
23     }
24     cout<<" total sales of each day:"<<endl;
25     for( int j=0;j<5;j++)
26     {
27         for( int i=0;i<3;i++)
28         {
29             dayTotal+=arr[i][j];
30         }
31         cout<<" day " <<j+1<<"="<<dayTotal<<endl;
32     }
33     cout<<" overall sale of 5 days would be : "<<endl;
34     for ( int i=0;i<3;i++)
35     {
36         for(int j=0;j<5;j++)
37         {
38             overallTotal+=arr[i][j];
39         }
40         cout<<" overall total calculated is : " <<overallTotal;
41     }
42     return 0;
43 }
44
45 }
```

Output:

```
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
total sales for each employee :
employee total is : 11000
employee total is : 23250
employee total is : 36750
total sales of each day:
day 1=1066
day 2=2266
day 3=3616
day 4=5116
day 5=6766
overall sale of 5 days would be :
overall total calculated is : 1000 overall total calculated is : 3250 overall total calculated is : 6750
-----
Process exited after 24.34 seconds with return value 0
Press any key to continue . . .
```

Task 11

The screenshot shows an IDE with a C++ file named `Untitled1.cpp`. The code defines an array `arr` with values `{2, 4, 6}` and iterates through it to find the maximum value. The output window shows the result: `max number is : 6`.

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int arr[3]={2,4,6};
6     int max;
7     for ( int i=0;i<3;i++)
8     {
9
10         if (arr[i]>max)
11         {
12             max=arr[i];
13         }
14     }
15     cout<<" max number is : "<<max;
16     return 0;
17 }
```

Output:

```
max number is : 6
-----
Process exited after 0.09839 seconds with return value 0
Press any key to continue . . .
```

Compiler (2) Resources Compile Log Debug Find Results Console Close

Abort Compilation

Output Filename: C:\Users\Warraich Computer\OneDrive\Documents\Untitled1.exe
Output Size: 2.98854827880859 MiB
Compilation Time: 1.27s

Task 12

The screenshot shows an IDE with a C++ file named `Untitled1.cpp`. The code defines an array `arr` with values `{2, 4, 6}` and iterates through it to find the minimum value. The output window shows the result: `min number is : 2`.

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int arr[3]={2,4,6};
6     int min;
7     for ( int i=0;i<3;i++)
8     {
9
10         if (arr[i]<min)
11         {
12             min=arr[i];
13         }
14     }
15     cout<<" min number is : "<<min<<endl;
16     return 0;
17 }
```

Output:

```
min number is : 2
-----
Process exited after 0.08945 seconds with return value 0
Press any key to continue . . .
```

Compiler (2) Resources Compile Log Debug Find Results Console Close

Abort Compilation

Output Filename: C:\Users\Warraich Computer\OneDrive\Documents\Untitled1.exe
Output Size: 2.98873424530029 MiB