

```

/*
  File: replace.cpp
  Created by: Tan Qi Hao
  Creation Date: 4/5/2019
  Synopsis: This program replace letter in a phrase.
*/

#include <cstdlib>
#include <iostream>
#include <string>
#include <vector>

using namespace std;

// Function prototypes
void replace(string & phrase, const string & letter, const string &
replacement, vector<char> & text);
void display_phrase(const vector<char> & text);

int main()
{
  string phrase, letter, replacement;
  vector<char> text_vec;

  cout << "Enter phrase: ";
  getline(cin, phrase);

  if (phrase.length() > 0)
  {
    cout << "Enter letter to replace: ";
    getline(cin, letter);

    if (letter.length() == 1)
    {
      cout << "Enter replacement letter: ";
      getline(cin, replacement);

      if (replacement.length() == 1)
      {
        replace(phrase, letter, replacement,
text_vec);

        cout << "String phrase: " << phrase << endl;
        cout << "Vector phrase: ";
        display_phrase(text_vec);
        cout << endl;
      }
      else
      {
        cout << "Replacement letter must be a single
letter" << endl;
      }
    }
    else
    {

```

```

        cout << "Letter to replace must be a single letter" <<
endl;
    }
}

return 0;
}

// FUNCTION
void replace(string & phrase, const string & letter, const string &
replacement, vector<char> & text)
{
    for(int i = 0; i < phrase.length(); i++){
        if (phrase[i] == letter[0]){
            phrase.replace(i, 1, replacement);
        }
    }

    for(int i = 0; i < phrase.length(); i++){
        text.push_back(phrase[i]);
    }
}

void display_phrase(const vector<char> & text)
{
    for(int i = 0; i < text.size(); i++){
        cout << text[i];
    }
}

```