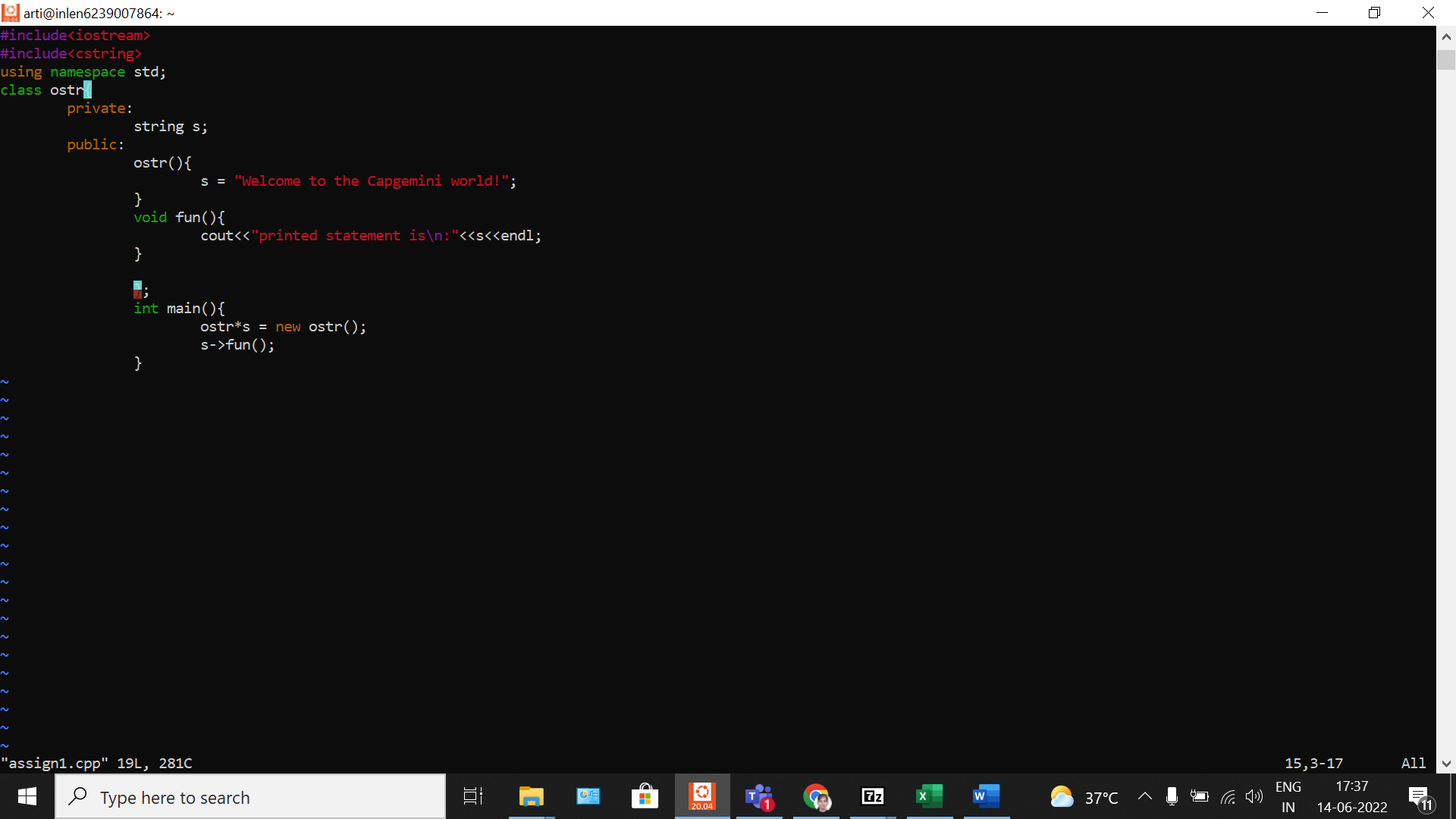
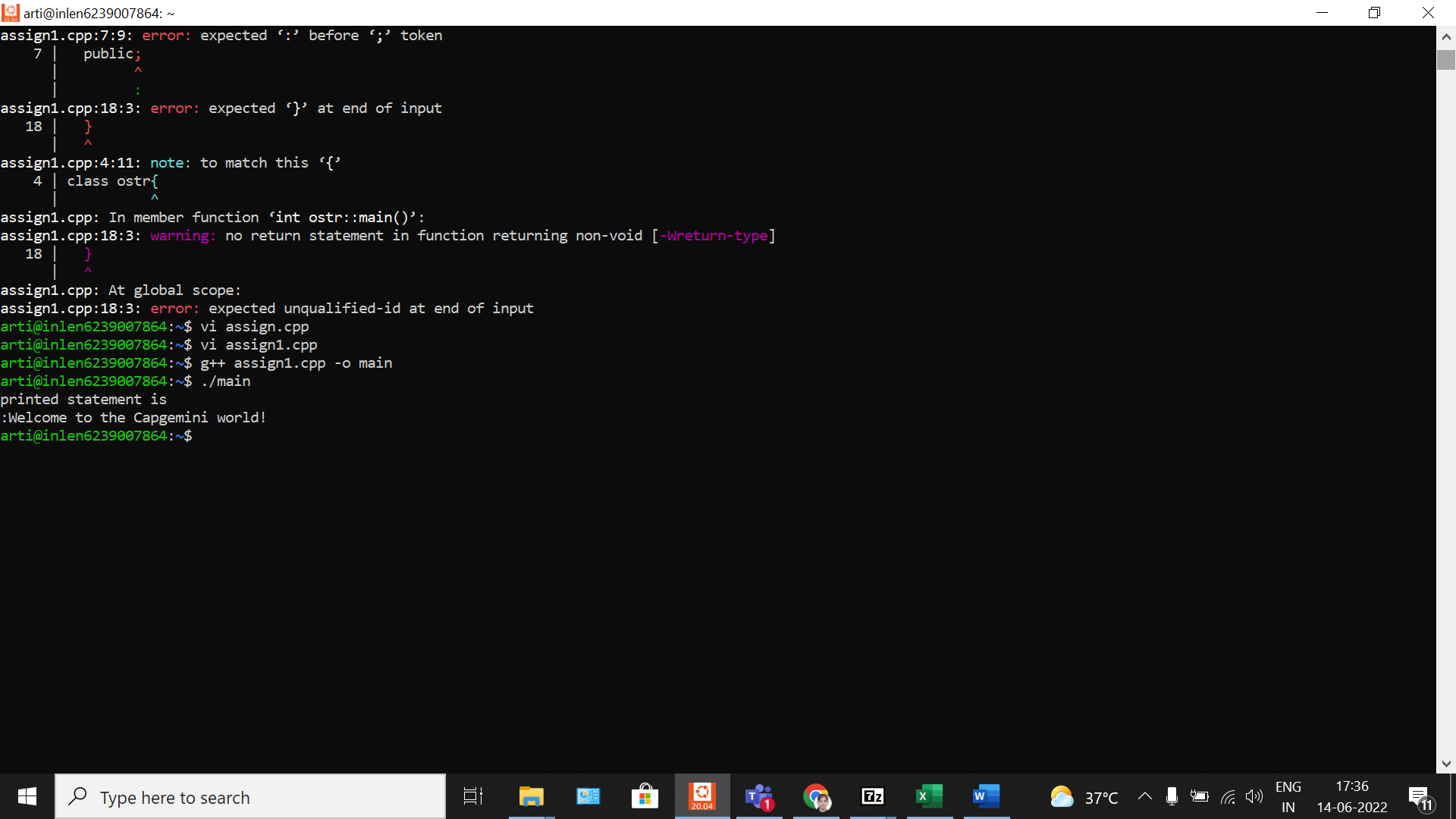
|  |  |  |
| --- | --- | --- |
| Write an application in C++ using to use new and delete to manage dynamic memory. Implement the application by defining a suitable class and its member functions. | | |
| Requirement Tag | Requirement Description | Comments |
| OSTR/01 | Accept a sentence (that is a line) with a maximum of 5 words from the user. |  |
| OSTR/02 | Extract every word and store in an array of 5 char pointers dynamically allocating memory. | Hint: Use new (nothrow) and handle new allocation failures manually. Refer http://www.cplusplus.com/doc/tutorial/dynamic/ |
| OSTR/03 | Print the longest word in the sentence (assume all words are of different length). |  |
| OSTR/04 | Read a word and a replace word from user. Perform search-replace. (Replace only the first matching word). | Hint: While replacing, free the memory allocated for the searched word and then allocate new memory as per length of replace word. |
| OSTR/05 | Display all the words. |  |
| OSTR/06 | Free all the allocated memory on exit |  |

**OSTR/01**





**OSTR/03**

#include<iostream>

#include<cstring>

using namespace std;

void MaxLengthWords(string str){

int StrLength = str.length();

int startIndex = 0, endIndex = 0;

int maxLength = 0, currentLength;

string largest;

while (endIndex <= StrLength){

if (str[endIndex] != '\0' && str[endIndex] != ' ')

endIndex++;

else{

currentLength = endIndex - startIndex;

if (currentLength > maxLength){

largest = str.substr(startIndex, currentLength);

maxLength = currentLength;

}

endIndex++;

startIndex = endIndex;

}

}

cout<<"longest Word from the string is :\t"<<largest;

}

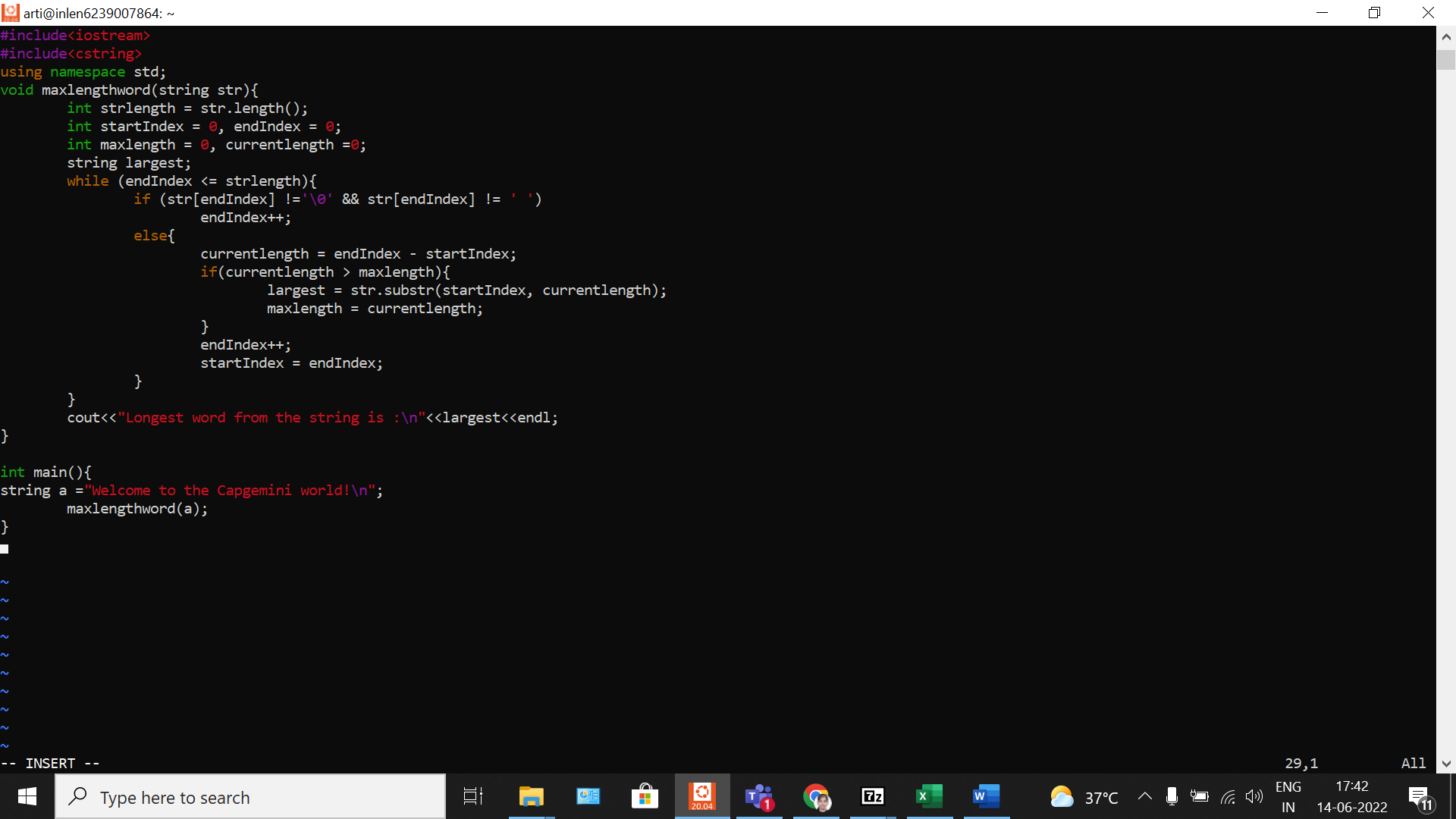
int main() {

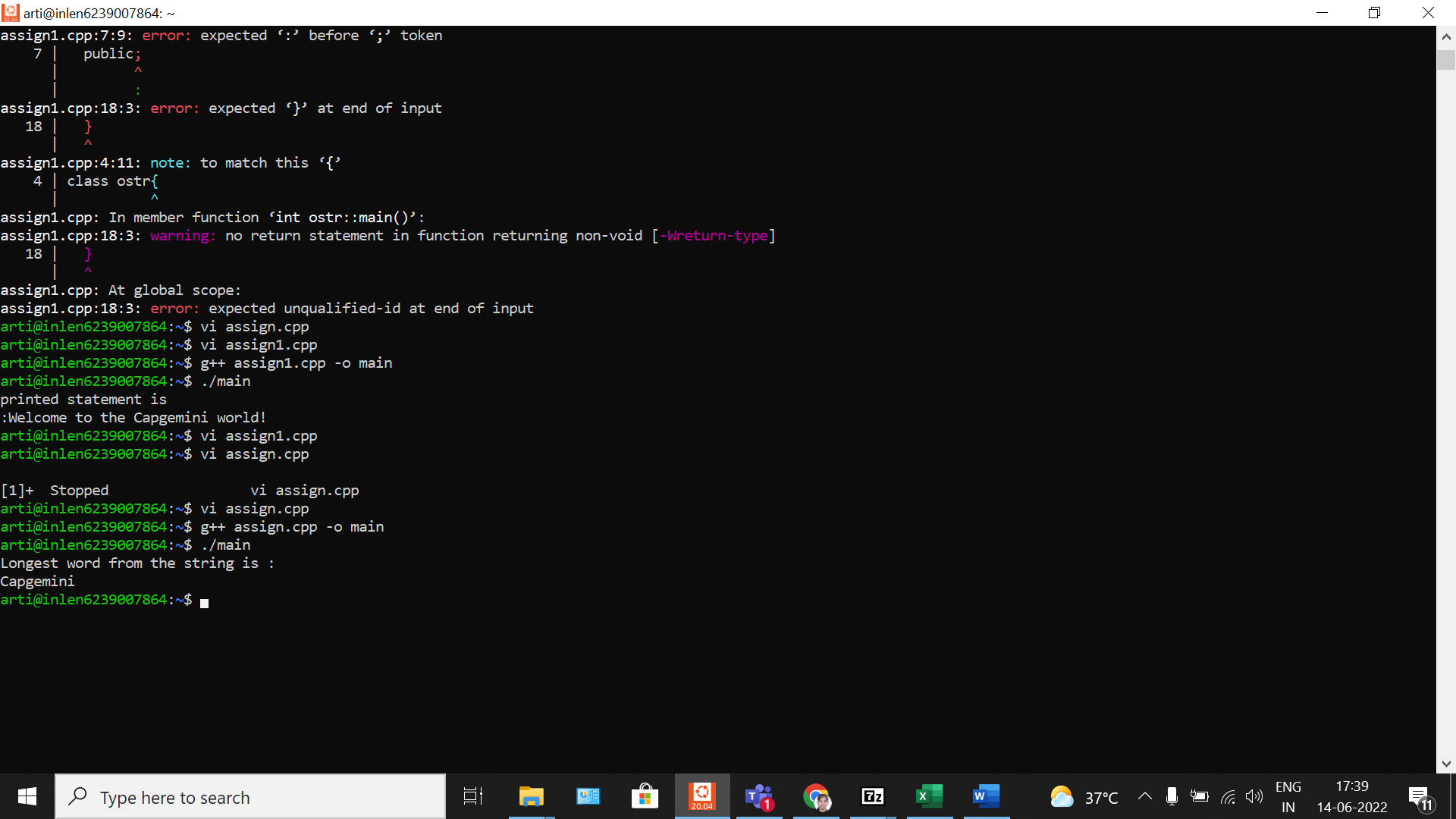
string a = "welcome to the Capgemini world !";

MaxLengthWords(a);

}

**OSTR/03**

****



**OSTR/04**

#include<iostream>

using namespace std;

int main()

{

string str1 = "Welcome to the Capgemini world!";

//string str2 = "Hello";

cout << "Before replacement, string is :"<<str1<<endl;

str1.replace(0,7,"Hello");

cout << "After replacement, string is :"<<str1<<endl;

return 0;

}

