ENT 189 COMPUTER PROGRAMMING

LAB-4 FILES

Lecturer	:	Dr. Lam Chee Kiang
Teaching Engineer	:	Mr. Mohd Rudzuan Bin Mohd Nor
Technician	:	Mr. Muhamad Zakuan Bin Abd Samad@Zakaria

Name : _____

Matric Number : _____

Program : Mechatronic Engineering

ENT 189 COMPUTER PROGRAMMING

LAB-4 FILES

Lecturer	:	Dr. Muhammad Izham Bin Ismail
Teaching Engineer	:	Mr. Wan Mohd Nooriman Bin Wan Yahya
Technician	:	Mr. Muhamad Zakuan Bin Abd Samad@Zakaria

Name : _____

Matric Number : _____

Program : Mechanical Engineering

OBJECTIVE

At the end of this lab, students should reach the below objective:

Able to develop simple programs using FILE concepts.

TASK 1

The following program is used to create a text file named task1.dat. Use the program to write and read the following data from the file task1.dat and observe the output.

13978	45.1
25809	72.0
34380	14.8
41645	32.4
59373	58.6
63876	98.2
78654	66.7

```
/* Lab 4 Task 1 */
#include<stdio.h>
int main(void)
{
        FILE *finp;
        int matnum;
        float tmark;
        int index, numdata;

        finp = fopen("task1.txt", "w");

        printf("Number of Data");
        scanf("%d",&numdata);

                for(index=1;index<=numdata;index++)
                   {
                    printf("Enter Matric Number");
                    scanf("%d",&matnum);
                    printf("Enter Test Mark");
                    scanf("%f",&tmark);
                    fprintf(finp, "%d %f\n",matnum,tmark);
                   }

        fclose(finp);

        finp = fopen("task1.dat", "r");
```

```
        printf("%s\t\t%s\n","Matric Number","Test Mark");
        while(!feof(finp))
           {
            fscanf(finp, "%d %f\n",&matnum, &tmark);
            printf("%d\t\t%.2f\n",matnum,tmark);
           }
        fclose(finp);
        return 0;
}
```

TASK 2

Using a sound level meter, the noise emanated from 10 Proton Saga at different frequency levels are measured and shown in Table-1.

(a) Write a program in C to write the data into a binary file named noise.txt.
(b) Write a program that reads the data from the file noise.txt and find the car that emanates the minimum noise at 200Hz.
(c) Also write a program that reads the data from the file noise.txt and find the cars whose noise level is less than 60 dB at 800 Hz.

Table-1 Car Noise Level (dB)

Vehicle Number	50Hz	100Hz	200Hz	400Hz	800Hz
AKA1234	51.2	52.8	61.0	61.9	62.8
ALL5467	50.3	51.4	59.6	58.3	65.6
BEN3409	50.2	62.6	62.6	61.6	61.3
CLA7566	55.0	54.1	69.0	65.2	63.9
DDL5888	48.3	51.2	55.5	58.0	57.1
KEN9413	54.3	58.0	63.7	60.2	64.9
MAS2391	54.9	58.6	59.9	61.0	64.5
PLP2020	43.9	47.4	49.6	47.9	55.8
RAA2772	50.6	54.4	58.4	57.1	60.8
WWW8910	51.3	55.6	58.8	59.3	59.8

TASK 3

(a) Write a program in C to create a text file named temp.txt and store the temperature reading from the following table.

Zone Code	Day 1(°C)	Day 2(°C)	Day 3(°C)
1034	23.7	25.1	24.5
2046	31.0	29.5	32.8
3078	19.8	21.9	20.4
4067	32.8	32.9	33.0
5049	25.6	26.2	27.6
6012	28.7	24.2	32.4

(b) Write a program in C to read the data from the file temp.dat and find the average temperature in each zone. Print your result in the following format.

Zone Code	Day 1	Day 2	Day 3	Average Temperature (°C)