DEPARTMENT OF BASIC SCIENCE AND HUMANITIES
INSTITUTE OF ENGINEERING AND MANAGEMENT
KOLKATA

EMPLOYEE MANAGEMENT SYSTEM

Submitted by:

Name of the Student: AVOY NATH

Enrolment Number: 12022002002136

Registration Number: 221040110231

Section: A

Class Roll Number:36

Stream: CSE

Subject: Programming for Problem Solving

Subject Code: ESC-103 (Pr)

Under the supervision of:

Prof. Swarnendu Ghosh

Academic Year: 2022-26

(PROJECT REPORT SUBMITTEDINFULFILLMENTOFTHE REQUIREMENTS FORTHESECOND SEMESTER)

1.Introduction:

This project is assigned to me for developing a Library Management System with the help of basic C programming language. The basic aim of the project is to create a library management system where we need to put up basic book and reader details and thereby with the help of c programming, we have to create a portal (.exe file) for adding new books, searching books, adding new reader, searching readers, issuing books, submitting books, deleting books, deleting readers and finally seeing all the books in the library at a glance.

2. Variable Description:

The different variables used in this project are listed under:

1. int- To store integer datatypes.

2. char- To store character datatypes.

3. Function Description:

The different functions (structures) used in this project are listed under:1. reader- For storing the required reader details vis. name, id and due date. 2. book- For storing the required book details viz. name, author, availability and reader info.

4. Program:

SCIENTIFIC CALCULATOR

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

int main() {
    int option;
    double num, num2, result;

    printf("Scientific Calculator\n");

    while (1) {
        printf("\nSelect an operation:\n");
        printf("1. Addition\n");
        printf("2. Substarction\n");
        printf("3. Multiplication\n");
        printf("4. Division\n");
        printf("5. Square Root\n");
        printf("6. Exponentiation\n");
        printf("7. Logarithm (base 10)\n");
        printf("8. Natural Logarithm (base e)\n");
        printf("9. Logarithm (given base)\n");
        printf("10. Sine\n");
        printf("11. Cosine\n");
        printf("12. Tangent\n");
        printf("13. Cosecant\n");
        printf("14. Secant\n");
        printf("15. Cotangent\n");
        printf("16. Exit\n");
        printf("Enter your option: ");
        scanf("%d", &option);

        if (option == 16) {
            printf("Thank you for using the calculator. Goodbye!\n");
            break;
        }

        printf("Enter a number: ");
        scanf("%lf", &num);

        switch (option) {
            case 1:
                printf("Enter another numbber :");
                scanf("%lf", &num2);
                result = num+num2;
```

```
            printf("Addition: %lf\n", result);
            break;
        case 2:
            printf("Enter another numbber :");
            scanf("%lf", &num2);
            result = num-num2;
            printf("Subtraction: %lf\n", result);
            break;
        case 3:
            printf("Enter another numbber :");
            scanf("%lf", &num2);
            result = num*num2;
            printf("Multiplication: %lf\n", result);
            break;
        case 4:
            printf("Enter another numbber :");
            scanf("%lf", &num2);
            result = num/num2;
            printf("Division: %lf\n", result);
            break;
        case 5:
            result = sqrt(num);
            printf("Square Root: %lf\n", result);
            break;
        case 6:
            printf("Enter the exponenet:");
            scanf("%lf", &num2);
            result = pow(num, num2);
            printf("Exponentiation: %lf\n", result);
            break;
        case 7:
            result = log10(num);
            printf("Logarithm (base 10): %lf\n", result);
            break;
        case 8:
            result = log(num);
            printf("Natural Logarithm (base e): %lf\n", result);
            break;
        case 9:
            printf("Enter the base:");
            scanf("%lf", &num2);
            result = log(num)/log(num2);
            printf("Logarithm (base %lf): %lf\n", num2, result);
            break;

        case 10:
            result = sin(num);
            printf("Sine: %lf\n", result);
```

```
                break;
            case 11:
                result = cos(num);
                printf("Cosine: %lf\n", result);
                break;
            case 12:
                result = tan(num);
                printf("Tangent: %lf\n", result);
                break;
            case 13:
                result = 1/sin(num);
                if (result==0){printf("Cosecant is undefined");}
                else{printf("Cosecant: %lf\n", result);}
                break;
            case 14:
                result = 1/cos(num);
                if (result==0){printf("Secant is undefined");}
                else{printf("Secant: %lf\n", result);}
                break;
            case 15:
                result = 1/tan(num);
                if (result==0){printf("Cotangent is undefined");}
                else{printf("Cotangent: %lf\n", result);}
                break;
            default:
                printf("Invalid option. Please try again.\n");
                break;
        }
    }

    return 0;
}
```

5.Output:

Sample output to demonstrate the functions in program are listed.

1)Output box: