

## **Digital assignment 2**

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### **QUESTION:**

Write a cprogram to get the employee information name,age,position and Date of joining. Print the employee list based on Alphabaetical order. Display the order of the employees based on date of joining.

### **SAMPLE INPUT MODEL:**

Enter the number of employees: 3

Enter details of employee 1:

Name: Jane

Age: 34

Position: HR

Date of joining (dd/mm/yyyy): 10/2/2000

Enter details of employee 2:

Name: Amie

Age: 23

Position: Sales

Date of joining (dd/mm/yyyy): 12/03/2004

Enter details of employee 3:

Name: Balu

Age: 45

Position: Scurity

Date of joining (dd/mm/yyyy): 1/1/1998

### **SAMPLE OUTPUT MODEL:**

Employee List sorted by name:

Name: Amie

Age: 23

Position: Sales

Date of Joining: 12/03/2004

Name: Balu

Age: 45

Position: Security

Date of Joining: 1/1/1998

Name: Jane

Age: 34

Position: HR

Date of Joining: 10/2/2000

Employee List sorted by date of joining:

Name: Balu

Age: 45

Position: Security

Date of Joining: 1/1/1998

Name: Jane

Age: 34

Position: HR

Date of Joining: 10/2/2000

Name: Amie

Age: 23

Position: Sales

Date of Joining: 12/03/2004

PUBLIC TEST CASE:

3

Jane

34

HR

10/2/2000

Amie

23

Sales

12/03/2004

Balu

45

Security

1/1/1998

OUTPUT:

Employee List sorted by name:

Amie

23

Sales

12/03/2004

Balu

45

Security

1/1/1998

Jane

34

HR

10/2/2000

Employee List sorted by date of joining:

Balu

Jane

Amie

Answer:

```
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#define MAX_EMPLOYEES 100
#define MAX_NAME_LENGTH 50
#define MAX_POSITION_LENGTH 50
#define DATE_LENGTH 11
struct Employee {
    char name[MAX_NAME_LENGTH];
    int age;
    char position[MAX_POSITION_LENGTH];
    char date[DATE_LENGTH];
};
int compareByName(const void *a, const void *b) {
    const struct Employee *ea = (const struct Employee
    *)a;
    const struct Employee *eb = (const struct Employee
    *)b;
    return strcmp(ea->name, eb->name);
}
int compareByDate(const void *a, const void *b) {
    const struct Employee *ea = (const struct Employee
    *)a;
    const struct Employee *eb = (const struct Employee
    *)b;
    return strcmp(ea->date, eb->date);
```

```

}
int main() {
    int n, i;
    struct Employee employees[MAX_EMPLOYEES];
    printf("Enter the number of employees: ");
    scanf("%d", &n);
    getchar(); // consume newline character
    for (i = 0; i < n; i++) {
        printf("Enter details of employee %d:\n", i+1);
        printf("Name: ");
        fgets(employees[i].name, MAX_NAME_LENGTH,
        stdin);
        employees[i].name[strcspn(employees[i].name,
        "\n")] = '\0';
        printf("Age: ");
        scanf("%d", &employees[i].age);
        getchar();
        printf("Position: ");
        fgets(employees[i].position,
        MAX_POSITION_LENGTH, stdin);
        employees[i].position[strcspn(employees[i].position,
        "\n")] = '\0';
        printf("Date of joining (dd/mm/yyyy): ");
        fgets(employees[i].date, DATE_LENGTH, stdin);
        employees[i].date[strcspn(employees[i].date,
        "\n")] = '\0';
    }
    qsort(employees, n, sizeof(struct Employee),
    compareByName);
}

```

```
printf("\nEmployee List sorted by name:\n\n");
for (i = 0; i < n; i++) {
    printf("Name: %s\n", employees[i].name);
    printf("Age: %d\n", employees[i].age);
    printf("Position: %s\n", employees[i].position);
    printf("Date of Joining: %s\n\n",
employees[i].date);
}
qsort(employees, n, sizeof(struct Employee),
compareByDate);
printf("\nEmployee List sorted by date of
joining:\n\n");
for (i = 0; i < n; i++) {
    printf("Name: %s\n", employees[i].name);
}
return 0;
}
```