Assignment 1

**Question 1:** Write a program to swap two numbers using references

**Code:**

#include <iostream>

void swap(int &a, int &b)

{

int c = a;

a = b;

b = c;

}

int main()

{

int a, b;

std::cin>>a>>b;

swap(a, b);

std::cout<<a<<' '<<b<<'\n';

}

**Output:**

6 34

34 6

**Question 2:** Write a program to accept the distance in feet and inches and convert it to centimetres

**Code:**

//1 foot = 30.48 cm

//1 inch = 2.54 cm

#include <iostream>

double convert(const double &x, const double &y)

{

return x \* 30.48 + y \* 2.54;

}

int main()

{

double ft, inch;

std::cout<<"Enter the distance in feet and inches\n";

std::cin>>ft>>inch;

std::cout<<"The converted distance in cm is: "<<convert(ft, inch)<<'\n';

}

**Output:**

Enter the distance in feet and inches

34 56

The converted distance in cm is: 1178.56

**Question 3:** Write a program to accept a line as a string with arbitrary spaces between words and then form a new string by removing the extra spaces and reversing each word of the original string. For example,

Input: I am a boy

Output: I ma a yob

**Code:**

#include <iostream>

#include <string>

#include <sstream>

#include <algorithm>

int main()

{

std::string str, nstr = "";

getline(std::cin, str);

std::stringstream sstr(str);

while(sstr >> str)

{

std::reverse(str.begin(), str.end());

nstr += str + std::string(" ");

}

std::cout<<nstr<<'\n';

}

**Output:**

I wish someone could understand my feelings for C++

I hsiw enoemos dluoc dnatsrednu ym sgnileef rof ++C