```c
 1  #include <stdio.h>
 2  #include <ctype.h>
 3
 4  #define NAME_LENGTH 100
 5  #define MARITAL_STATUS 10
 6
 7  struct Employee
 8  {
 9      char name[NAME_LENGTH];
10      int age;
11      char sex;
12      float salary;
13      char marital_status;
14  };
15
16  int main(void)
17  {
18      //function prototype
19      void MyGetString(char[], int);
20
21      //variable delarations
22      struct Employee *pEmployeeRecord = NULL;
23      int num_employees, i;
24
25      //code
26      printf("\n\n");
27      printf("Enter Number Of Employees Whose Details You Want To Record : ");
28      scanf("%d", &num_employees);
29
30      printf("\n\n");
31      pEmployeeRecord = (struct Employee *)malloc(sizeof(struct Employee) *
            num_employees);
32      if (pEmployeeRecord == NULL)
33      {
34          printf("FAILED TO ALLOCATED MEMORY FOR %d EMPLOYEES !!! EXITTING NOW ...
                \n\n", num_employees);
35          exit(0);
36      }
37      else
38          printf("SUCCESSFULLY ALLOCATED MEMORY FOR %d EMPLOYEES !!!\n\n",
                num_employees);
39
40      // ****** USER INPUT INITIALIZATION OF ARRAY OF 'struct Employee' ******
41      for (i = 0; i < num_employees; i++)
42      {
43          printf("\n\n\n\n");
44          printf("********** DATA ENTRY FOR EMPLOYEE NUMBER %d **********\n", (i +
                1));
45
46          printf("\n\n");
47          printf("Enter Employee Name : ");
48          MyGetString(pEmployeeRecord[i].name, NAME_LENGTH);
```

```
49
50          printf("\n\n\n");
51          printf("Enter Employee's Age (in years) : ");
52          scanf("%d", &pEmployeeRecord[i].age);
53
54          printf("\n\n");
55          printf("Enter Employee's Sex (M/m For Male, F/f For Female) : ");
56          pEmployeeRecord[i].sex = getch();
57          printf("%c", pEmployeeRecord[i].sex);
58          pEmployeeRecord[i].sex = toupper(pEmployeeRecord[i].sex);
59
60          printf("\n\n\n");
61          printf("Enter Employee's Salary (in Indian Rupees) : ");
62          scanf("%f", &pEmployeeRecord[i].salary);
63
64          printf("\n\n");
65          printf("Is The Employee Married? (Y/y For Yes, N/n For No) : ");
66          pEmployeeRecord[i].marital_status = getch();
67          printf("%c", pEmployeeRecord[i].marital_status);
68          pEmployeeRecord[i].marital_status = toupper(pEmployeeRecord       ⏎
               [i].marital_status);
69      }
70
71
72      // *** DISPLAY ***
73      printf("\n\n\n\n");
74      printf("********** DISPLAYING EMPLOYEE RECORDS **********\n\n");
75      for (i = 0; i < num_employees; i++)
76      {
77          printf("*********** EMPLOYEE NUMBER %d **********\n\n", (i + 1));
78          printf("Name            : %s\n", pEmployeeRecord[i].name);
79          printf("Age             : %d years\n", pEmployeeRecord[i].age);
80
81          if (pEmployeeRecord[i].sex == 'M')
82              printf("Sex             : Male\n");
83          else if(pEmployeeRecord[i].sex == 'F')
84              printf("Sex             : Female\n");
85          else
86              printf("Sex             : Invalid Data Entered\n");
87
88
89          printf("Salary          : Rs. %f\n", pEmployeeRecord[i].salary);
90
91          if (pEmployeeRecord[i].marital_status == 'Y')
92              printf("Marital Status : Married\n");
93          else if (pEmployeeRecord[i].marital_status == 'N')
94              printf("Marital Status : Unmarried\n");
95          else
96              printf("Marital Status : Invalid Data Entered\n");
97
98
99          printf("\n\n");
```

```c
100        }
101
102        if (pEmployeeRecord)
103        {
104            free(pEmployeeRecord);
105            pEmployeeRecord = NULL;
106            printf("MEMORY ALLOCATED TO %d EMPLOYEES HAS BEEN SUCCESSFULLY FREED !!! ⮐
                 \n\n", num_employees);
107        }
108
109        return(0);
110 }
111
112 // *** SIMPLE RUDIMENTARY IMPLEMENTATION OF gets_s() ***
113 // *** IMPLEMENTED DUE TO DIFFERENT BEHAVIOUR OF gets_s() / fgets() / fscanf() ON ⮐
        DIFFERENT PLATFORMS ***
114 // *** BACKSPACE / CHARACTER DELETION AND ARROW KEY CURSOR MOVEMENT NOT            ⮐
        IMPLEMENTED ***
115
116 void MyGetString(char str[], int str_size)
117 {
118        //variable declarations
119        int i;
120        char ch = '\0';
121
122        //code
123        i = 0;
124        do
125        {
126            ch = getch();
127            str[i] = ch;
128            printf("%c", str[i]);
129            i++;
130        }while ((ch != '\r') && (i < str_size));
131
132        if (i == str_size)
133            str[i - 1] = '\0';
134        else
135            str[i] = '\0';
136 }
137
138
```