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Subject: Data Structures

Practical – 9

Aim: Program to create files for storing details of all the items needed for playing any game. Perform display, insertion of new record at any position, deletion of any record.

Program:

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
struct Gaming
{
    int idx;
    char game_name[50];
    char game_item[50];
} gm;
void insert()
{
    FILE *fp;
    fp = fopen("game_items.txt", "a");
    if (fp == NULL)
    {
        fprintf(stderr, "\nError can't open file\n");
        exit(1);
    }
    printf("Enter the equipment no :");
    scanf("%d", &gm.idx);
    printf("Name of game:");
    scanf("%s", gm.game_name);
    printf("Items needed for the game:");
    scanf("%s", gm.game_item);
    fwrite(&gm, sizeof(gm), 1, fp);
    fclose(fp);
}
void display()
{
    FILE *fp1;
    fp1 = fopen("game_items.txt", "r");
    if (fp1 == NULL)
```

```

{
    fprintf(stderr, "\nError can't open file\n");
    exit(1);
}
printf("\n*Index*\t\t*Game*\t\t*Item*");
while (fread(&gm, sizeof(gm), 1, fp1))
{
    printf("\n%d\t\t%s\t\t%s\n", gm.idx, gm.game_name, gm.game_item);
}
fclose(fp1);
}
void delete ()
{
    FILE *fpo, *fptemp;
    int in, ino;
    printf("Enter the equipment number you want to delete :");
    scanf("%d", &in);
    fpo = fopen("game_items.txt", "r");
    fptemp = fopen("temp.txt", "w");
    while (fread(&gm, sizeof(gm), 1, fpo))
    {
        ino = gm.idx;
        if (ino != in)
        {
            fwrite(&gm, sizeof(gm), 1, fptemp);
        }
    }
    fclose(fpo);
    fclose(fptemp);
    fpo = fopen("game_items.txt", "w");
    fptemp = fopen("temp.txt", "r");
    while (fread(&gm, sizeof(gm), 1, fptemp))
    {
        fwrite(&gm, sizeof(gm), 1, fpo);
    }
    printf("\n||Record Deleted successfully||\n");
    fclose(fpo);
    fclose(fptemp);
}
int main()
{
    int choice;
    printf("\n__FILE OPERATIONS__\n");
    printf("\n\t1.Insert\n\t2.Display\n\t3.Delete\n\t5.Exit");
    do
    {
        printf("\nEnter your choice : ");
        scanf("%d", &choice);
        printf("\n");
        switch (choice)

```

```
{
    case 1:
        insert();
        break;
    case 2:
        display();
        break;
    case 3:
        delete ();
        break;
    case 4:
        printf("\n Thank you");
        break;
}
} while (choice != 4);
return 0;
}
```

Output:

__FILE OPERATIONS__

- 1.Insert
- 2.Display
- 3.Delete
- 4.Exit

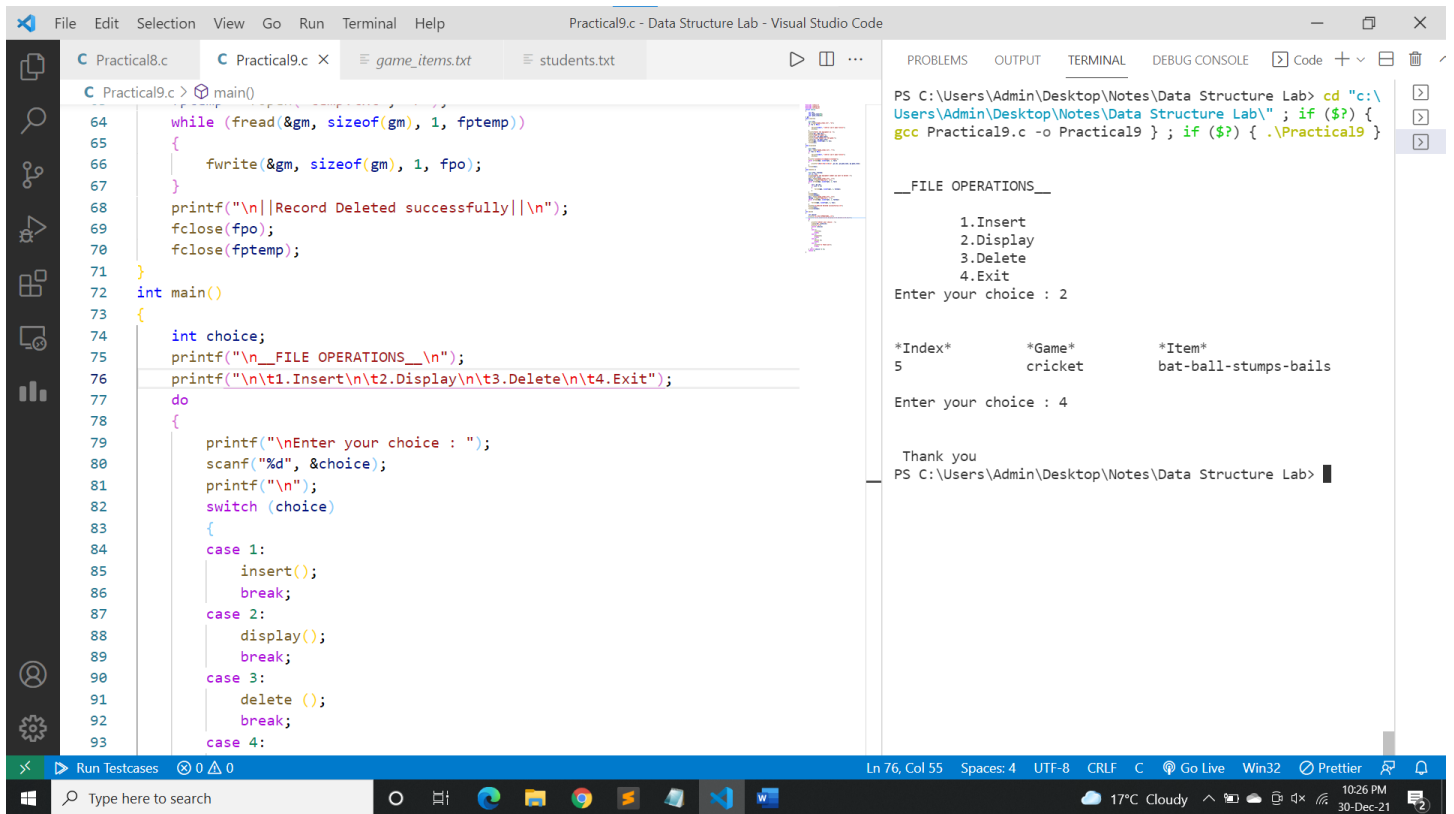
Enter your choice : 2

Index	*Game*	*Item*
5	cricket	bat-ball-stumps-bails

Enter your choice : 4

Thank you

Screenshot:



```
File Edit Selection View Go Run Terminal Help Practical9.c - Data Structure Lab - Visual Studio Code
C Practical8.c C Practical9.c x game_items.txt students.txt
C Practical9.c > main()
64 while (fread(&gm, sizeof(gm), 1, fptemp))
65 {
66     fwrite(&gm, sizeof(gm), 1, fpo);
67 }
68 printf("\n||Record Deleted successfully||\n");
69 fclose(fpo);
70 fclose(fptemp);
71 }
72 int main()
73 {
74     int choice;
75     printf("\n__FILE OPERATIONS__\n");
76     printf("\n\t1.Insert\n\t2.Display\n\t3.Delete\n\t4.Exit");
77     do
78     {
79         printf("\nEnter your choice : ");
80         scanf("%d", &choice);
81         printf("\n");
82         switch (choice)
83         {
84             case 1:
85                 insert();
86                 break;
87             case 2:
88                 display();
89                 break;
90             case 3:
91                 delete ();
92                 break;
93             case 4:
94                 break;
95         }
96     } while (choice != 4);
97     printf("\nThank you\n");
98     return 0;
99 }
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE Code + -

```
PS C:\Users\Admin\Desktop\Notes\Data Structure Lab> cd "c:\Users\Admin\Desktop\Notes\Data Structure Lab\" ; if ($?) { gcc Practical9.c -o Practical9 } ; if ($?) { .\Practical9 }

__FILE OPERATIONS__

1.Insert
2.Display
3.Delete
4.Exit
Enter your choice : 2

*Index*      *Game*      *Item*
5           cricket    bat-ball-stumps-bails

Enter your choice : 4

Thank you
PS C:\Users\Admin\Desktop\Notes\Data Structure Lab>
```

Ln 76, Col 55 Spaces: 4 UTF-8 CRLF C Go Live Win32 Prettier 10:26 PM 30-Dec-21

Conclusion: I have successfully completed practical 9.