***In the name of GOD***

Principle Of Programming HW#2

Due date : Sunday, October, 21, 23:55

Q1 – compile the code below and check the output. Explain in details why this happens and fix the code if possible.

#include <stdio.h>

int main()

{

float x = 0.9;

If(x == 0.9) {

printf("equal\n");

}

else {

printf("not equal !!!\n");

}َ

return 0;

}

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Q2 – Write program to count a total number of duplicate elements in a **given** array.

Input: {1, 2, 1, 2, 1} --> 1: 3 times

2: 2 times

Q3 – Write function that **gets** an array of integers and its size. This function return 1 if all the numbers of array are palindrome, otherwise return 0. (if you don’t know what palindrome number is search it)

Prototype : int palindrome\_array(int array[ ], int size);

Example: palindrome\_array({55, 101, 401104}, 3) --> 1

palindrome\_array({202, 1211, 65, 18}, 4) --> 0

palindrome\_array( {}, 0 ) --> 1

Q4 – **Given** two numbers as string. Write program to add these numbers. (The number may not fit in long long int)

Example: input: “111111111111111111111”

“111111111111111111111”

Output: ”222222222222222222222”

Q5 – Write a function that **gets** an array of characters and size of the array. This function must convert infix calculator to prefix and calculate the input.

Prototype: void infix\_to\_prefix(char array[], int size);

Example: input: (A+B) \* (C-D)

Output: \*+AB-CD

· Compress your answers (your .c files) in a zip file named like StudentNO\_HW2.zip

o Eg : 9332222\_HW2.zip

· DO NOT WORRY ABOUT YOUR GRADES AND DO NOT COPY!

The thing we care most about is your hard work and progress. Just try your best and leave the rest to us. ^\_^

REGARDS