Digital assignment 2

Name: Gotam. Sai varshith

Reg.no: 22BCE1605

First 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:

```c
#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() {
```

```c
    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++) {
```

```c
        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;
}
```