CHARUSAT
CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY

cspit
Chandubhai S Patel Institute of Technology

Faculty of Technology and Engineering

U & P U. Patel Department of Computer Engineering

Date : 01 / 01 / 2024

Academic Year	:	2023-2024	Semester	:	2
Course code	:	CE144	Course name	:	OOPC

Practical – 2 Lab Manual

INPUTS

Number of employee (number between 0 to 1000), Employee ID (4 digit number), Employee name (string with space), Qualification (floating point number), Experience (factional point number), Contact number (10 digit number)

EXPECTED OUTPUT

```
Enter an employee id : 1234

------------------------------------------------

Employee Name    :  Pranav Bhimani

Qualification    :  B.Tech – CE

Experience       :  5.5 years

Contact Number   :  9878942525

------------------------------------------------

Press Y to get another employee detail, Press N to exit : Y

Enter an employee id : 75

******************************

ERROR : ENTERED EMPLOYEE ID DOES NOT EXIST

******************************

Press Y to get another employee detail, Press N to exit : N
```

CONCEPTS TO BE USED

structure

- It is the user defined datatype.
- It can hold multiple data of different types (called data member) along with the functions (called member function) to operate on those data.

Example code

```
#include <iostream>
using namespace std;
struct abc
{
        int     a;
        float   b;
        void getdata()
        {
                cin >> a >> b;
        }
        void putdata()
        {
                cout << a << b;
        }
};
```

```
int main()
{
        struct  abc  A;
        A.getdata();
        A.putdata();

        cin >> A.a >> A.b;
        cout << A.a << A.b;
        return 0;
}
```

public
private

- They are access specifier.
- Data members and member functions declared in public part are accessible anywhere in the program. Default access specifier is public.
- Data members and member functions declared in private part are only accessible by public members of the structure.
- All data members and members functioned declared after the mentioned access specifier are considered as part of respected access are of the structure.

Example code

```
#include <iostream>
using namespace std;
struct abc
{
        private:
        int     a;
        float   b;

        public:
        void getdata()
        {
                cin >> a >> b;
        }
        void putdata()
        {
                cout << a << b;
        }
};
```

```
int main()
{
        struct  abc  A;
        A.getdata();
        A.putdata();
        return 0;
}
```

PRACTICE PROGRAM

1. Develop a C++ based library management system. The system stores the information of book and project reports. Book information are Book number (5 digit number), Book name (string with space), Anther name (string with space), Edition (2 digit number), Year of publication (4 digit number). Project information are like Project tile (string withs space), Student ID (alphanumeric of length 6 to 7), Department (string with space), Academic year (4 digit number). The librarian stores the details of multiple books and reports. He can retrieve the specific book details by entering the book number and specific report details by entering student ID.

2. Develop a C++ based railway train listing system. Railway officer feed train details like train number (5 digit number), Start station name (string without space), End station name (string without space), Number of coaches (2 digit number). Display details of all trained on a train listing board.