

New Style Lab Manual

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1 Program 1

Question goes here

```
1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <string.h>
4 typedef struct{
5     unsigned emp_id;
6     char emp_name[25];
7     char emp_dept[25];
8     unsigned emp_salary, emp_age;
9 }employee_t;
10
11 void fnAddRecord(void);
12 void fnSearchEmpID(int);
13 void fnSearchEmpSal(int);
14 void fnSearchEmpDept(char[]);
15 void fnSearchEmpAge(int);
16 void fnDisplayAllRecords(void);
17
18 int main()
19 {
20     int id, sal, age, iChoice;
21     char dept[10];
22
23     for(;;)
24     {
25         printf("\n1.Add Record\n2.Display Records\n3.Search Employee by ID\n");
26         printf("4.Search Employee by Dept\n5.Search Employee by salary\n");
27         printf("6.Search Employee by Age\n7.Exit");
28         printf("\nEnter your choice : ");
29         scanf("%d",&iChoice);
30
31         switch(iChoice)
32         {
33             case 1:
34                 fnAddRecord();
35                 break;
36
37             case 2:
38                 printf("\n Employee Details \n");
39                 fnDisplayAllRecords();
40                 break;
41
42             case 3:
43                 printf("\nEnter the emp_id that you want to search\n");
44                 scanf("%d",&id);
45                 fnSearchEmpID(id);
46                 break;
47
48             case 4:
49                 printf("\nEnter the dept that you want to search\n");
50                 scanf("%s",dept);
51                 fnSearchEmpDept(dept);
52                 break;
53
54             case 5:
55                 printf("\nEnter the salary that you want to search\n");
56                 scanf("%d",&sal);
57                 fnSearchEmpSal(sal);
58                 break;
59
60             case 6:
61                 printf("\nEnter the age that you want to search\n");
62                 scanf("%d",&age);
63                 fnSearchEmpAge(age);
64                 break;
65             case 7: exit(0);
66         }
67     }
68     return 0;
69 }
70
71 void fnDisplayAllRecords()
72 {
73     int iCount = 0;
```

```

74  employee_t ep;
75  FILE *fp;
76
77  fp = fopen("emp.dat", "r");
78  if (fp==NULL)
79  {
80      printf("\nFile does not exist\n");
81      return;
82  }
83  while (fscanf(fp, "%d%s%s%d", &ep.emp_id, ep.emp_name, ep.emp_dept, &ep.emp_salary, &ep.
      emp_age) != EOF)
84  {
85      printf("%d\t%s\t%s\t%d\t%d\n", ep.emp_id, ep.emp_name, ep.emp_dept, ep.emp_salary, ep.
      emp_age);
86      iCount++;
87  }
88  if (0 == iCount)
89      printf("\nNo Records found\n");
90  fclose(fp);
91 }
92
93 void fnAddRecord()
94 {
95     FILE *fp;
96     employee_t emp;
97
98     printf("\nEnter Employee details\n");
99     printf("\nID : ");
100    scanf("%d", &emp.emp_id);    getchar();
101    printf("\nName : ");
102    fgets(emp.emp_name, 25, stdin);
103    printf("\nDept : ");
104    fgets(emp.emp_dept, 25, stdin);
105    printf("\nSalary : ");
106    scanf("%d", &emp.emp_salary);
107    printf("\nAge : ");
108    scanf("%d", &emp.emp_age);
109
110    fp = fopen("emp.dat", "a");
111    fprintf(fp, "%d\t%s\t%s\t%d\t%d\n", emp.emp_id, emp.emp_name, emp.emp_dept, emp.emp_salary,
      emp.emp_age);
112    fclose(fp);
113 }
114
115 void fnSearchEmpID(int id)
116 {
117     int iCount = 0;
118     employee_t ep;
119     FILE *fp;
120
121     fp = fopen("emp.dat", "r");
122     if (fp==NULL)
123     {
124         printf("\nFile does not exist\n");
125         return;
126     }
127     while (fscanf(fp, "%d%s%s%d", &ep.emp_id, ep.emp_name, ep.emp_dept, &ep.emp_salary, &ep.
      emp_age) != EOF)
128     {
129         if (ep.emp_id == id)
130         {
131             printf("%d\t%s\t%s\t%d\t%d\n", ep.emp_id, ep.emp_name, ep.emp_dept, ep.emp_salary, ep.
      emp_age);
132             iCount++;
133         }
134     }
135     if (0 == iCount)
136         printf("\nNo Records found\n");
137     fclose(fp);
138 }
139
140 void fnSearchEmpSal(int sal)
141 {
142     int iCount = 0;
143     employee_t ep;
144     FILE *fp;

```

```

145 fp = fopen("emp.dat", "r");
146 if (fp==NULL)
147 {
148     printf("\nFile does not exist\n");
149     return;
150 }
151 while (fscanf(fp, "%d%s%s%d%d", &ep.emp_id, ep.emp_name, ep.emp_dept, &ep.emp_salary, &ep.
152     emp_age) != EOF)
153 {
154     if (ep.emp_salary == sal)
155     {
156         printf("%d\t%s\t%s\t%d\t%d\n", ep.emp_id, ep.emp_name, ep.emp_dept, ep.emp_salary, ep.
157             emp_age);
158         iCount++;
159     }
160 }
161 if (0 == iCount)
162     printf("\nNo Records found\n");
163 fclose(fp);
164 }
165 void fnSearchEmpDept(char dept[])
166 {
167     int iCount = 0;
168     employee_t ep;
169     FILE *fp;
170
171     fp = fopen("emp.dat", "r");
172     if (fp==NULL)
173     {
174         printf("\nFile does not exist\n");
175         return;
176     }
177     while (fscanf(fp, "%d%s%s%d%d", &ep.emp_id, ep.emp_name, ep.emp_dept, &ep.emp_salary, &ep.
178         emp_age) != EOF)
179     {
180         if (!strcmp(ep.emp_dept, dept))
181         {
182             printf("%d\t%s\t%s\t%d\t%d\n", ep.emp_id, ep.emp_name, ep.emp_dept, ep.emp_salary, ep.
183                 emp_age);
184             iCount++;
185         }
186     }
187     if (0 == iCount)
188         printf("\nNo Records found\n");
189 }
190 void fnSearchEmpAge(int age)
191 {
192     int iCount = 0;
193     employee_t ep;
194     FILE *fp;
195
196     fp = fopen("emp.dat", "r");
197     if (fp==NULL)
198     {
199         printf("\nFile does not exist\n");
200         return;
201     }
202     while (fscanf(fp, "%d%s%s%d%d", &ep.emp_id, ep.emp_name, ep.emp_dept, &ep.emp_salary, &ep.
203         emp_age) != EOF)
204     {
205         if (ep.emp_age == age)
206         {
207             printf("%d\t%s\t%s\t%d\t%d\n", ep.emp_id, ep.emp_name, ep.emp_dept, ep.emp_salary, ep.
208                 emp_age);
209             iCount++;
210         }
211     }
212     if (0 == iCount)
213         printf("\nNo Records found\n");
214 }

```