OOP Assignment - 02

Employee Information System

Name: Aagam Gadiya   PRN: B24CE1118

Division: SY - BTech-II   Batch: C

PROBLEM STATEMENT: Develop a program in C++ to create a database of an employee's information system containing the following fields: Name, employee ID, Department, Date of Joining, Contact address, Telephone number etc. Construct the database with suitable member functions to accept and print employee details. Make use of constructor types, destructor, static members, inline function and dynamic memory allocation using operators-new and delete.

CODE

```cpp
#include<iostream>
#include<string>
using namespace std;
class Employee
{
        public:
        long long tele_no;
        string name,dept,contact_address,joining_date;
        static int id;
        static void get_id() {

                cout<<"The employee no is:"<<id<<endl;
                id++;
                cout<<"\n";
        }
        void getdata();
        inline void showdata();
        Employee() {  //Default Constructor

                cout<<"Default Constructor Block\n";
                tele_no=0;
        }
        Employee(string nm,long long tel_no,string doj,string dpt,string contact_add) {
        //Parameterized Constructor
                cout<<"Parameterized Constructor Block\n";
                name=nm;
                tele_no=tel_no;
                joining_date=doj;
```

```cpp
                dept=dpt;
                contact_address=contact_add;
        }
        Employee(Employee &emp) {
                cout<<"Copy Constructor Block\n";
                name=emp.name;
                tele_no=emp.tele_no;
                joining_date=emp.joining_date;
                dept=emp.dept;
                contact_address=emp.contact_address;
        }


~Employee() {
                cout<<"Destructor called for Employee: "<<name<<endl;
        }
};
int Employee::id=1;  //Static data member
void Employee::getdata()
{
        cout<<"Enter Name: ";
        cin>>name;
        cout<<"Enter Telephone Number: +91";
        cin>>tele_no;
        cout<<"Enter Contact Address: ";
        cin>>contact_address;
        cout<<"Enter the Department: ";
        cin>>dept;
        cout<<"Enter Date of Joining: ";
        cin>>joining_date;
        cout<<"\n";

}
inline void Employee::showdata()        //Inline Function
{
        cout<<"Employee Name: "<<name<<endl;
        cout<<"Employee Telephone Number: +91"<<tele_no<<endl;
        cout<<"Employee Contact Address: "<<contact_address<<endl;
        cout<<"Employee Department: "<<dept<<endl;
        cout<<"Employee Date of Joining: "<<joining_date<<endl;
        cout<<"\n";
}
int main()
{
        Employee emp1;
        emp1.getdata();
```

```cpp
        Employee::get_id();     //Static Member Function
        emp1.showdata();
        cout<<"\n";
        Employee emp2("Om",3486758265,"07/08/2021","Google","California");
        Employee::get_id();     //Static Member Function
        emp2.showdata();
        cout<<"\n";
        Employee emp3(emp2);
        Employee::get_id();     //Static Member Function
        emp3.showdata();
        cout<<"\n";
        Employee *ptr = new Employee("Kaivalya", 8374657836, "31/03/2023",
"Microsoft", "Yerwada");
        //new and delete operator
        ptr->showdata();
        delete ptr;
        return 0;
}
```

OUTPUT

Default Constructor Block
Enter Name: Aagam
Enter Telephone Number: +919384856735
Enter Contact Address: Wagholi
Enter the Department: AIML
Enter Date of Joining: 08/09/2024

The employee no is:1

Employee Name: Aagam
Employee Telephone Number: +919384856735
Employee Contact Address: Wagholi
Employee Department: AIML
Employee Date of Joining: 08/09/2024

Parameterized Constructor Block
The employee no is:2

Employee Name: Om
Employee Telephone Number: +913486758265

Employee Contact Address: California
Employee Department: Google
Employee Date of Joining: 07/08/2021

Copy Constructor Block
The employee no is:3

Employee Name: Om
Employee Telephone Number: +913486758265
Employee Contact Address: California
Employee Department: Google
Employee Date of Joining: 07/08/2021

Parameterized Constructor Block
Employee Name: Kaivalya
Employee Telephone Number: +918374657836
Employee Contact Address: Yerwada
Employee Department: Microsoft
Employee Date of Joining: 31/03/2023

Destructor called for Employee: Kaivalya
Destructor called for Employee: Om
Destructor called for Employee: Om
Destructor called for Employee: Aagam

(program exited with code: 0)
Press return to continue