EEL PROJECT

ASSIGNMENT 6

Group members – Nidhi Yadav, Shruti Deshmukh, Sachin Lokhande, Bhavna

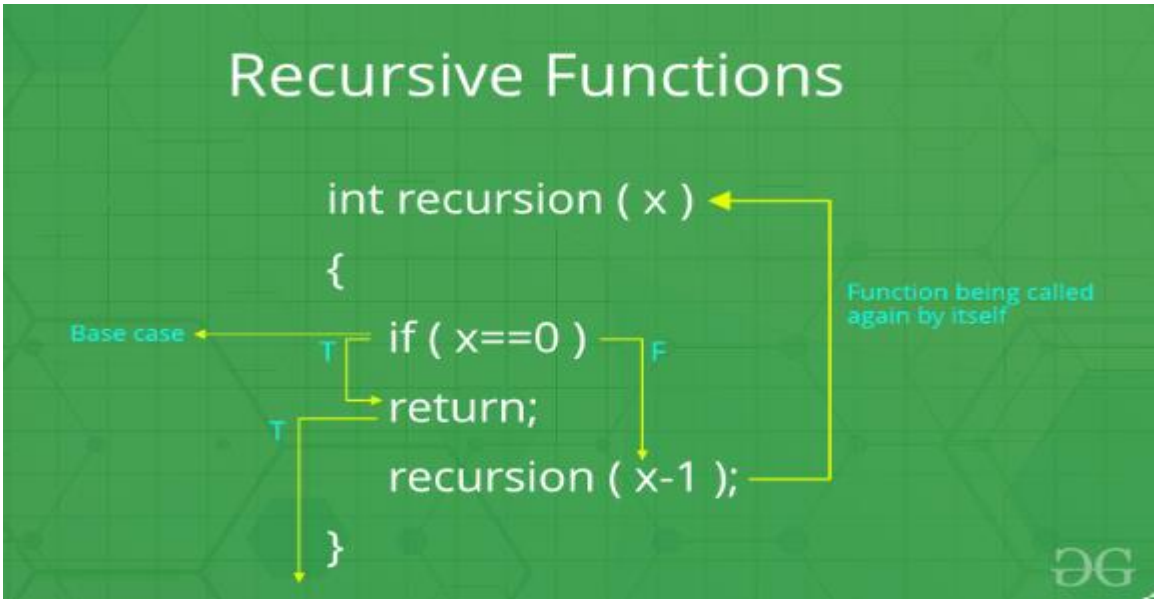
Research

We had made the program in which we are creating a database to store the salaries of teachers to maintain the data. we had used different functions to implement operations in our program.

We had used these websites for references

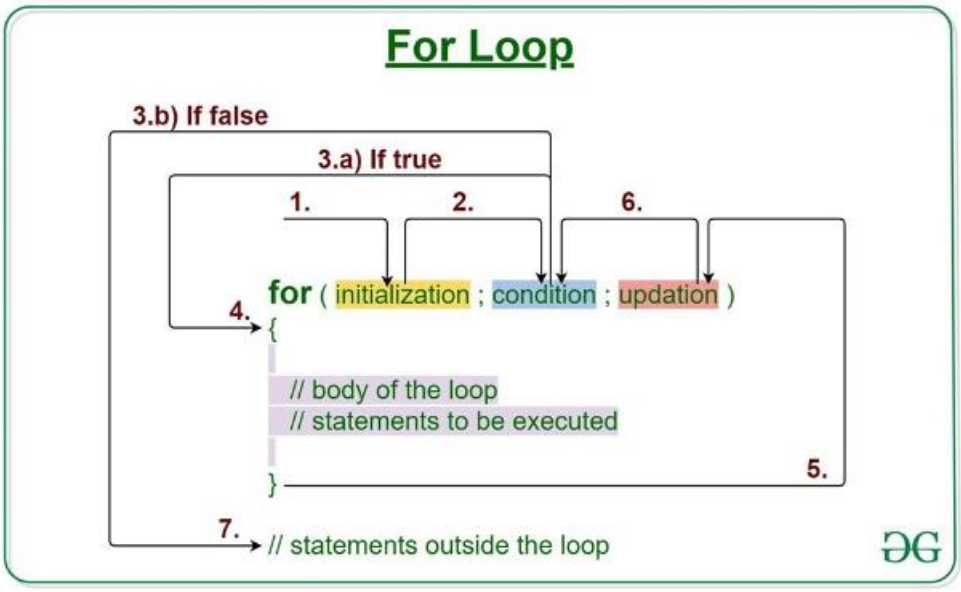
1. Recursive Functions - GeeksforGeeks

   In other words, a recursive function is a function that solves a problem by solving smaller instances of the same problem. This technique is commonly used in programming to solve problems that can be broken down into simpler, similar subproblems



2. For loop Syntax - GeeksforGeeks

For loop is a control flow statement in programming that allows you to execute a block of code repeatedly based on a specified condition. It is commonly used when you know how many times you want to execute a block of code.

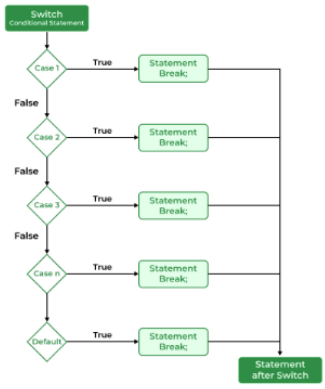


For loop Syntax

3.Switch Statement in C - GeeksforGeeks

Switch case statement evaluates a given expression and based on the evaluated value(matching a certain condition), it executes the statements associated with it. Basically, it is used to perform different actions based on different conditions(cases).

Flowchart of Switch Statement



Flowchart of switch statement in C

Analyse

While creating this program we were getting compile time and run time error continuously, after discussing among the group members we researched on the problems and found a website called geeks for geeks, it is basically a problem-solving platform where we found the solutions for our problems, thus our errors were rectified.

As we had already mentioned the links of websites referred above for your reference.

Work done by the group members:

Sachin made the word file and helped with the code

Shruti helped with the code, word file, gathering information.

Nidhi built the program.

Bhavna has gathered the information regarding pointer and recursive function and basic syntax, also helped to rectify the errors (i.e. syntax and compile error) while programming

Ideate

This program is a simple Teacher Management System written in C, which allows a user to add, display, and search for teachers based on their ID.

Advantages

Extra Feachers in our code are

1. **Modular Design:** Functions handle specific tasks, improving readability and maintainability.
2. **Menu-driven Interface:** User-friendly navigation.
3. **Validation:** Handles invalid inputs gracefully.

Build

```c
#include <stdio.h>
#include <string.h>


struct Employee {
    int employeeID;
    float salary;
    char name[50];
};


void inputEmployeeData(struct Employee emp[], int index) {
    printf("Enter Teacher ID: ");
    scanf("%d", &emp[index].employeeID);
    printf("Enter Teacher Name: ");
    getchar();
    fgets(emp[index].name, sizeof(emp[index].name), stdin);
    emp[index].name[strcspn(emp[index].name, "\n")] = 0;
    printf("Enter Teacher Salary: ");
    scanf("%f", &emp[index].salary);
}


void displayEmployeeData(struct Employee emp) {
    printf("%-10d %-25s %-10.2f\n", emp.employeeID, emp.name, emp.salary);
}


void displayAllEmployees(struct Employee emp[], int count) {
    if (count == 0) {
        printf("No teacher to display.\n");
        return;
    }
    printf("\n%-10s %-25s %-10s\n", "ID", "Name", "Salary");
    for (int i = 0; i < count; i++) {
        displayEmployeeData(emp[i]);
    }
}
```

```c
void searchEmployeeByID(struct Employee emp[], int count, int id) {
    for (int i = 0; i < count; i++) {
        if (emp[i].employeeID == id) {
            printf("\nTeacher Found:\n");
            displayEmployeeData(emp[i]);
            return;
        }
    }
    printf("Teacher with ID %d not found.\n", id);
}


int main() {
    struct Employee employees[100];
    int numEmployees = 0, choice;

    while (1) {

        printf("\n1. Add Teacher\n");
        printf("2. Display All teacher\n");
        printf("3. Search Teacher by ID\n");
        printf("4. Exit\n");
        printf("Enter your choice: ");

        if (scanf("%d", &choice) != 1) {

            printf("Invalid input! Please enter a number.\n");
            while (getchar() != '\n');
            continue;
        }

        switch (choice) {
            case 1:

                if (numEmployees < 100) {
                    inputEmployeeData(employees, numEmployees);
                    numEmployees++;
                } else {
                    printf("Teacher list is full!\n");
                }
                break;

            case 2:

                displayAllEmployees(employees, numEmployees);
```

```
                break;

            case 3: {

                if (numEmployees == 0) {
                    printf("No Teacher to search.\n");
                    break;
                }
                int searchID;
                printf("Enter Teacher ID to search: ");
                scanf("%d", &searchID);
                searchEmployeeByID(employees, numEmployees, searchID);
                break;
            }

            case 4:

                printf("Exiting the program,Thankyou for the visit.\n");
                return 0;

            default:
                printf("Invalid choice! Please try again.\n");
        }
    }

    return 0;
}
```

Test

OUTPUT OF OUR CODE

```
rive\Desktop\coding\c>          > cd "c:\Users\hp5cd\OneDrive\Desktop\coding\c\
" ; if ($?) { gcc companyemployedetailstracker.c -o companyemployedetailstracke
r } ; if ($?) { .\companyemployedetailstracker }

1. Add Teacher
2. Display All teacher
3. Search Teacher by ID
4. Exit
Enter your choice: 1
Enter Teacher ID: 12345
Enter Teacher Name: nidhi
Enter Teacher Salary: 100000

1. Add Teacher
2. Display All teacher
3. Search Teacher by ID
4. Exit
Enter your choice: 1
Enter Teacher ID: 23456
Enter Teacher Name: bharti
Enter Teacher Salary: 300000

1. Add Teacher
2. Display All teacher
3. Search Teacher by ID
4. Exit
Enter your choice: 1
Enter Teacher ID: 45678
Enter Teacher Name: rohini
Enter Teacher Salary: 200000

1. Add Teacher
2. Display All teacher
3. Search Teacher by ID
4. Exit
```

```
1. Add Teacher
2. Display All teacher
3. Search Teacher by ID
4. Exit
Enter your choice: 2

ID         Name
   Salary
12345      nidhi
   100000.00
23456      bharti
   300000.00
45678      rohini
   200000.00
   230000.00
```

```
1. Add Teacher
2. Display All teacher
3. Search Teacher by ID
4. Exit
Enter your choice: 3
Enter Teacher ID to search: 12345

Teacher Found:
12345      nidhi                    100000.00

1. Add Teacher
2. Display All teacher
3. Search Teacher by ID
4. Exit
Enter your choice: 4
Exiting the program Thank You visit again.
PS C:\Users\hp5cd\OneDrive\Desktop\coding\c>
```

Implement

Now we can say that output is implemented and our code is also running successfully.

We can implement the project in which we are creating the database where the salaries of teachers is stored with there employee id

We know that GitHub is used by many people and in corporate sector. So publishing on GitHub will help us to reach out to a large number of consumers.

[NidhiYadav-411/employee-detail-tracker]