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A Mini Project Report On

"EMPLOYEE MANAGEMENT SYSTEM"
**SUBMITTED FOR THE REQUIREMENT OF THE VI
SEMESTER FILE STRUCTURE WITH MINI PROJECT**

**LAB (17ISL67)
BACHELOR OF ENGINEERING
IN
INFORMATION SCIENCE & ENGINEERING**

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2021-2022

CERTIFICATE

I Certify that the Mini Project work entitled **"EMPLOYEE MANAGEMENT RECORD SYSTEM"** carried out by AMAN ANAND (1AM19IS010) , ABHISHEK KUMAR SINGH (**1AM19IS002)** is a bonafide student of AMC Engineering College in partial fulfilment of the requirement of VI semester (File Structure Laboratory With Mini Project) Bachelor of Engineering in Information Science and Engineering Visvesvaraya Technological University, Belgaum/Belagavi during the year 2020 - 2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The Mini Project report has been approved as it satisfies the academic requirements in respect of the Mini Project work prescribed for the said degree.

Signature of the Guide   Signature of the HOD   Signature of the Principal

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DECLARATION

I, **AMAN ANAND (1AM19IS010), ABHISHEK KUMAR SINGH(1AM19IS002) ,**student of VI semester of BE, Information Science and Engineering, AMC Engineering College hereby declare that the Mini project work entitled **"EMPLOYEE MANGEMENT RECORD SYSTEM"** has been carried out by me at AMC Engineering College, Bengaluru and submitted in partial fulfilment of the course requirements of **Bachelor of Engineering in Information Science and Engineering of Vishvesvaraya Technological University, Belagavi,** during the academic year 2021-2022. I also declare that, to the best of my knowledge and belief, the work reported here does not from part of any other dissertation on the basis of which a degree or an award was conferred on an earlier occasion on this by any other student.

Date:

Place: Bengaluru

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ABHISHEK KUMAR SINGH (1AM19IS002)

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ABSTRACT

Employee management system is an application based system, having two applications developed, one for employers to manage employee details and another for employees to mark their attendance. Every organisation whether government or private uses an information system[2.] to store data of their staff. However, in India it is found that many small scale industries use pen and paper to keep a record. However, there are many advanced technology systems available that can do this work but they all are costly for these low level industries. This paper discusses making a system for solving problems for them at a cheaper cost. This system will mark attendance of each employee and calculate the salary of them at the end of month. It also calculates overtime and total working hours of each employee. As in small scale each company has their own holidays preference and variable week off for employees, so all this power is given to the employer to manage holidays and week days of each employee separately. It saves lots of time and has no error in pay calculation hence preventing clashes between HR Team and employees. So that both employer and employee can focus on their work to develop their company.

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CHAPTER 1

INTRODUCTION

Employee Mangement Record System project in C++ is a simple console application built without the use of graphics. This project student report card system helps in managing the record of students according to their roll no. In this project we tried to enter all details of students like roll no, name, marks in all five subjects, etc. and tried to maintain all the possibility which may help the user to enter more record if he/she requires.

The project work intends to replace the existing manual pen and paperwork to record the various aspects of an employee with a system that manages and provides the proper functioning of the employee to the utmost level possible. Since the existing system makes use of a manual intervention to perform its tasks, there is the possibility of consuming more time to perform the tasks than required, along with the risk of losing the confidential data. There are more chances of an erratum in the company records in a manual system. Managing and organizing records becomes chaotic. It is very important to maintain efficient software to handle information in a company.

There is a need for an application that provides a way to record employee information and to access it in a simpler way. The said system intends to overcome these drawbacks and provide full functionality and efficiency. The user interface designed in the project will keep in mind the much-needed simplicity. The main purpose of our system is to make information management tasks easier and to develop software that replaces the manual company system with an employee management systemthat uses as less laboras possible.

Our project Employee Management system includes registration of employees, storing their details into the system. It has a special facility to give a unique id to every employee and store the details of every employee and the staff automatically. The user can search the availability of and the details of an employee using the id.

The Employee Management System can be entered using a username and password. It is accessible either by an administrator or employee. Only they can add data to the database. The

data can be retrieved easily. The interface is very user-friendly. The data are well protected for personal use and it makes the data processing very fast.

1.1 C++

C++, as we all know is an extension to C language and was developed by Bjarne Stroustrup at Bell labs. C++ is an intermediate level language, as it comprises a confirmation of both high level and low-level language features. C++ is a statically typed, free form, multi-paradigm, compiled general-purpose language.

C++ is an Object-Oriented Programming language but is not purely Object Oriented. Its features like Friend and Virtual, violate some of the very important OOPS features, rendering this language unworthy of being called completely Object Oriented. It's a middle level language.

1.2 BENEFITS OF C++

- There is Stronger Type Checking in C++.
- All the OOPS features in C++ like Abstraction, Encapsulation,
   Inheritance etc. makes it more worthy and useful for programmers.
- C++ supports and allows user defined operators (i.e. Operator Overloading) and function overloading is also supported in it.
- Exception Handling is there in C++.
- The Concept of Virtual functions and also Constructors and Destructors for Objects.
- Inline Functions in C++ instead of Macros in C language. Inline functions make complete function body act like Macro, safely.

- Variables can be declared anywhere in the program in C++, but must be declared before they are used.

1.2 FILE HANDLING IN C++

Files are used to store data in a storage device permanently. File handling provides a mechanism to store the output of a program in a file and to perform various operations on it.

A stream is an abstraction that represents a device on which operations of input and output are performed. A stream can be represented as a source or destination of characters of indefinite length depending on its usage.

In C++, we have a set of file handling methods. These include ifstream, ofstream, and fstream. These classes are derived from fstreambase and from the corresponding iostream class. These classes, designed to manage the disk files, are declared in fstream and therefore we must include fstream and therefore we must include this file in any program that uses files.

In C++, files are mainly dealt by using three classes fstream, ifstream, ofstream.

- ofstream: This Stream class signifies the output file stream and is applied to create files for writing information to files
- ifstream: This Stream class signifies the input file stream and is applied for reading information from files
- fstream: This Stream class can be used for both read and write from/to files.

All the above three classes are derived from fstreambase and from the corresponding iostream class and they are designed specifically to manage disk files. C++ provides us with the following operations in File Handling:

- Creating a file: open()
- Reading data: read()
- Writing new data: write()
- Closing a file: close()

CHAPTER 2

SYSTEM REQUIREMENTS

2.1 HARDWARE CONFIGURATION:

• System	: Pentium Dual Core.
• Hard Disk	: 120 GB.
• Ram	: 1 GB

2.1 SOFTWARE CONFIGURATION:

• Operating system	: Windows XP/7/10.
• Language	: C++
• IDE	: Turbo C++

CHAPTER 4

IMPLEMENTATION

4.1 SOURCE CODE

```cpp
// C++ program for the above approach #include
<bits/stdc++.h>

#define max 20 using namespace
std;

// Structure of Employee struct
employee { string name; long
int code; string designation; int
exp;     int
    age;
};

int    num;    void
showMenu();

// Array of Employees to store the
// data in the form of the Structure
// of the Array employee emp[max], tempemp[max],
    sortemp[max], sortemp1[max];

// Function to build the given datatype void build()
{
    cout << "Build The Table\n"; cout
    << "Maximum Entries can be " <<
    max << "\n";

    cout << "Enter the number of "
       << "Entries required"; cin >>
    num;

    if (num > 20) {
       cout << "Maximum number of "
          << "Entries are 20\n";
num = 20;
}
cout << "Enter the following data:\n";
```

```cpp
    for (int i = 0; i < num; i++) {
        cout << "Name "; cin >>
        emp[i].name;

        cout << "Employee ID "; cin >>
        emp[i].code;

        cout << "Designation "; cin
            >>
        emp[i].designation;

        cout << "Experience ";
        cin >> emp[i].exp;

        cout << "Age "; cin
        >> emp[i].age;
    }

    showMenu();
}

// Function to insert the data into
// given data type void insert()
{
    if (num < max) {
            int        i        =
        num; num++;

        cout << "Enter the information " <<
                "of     the
        Employee\n"; cout << "Name ";
        cin >>
        emp[i].name;

        cout << "Employee ID "; cin >>
        emp[i].code;

        cout << "Designation "; cin
            >>
        emp[i].designation;

        cout << "Experience ";
        cin >> emp[i].exp;

        cout << "Age "; cin
            >>
        emp[i].age;
```

```
        }
```
```
 else {
    cout << "Employee Table Full\n"; //
Function to delete record at index i void
deleteIndex(int i)
{ for (int j = i; j < num - 1; j++) {
     emp[j].name  =  emp[j  +  1].name;
     emp[j].code = emp[j + 1].code;
     emp[j].designation
        =    emp[j    +    1].designation;
     emp[j].exp  =   emp[j   +   1].exp;
     emp[j].age = emp[j + 1].age;
  }
  return;
}
// Function to delete record void
deleteRecord()
{
  cout << "Enter the Employee ID " <<

  "to Delete Record"; int code;

  cin >> code; for (int i = 0; i
  < num; i++) { if
  (emp[i].code == code) {
  deleteIndex(i);    num--;
  break;
    }
  }
  showMenu();
}

void searchRecord()
{
  cout << "Enter  the  Employee"

  << "  ID  to  Search  Record"; int

  code; cin >> code; for

  (int i = 0; i < num; i++) {

    // If the data is found if
    (emp[i].code == code) { cout
      << "Name "
        << emp[i].name << "\n";
```

```cpp
        cout << "Employee ID "
            << emp[i].code << "\n";



        cout << "Designation "
            << emp[i].designation << "\n"




    cout << "Experience "
            << emp[i].exp << "\n";

        cout << "Age "
            <<   emp[i].age   <<
        "\n"; break;
      }
    }

    showMenu();
}

// Function to show menu void
showMenu()
{

    cout << "------------------------" <<
        "GeeksforGeeks Employee"
        << " Management System"
        << "------------------------\n\n";

            cout      <<      "Available
    Options:\n\n";    cout   <<
    "Build Table (1)\n"; cout <<
    "Insert New Entry (2)\n"; cout
        <<     "Delete      Entry
    (3)\n";
    cout << "Search a Record
     (4)\n"; cout << "Exit     (5)\n"; int

    option;

    //     Input
    Options cin
    >> option;
```

```cpp
    // Call function on the bases of the
    // above option
    if (option
```

```cpp
    == 1) { build();
    }
    else if (option == 2) { insert();
    }
    else if (option == 3) { deleteRecord();
    }
    else if (option == 4) { searchRecord();
    }
    else if (option == 5) { return;
    } e
    l
    s
    e
    {
```

cout   <<
  "Expected Options"
        <<   "   are   1/2/3/4/5";
    showMenu();
  }
}

```cpp
//  Driver
Code  int
main()
{

  showMenu
    (); return 0;
}
```

1. Building table

```
Available Options:

Build Table          (1)
Insert New Entry     (2)
Delete Entry         (3)
Search a Record      (4)
Exit                 (5)
1
Build The Table
Maximum Entries can be 20
Enter the number of Entries required2
Enter the following data:
Name Akash
Employee ID 123
Designation ceo
Experience 15
Age 15
Name Aman
Employee ID 456
Designation dev
Experience 4
Age 21
```

2.Deleting Table

```
Available Options:

Build Table          (1)
Insert New Entry     (2)
Delete Entry         (3)
Search a Record      (4)
Exit                 (5)
3
Enter the Employee ID to Delete Record123
```

3.Searching employee Id

```
                    Geeks for Geeks Employee Management System

Available Options:

Build Table          (1)
Insert New Entry     (2)
Delete Entry         (3)
Search a Record      (4)
Exit                 (5)
4
Enter the Employee ID to Search Record123

Available Options:

Build Table          (1)
Insert New Entry     (2)
Delete Entry         (3)
Search a Record      (4)
Exit                 (5)
4
Enter the Employee ID to Search Record456
Name Aman
Employee ID 456
Designation dev
Experience 4
Age 21
```

CONCLUSION

In this report, an information system's development has been presented.

It was emphasized on the basic steps, consequently taken during the project's development course as a particular attention was turned to the basic operative functions performed upon the data into the database.

Employee management system is an application based system, having two applications developed, one for employers to manage employee details and another for employees to mark their attendance.

This paper discusses making a system for solving problems for them at a cheaper cost. This system will mark attendance of each employee and calculate the salary of them at the end of month. It also calculates overtime and total working hours of each employee.

✝ <u>References</u>

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