ITU Faculty of Aeronautics and Astronautics
BIL 110E - Introduction to Programming Language (C)
2018 – 2019 Fall Semester

Quiz #4

for CRN 12600
December 25, 2018
Instructor: Asst. Prof. Ramazan Yeniceri

Name:	Number:

Solve the given three questions using an online C compiler. You can ask for help from any internet source, however it is strictly banned to request or receive help from your classmates. Always create at least one C code file for each question. All files must be zipped and uploaded to Ninova within the Quiz hour.

Question 1 (2.5 points):

a) Write a function that takes the time as three integer arguments (for hours, minutes, and seconds) and returns the number of seconds since the last time the clock “struck 12.”
b) Use this function to calculate the amount of time in seconds between two times, both of which are within one 12-hour cycle of the clock.

Question 2 (2.5 points):

a) What does Program 1 do in general?
b) Explain each variable, each repetition statement, each function called from stdio library.

Question 3 (2.5 points):

a) What does Program 2 do in general?
b) Explain each variable, each selection statement, each function called from stdio and stdlib libraries.

```c
#include <stdio.h>
struct student
{
    char name[50];
    int roll;
    float marks;
} s[10];

int main()
{
    int i;

    printf("Enter information of students:\n");

    // storing information
    for(i=0; i<10; ++i)
    {
        s[i].roll = i+1;

        printf("\nFor roll number%d,\n",s[i].roll);

        printf("Enter name: ");
        scanf("%s",s[i].name);

        printf("Enter marks: ");
        scanf("%f",&s[i].marks);

        printf("\n");
    }

    printf("Displaying Information:\n\n");
    // displaying information
    for(i=0; i<10; ++i)
    {
        printf("\nRoll number: %d\n",i+1);
        printf("Name: ");
        puts(s[i].name);
        printf("Marks: %.1f",s[i].marks);
        printf("\n");
    }
    return 0;
}
```

Program 1

```c
#include <stdio.h>
#include <stdlib.h>

int main()
{
   int num;
   FILE *fptr;

   if ((fptr = fopen("C:\\program.txt","r")) == NULL){
       printf("Error! opening file");

       // Program exits if the file pointer returns NULL.
       exit(1);
   }

   fscanf(fptr,"%d", &num);

   printf("Value of n=%d", num);
   fclose(fptr);

   return 0;
}
```

Program 2

Good luck ;)