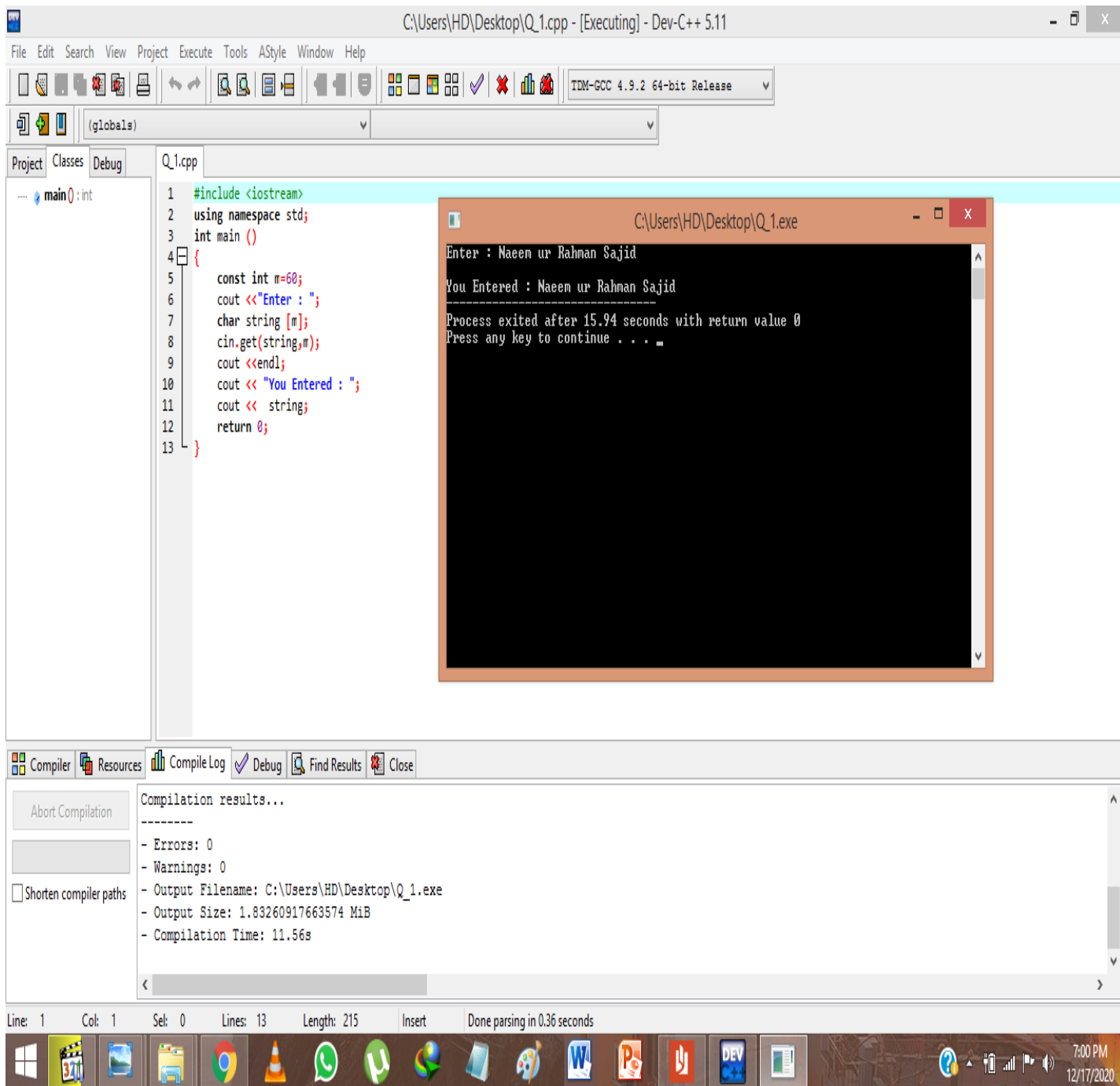
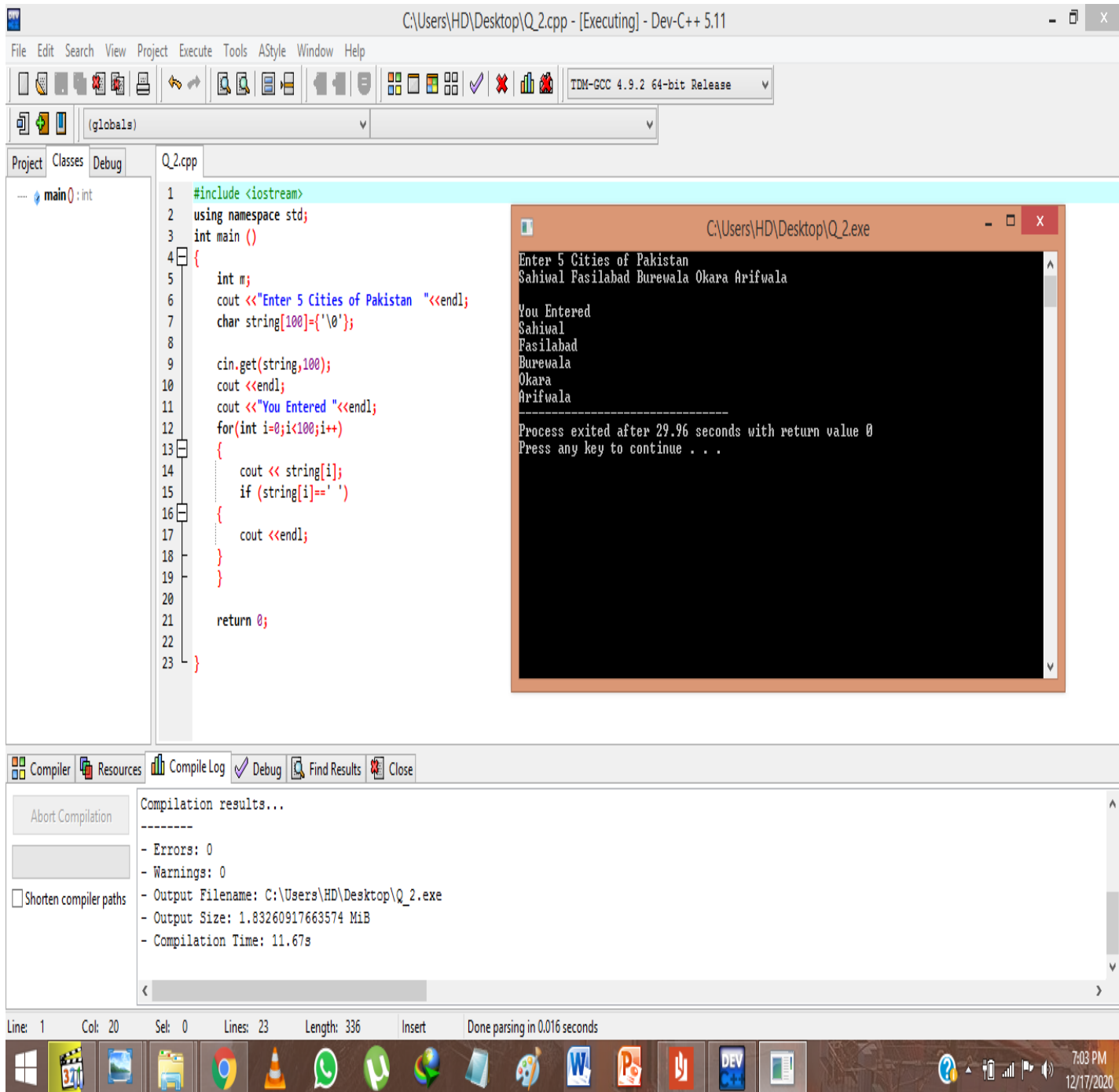


QUESTION NO 1



QUESTION NO 2



The screenshot displays the Dev-C++ IDE interface. The main window shows the source code for a C++ program named Q2.cpp. The code prompts the user to enter 5 cities of Pakistan, reads the input, and prints it line by line. A separate window titled 'C:\Users\HD\Desktop\Q_2.exe' shows the program's execution, displaying the input and the output. The bottom status bar shows the compilation results, indicating no errors or warnings.

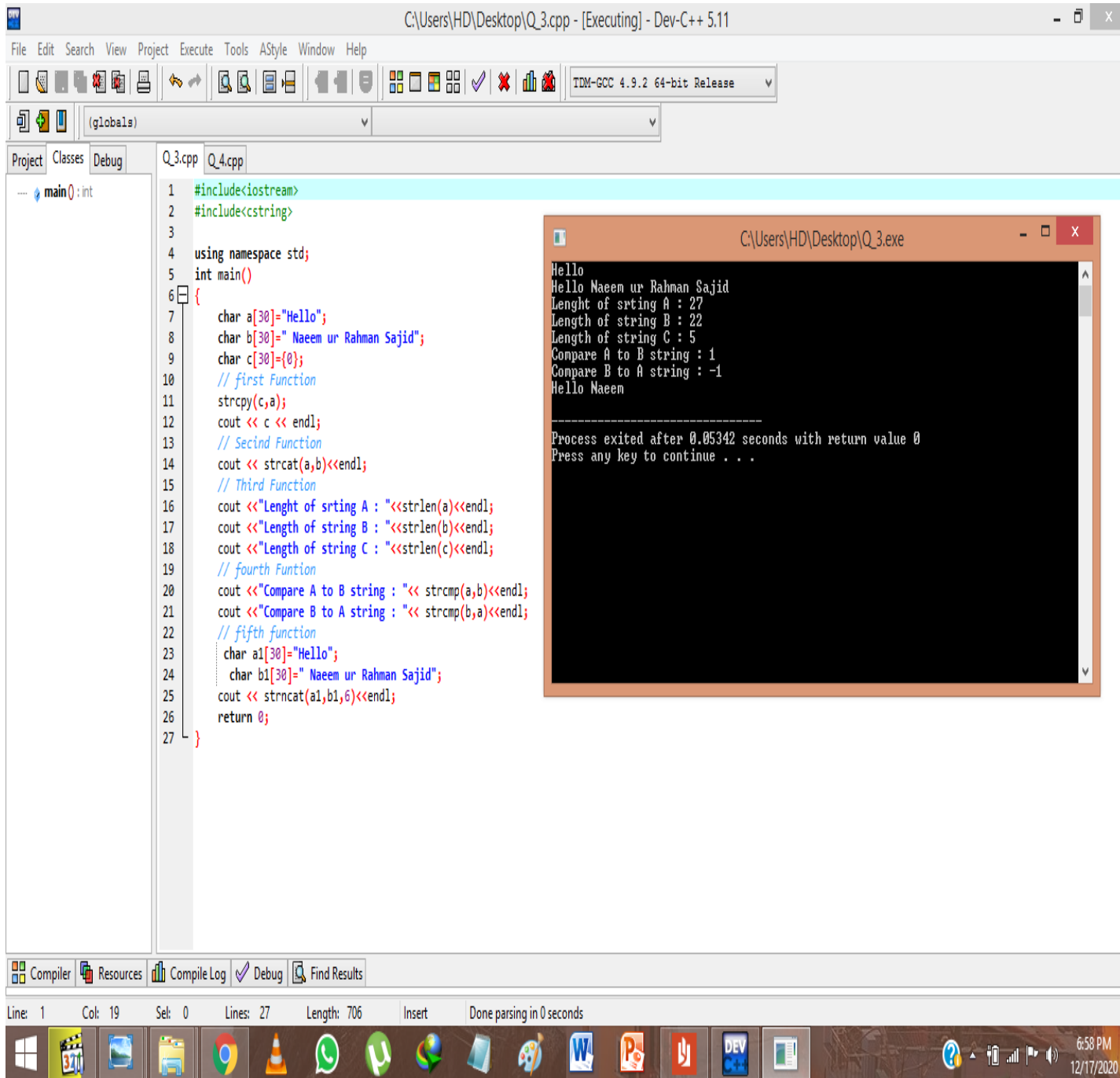
```
1 #include <iostream>
2 using namespace std;
3 int main ()
4 {
5     int n;
6     cout << "Enter 5 Cities of Pakistan " << endl;
7     char string[100]={'\0'};
8
9     cin.get(string,100);
10    cout << endl;
11    cout << "You Entered " << endl;
12    for(int i=0;i<100;i++)
13    {
14        cout << string[i];
15        if (string[i]!=' ')
16        {
17            cout << endl;
18        }
19    }
20
21    return 0;
22 }
23 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\HD\Desktop\Q_2.exe
- Output Size: 1.83260917663574 MiB
- Compilation Time: 11.67s

Line: 1 Col: 20 Sel: 0 Lines: 23 Length: 336 Insert Done parsing in 0.016 seconds

QUESTION NO 3



```
1 #include<iostream>
2 #include<cstring>
3
4 using namespace std;
5 int main()
6 {
7     char a[30]="Hello";
8     char b[30]=" Naeem ur Rahman Sajid";
9     char c[30]={0};
10    // first Function
11    strcpy(c,a);
12    cout << c << endl;
13    // Secind Function
14    cout << strcat(a,b)<<endl;
15    // Third Function
16    cout <<"Lenght of srting A : "<<strlen(a)<<endl;
17    cout <<"Length of string B : "<<strlen(b)<<endl;
18    cout <<"Length of string C : "<<strlen(c)<<endl;
19    // fourth Funtion
20    cout <<"Compare A to B string : "<< strcmp(a,b)<<endl;
21    cout <<"Compare B to A string : "<< strcmp(b,a)<<endl;
22    // fifth function
23    char a1[30]="Hello";
24    char b1[30]=" Naeem ur Rahman Sajid";
25    cout << strncat(a1,b1,6)<<endl;
26    return 0;
27 }
```

Output:

```
Hello
Hello Naeem ur Rahman Sajid
Lenght of srting A : 27
Length of string B : 22
Length of string C : 5
Compare A to B string : 1
Compare B to A string : -1
Hello Naeem

-----
Process exited after 0.05342 seconds with return value 0
Press any key to continue . . .
```

QUESTION NO 4

The screenshot shows the Dev-C++ IDE with a C++ program open and executed. The program calculates various mathematical values using the `cmath` library. The output window displays the results of these calculations.

```

1  #include <iostream>
2  #include <math.h>
3  using namespace std;
4  int main()
5  {
6      double x = 45;
7      cout << "Sine of 45 : " << sin(x) << endl<<endl;
8      cout << "Cosine of 45 : " << cos(x) << endl<<endl;
9      cout << "Tangent of 45 : " << tan(x) << endl<<endl;
10     double y = 14;
11     cout << "Square root of 14 : " << sqrt(y) << endl<<endl;
12     int z = -25;
13     cout << "Absolute value of -25 : " << abs(z) << endl<<endl;
14     cout << "Power value of 45^14 : " << pow(x, y) << endl<<endl;
15     x = 4;
16     y = 20;
17     cout << "Hypotenuse as x=4,y=20" << hypot(x, y) << endl<<endl;
18     x = 19.234;
19     cout << "Floor value of 19.234 : " << floor(x) << endl<<endl;
20     x = 1.0;
21     cout << "Arc Cosine value of x=1.0 : " << acos(x) << endl<<endl;
22     cout << "Arc Sine value of x=1.0 : " << asin(x) << endl<<endl;
23     cout << "Arc Tangent value of x=1.0 : " << atan(x) << endl<<endl;
24     y = 12.3;
25     cout << "Ceiling value of 12.3 : " << ceil(y) << endl<<endl;
26     x = 57.3;
27     cout << "Hyperbolic Cosine of 57.3 : " << cosh(x) << endl<<endl;
28     cout << "Hyperbolic tangent of 57.3 : " << tanh(x) << endl<<endl;
29     y = 90;
30     cout << "Log value of 90 : " << log(y) << endl<<endl;
31     return 0;
32 }

```

Output of the program:

```

Power value of 45^14 : 1.39629e+023
Hypotenuse as x=4,y=20:2020.3961
Floor value of 19.234 : 19
Arc Cosine value of x=1.0 : 0
Arc Sine value of x=1.0 : 1.5708
Arc Tangent value of x=1.0 : 0.785398
Ceiling value of 12.3 : 13
Hyperbolic Cosine of 57.3 : 3.83746e+024
Hyperbolic tangent of 57.3 : 1
Log value of 90 : 4.49981
-----
Process exited after 0.05794 seconds with return value 0
Press any key to continue . . .

```