Question 6

Q 6.1

Source code :

#include <iostream>

#include <stdio.h>

#include <stdlib.h>

#include <conio.h>

using namespace std;

void main()

{

const char \*st1 = "Hello world";

char st2[] = { 'H', 'e', 'l', 'l', 'o', ' ', 'w', 'o', 'r', 'l', 'd', '\0' };

char \*st3 = new char[100];

st3[0] = 's';

st3[1] = 't';

st3[2] = 'i';

st3[3] = 'n';

st3[4] = 'g';

st3[5] = '\0';

cout << st1 << endl;

cout << st2 << endl;

cout << st3 << endl;

delete st3;

system("pause");

}

Q 6.2

Source code :

#include <iostream>

#include <stdio.h>

#include <stdlib.h>

#include <conio.h>

using namespace std;

void clone(char \*input, char \*output) {

int length = 0;

while (input[length] != '\0') {

output[length] = input[length];

length++;

}

output[length] = '\0';

}

void main() {

char input[] = "Hello";

char output[100];

clone(input, output);

cout << input << endl;

cout << output << endl;

system("pause");

}

Q 6.3

Source code:

#include <iostream>

#include <stdio.h>

#include <stdlib.h>

#include <conio.h>

#include <string.h>

using namespace std;

void copyString(char \*input, int offset, int length, bool invert, char \*output, int output\_offset)

{

char \*tmp = new char[length];

for (int i = 0; i < length; i++)

{

tmp[i] = input[offset];

offset++;

}

if (invert)

{

for (int i = 0; i <length / 2; i++)

{

swap(tmp[i], tmp[length - i - 1]);

}

}

memcpy(&output[output\_offset], tmp, sizeof(tmp) + 1);

delete[] tmp;

}

void main() {

char input[] = "Hello world";

char output[100] = "My name is C++";

cout << input << endl;

cout << output << endl;

copyString(input, 6, 5, true, output, 11);

cout << input << endl;

cout << output << endl;

system("pause");

}