

Q: Create a class called Employee that contains employee number (type long), name (an object of class string)

and salary (integer). Include a member function called getData() to get data from the user for insertion into the object, and another function called putData() to display the data. Define both the functions outside the class.

Assume the name has embedded blanks (like Rakesh Kumar Mehta).

Write a main() program to execute this class. It should create an array of type Employee, and then invite the user to input data for up to 10 employees. Finally, it should print out the data for all the employees in proper format.

Ans:

Source code:

```
#include<iostream>
```

```
#include<string>
```

```
#include <iomanip>
```

```
using namespace std;
```

```
class Employee{
    public:
        long long int employee_number;
        string name;
        int salary;
        void getData();
        void putData();
};
```

```
void Employee::getData(){
    cout<<"Enter employee number\t";
    cin>>employee_number;
    cin.clear();
    cin.sync();
    cout<<"Enter Name of employee"<<endl;
    getline(cin,name);
    cout<<"Enter Salary\t";
    cin>>salary;
}
```

```
void Employee::putData(){
    cout<<left<<"|"<<setw(15)<<employee_number<<"|"<<setw(15)<<name<<"|"<<setw(15)<<salary<<endl;
}
```

```
int main(){
    Employee arr[10];
    cout<<"Enter details:\n";
    for(int i=0;i<10;i++){
        cout<<"Enter data for employee "<<i+1<<endl;
        arr[i].getData();
    }
    cout<<"Employee Details:\n"<<
```

```

" _____\n|Employee Number|Name      |Salary
|\n _____\n";

for(int i=0;i<10;i++){

    arr[i].putData();

    cout<<" _____\n";

}

return 0;

}

```

Output:

The screenshot shows the execution of a C++ program that takes input for 10 employees and displays their details in a table. The program is titled "D:\sem-5\oop_lab\3a.exe".

Input sequence:

```

Enter details:
Enter data for employee 1
Enter employee number 1
Enter Name of employee
Paras Dang
Enter Salary 80000
Enter data for employee 2
Enter employee number 2
Enter Name of employee
Prabhmeet Singh
Enter Salary 75000
Enter data for employee 3
Enter employee number 3
Enter Name of employee
Parmeesh Singh
Enter Salary 89000
Enter data for employee 4
Enter employee number 4
Enter Name of employee
Ruben Singh
Enter Salary 89000
Enter data for employee 5
Enter employee number 5
Enter Name of employee
Naman Sachdeva
Enter Salary 60000
Enter data for employee 6
Enter employee number 6
Enter Name of employee
Mridul Bhatia
Enter Salary 50000

```

Output table:

Employee Number	Name	Salary
1	Paras Dang	80000
2	Prabhmeet Singh	75000
3	Parmeesh Singh	89000
4	Ruben Singh	89000
5	Naman Sachdeva	60000
6	Mridul Bhatia	50000
7	Aryan Bedi	89000
8	Tanmay Vig	1000000
9	Garvit Ahuja	88000
10	Bhargav Bajaj	60000

Process exited after 229.1 seconds with return value 0
Press any key to continue . . .

Q: Create a class called Student that contains a Student id (type int), name (char array) and marks (integer).

Include a member function called getStudent() to get data from the user for insertion into the object, and another function called printStudent() to display the data. Define both the functions inside the class.

Assume the name has no embedded blanks.

Write a main() program to execute this class. It should create an array of type Student,

and then invite the user to input data for up to 10 students. Finally, it should print out

the data for all the students in proper format.

Ans:

Source Code:

```
#include<iostream>
```

```
#include<string>
```

```
#include <iomanip>
```

```
#define M 10
```

```
using namespace std;
```

```
class Student{
```

```
    public:
```

```

int student_id;
char name[30];
int marks;
void getData(){
    cout<<"Enter student number\t";
    cin>>student_id;
    cin.clear();
    cin.sync();
    cout<<"Enter Name of student"<<endl;
    cin.getline(name,30);
    cout<<"Enter Marks\t";
    cin>>marks;
}
void putData(){
    cout<<left<<"|"<<setw(15)<<student_id<<"|"<<setw(15)<<name<<"|"<<setw(15)<<marks<<"|"<<endl;
}
};

```

```

int main(){
    Student arr[M];
    cout<<"Enter details:\n";
    for(int i=0;i<M;i++){
        cout<<"Enter data for student "<<i+1<<endl;
        arr[i].getData();
    }
    cout<<"Student Details:\n"<<
    "
    _____\n|Student Number |Name      |Marks
|\n_____ \n";
    for(int i=0;i<M;i++){
        arr[i].putData();
        cout<<"_____ \n";
    }
}

```

return 0;

}

output:

```
D:\sem-5\oop_lab\3b.exe
Enter details:
Enter data for student 1
Enter student number 1
Enter Name of student
Ruben
Enter Marks 99
Enter data for student 2
Enter student number 2
Enter Name of student
Bhargav
Enter Marks 38
Enter data for student 3
Enter student number 3
Enter Name of student
Paras
Enter Marks 89
Enter data for student 4
Enter student number 4
Enter Name of student
Boby
Enter Marks 76
Enter data for student 5
Enter student number 5
Enter Name of student
Prabhmeet
Enter Marks 88
Enter data for student 6
Enter student number 6
Enter Name of student
Garvit
Enter Marks 84
Enter data for student 7
Enter student number 7
Enter Name of student
Malkeet
Enter Marks 92
Enter data for student 8
Enter student number 8
Enter Name of student
Parmeesh
Enter Marks 91
Enter data for student 9
Enter student number 9
Enter Name of student
Tanmay
Enter Marks 100
Enter data for student 10
Enter student number 10
Enter Name of student
Mridul

D:\sem-5\oop_lab\3b.exe
Enter student number 8
Enter Name of student
Parmeesh
Enter Marks 91
Enter data for student 9
Enter student number 9
Enter Name of student
Tanmay
Enter Marks 100
Enter data for student 10
Enter student number 10
Enter Name of student
Mridul
Enter Marks 33
Student Details:
|Student Number|Name|Marks|
|1|Ruben|99|
|2|Bhargav|38|
|3|Paras|89|
|4|Boby|76|
|5|Prabhmeet|88|
|6|Garvit|84|
|7|Malkeet|92|
|8|Parmeesh|91|
|9|Tanmay|100|
|10|Mridul|33|

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Process exited after 179.2 seconds with return value 0
Press any key to continue . . .
```