IT1050 – Object Oriented Concepts   Semester 1, 2020
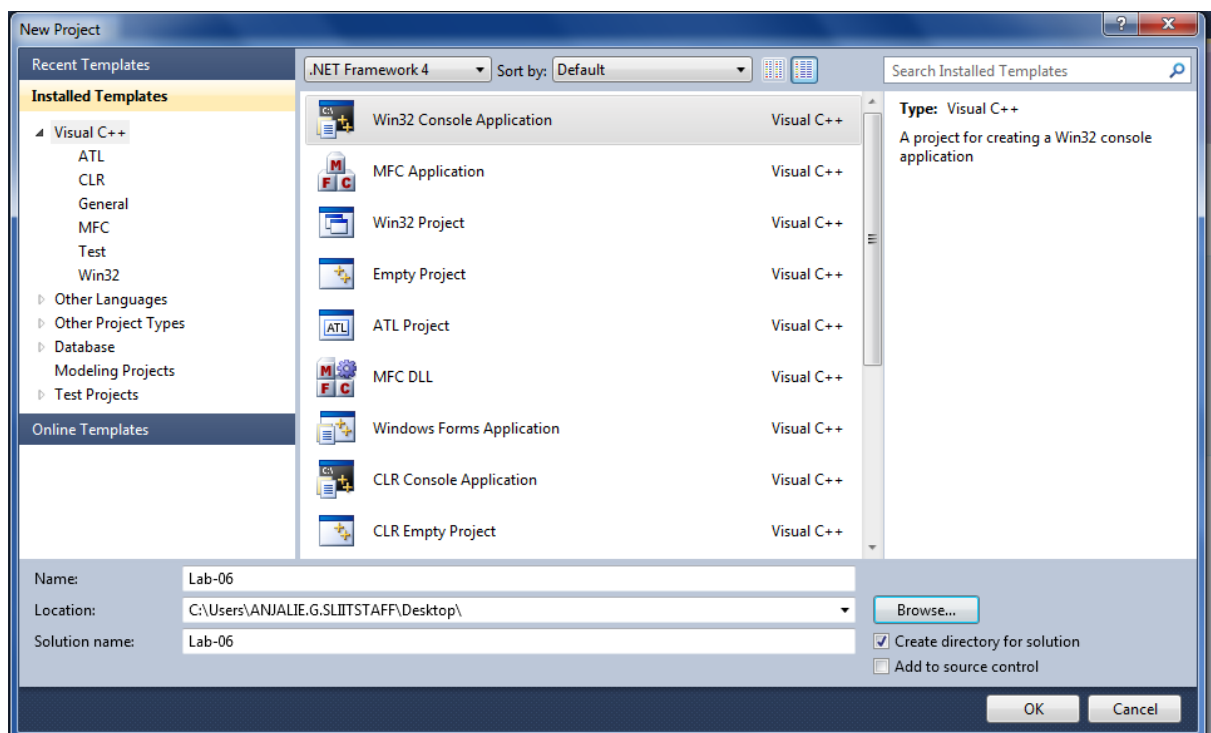
Objectives:

- Implement a Object Oriented Program using Visual Studio. NET platform .

    Exercise 1:

    In Exercise 1 we will implement an Employee class that can be used to store details of an Employee working in a company

(a) In Visual C++, create a new *Win32 Console Application* project. Save the project in your Desktop. We will name the project as **Lab-06**

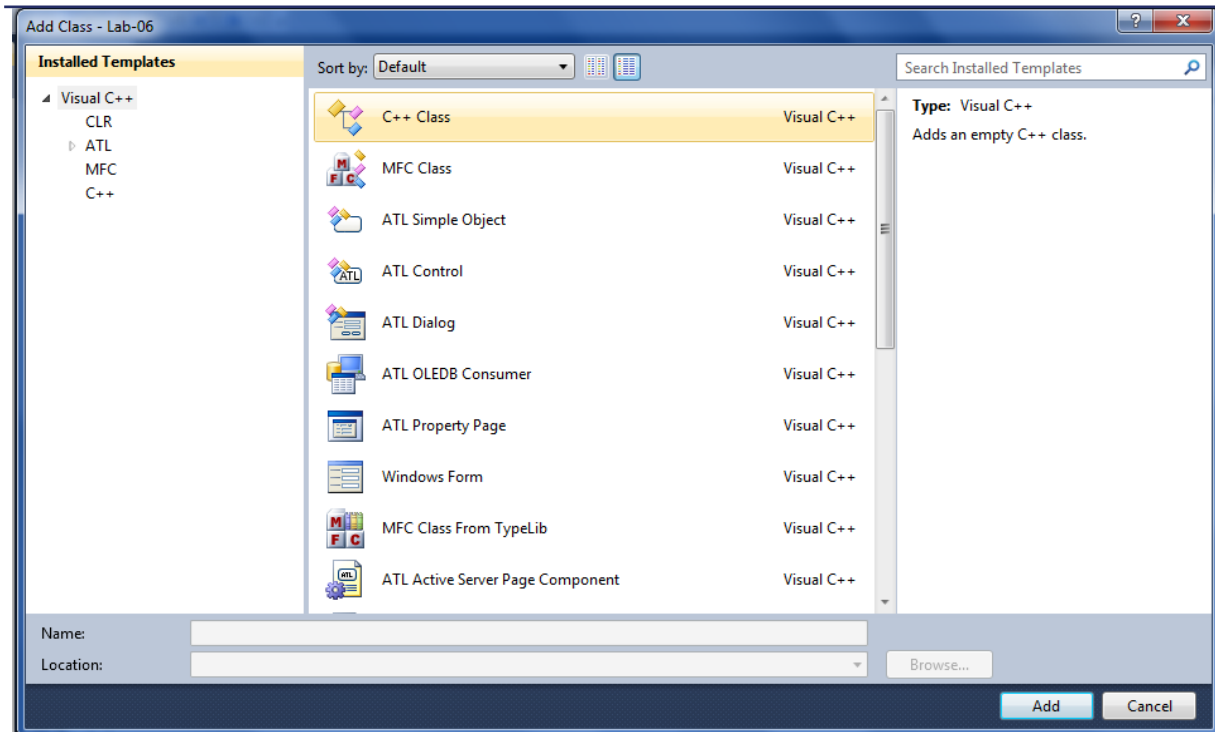b) Add a new Class to the project from the main menu select, *Project -> Add Class*
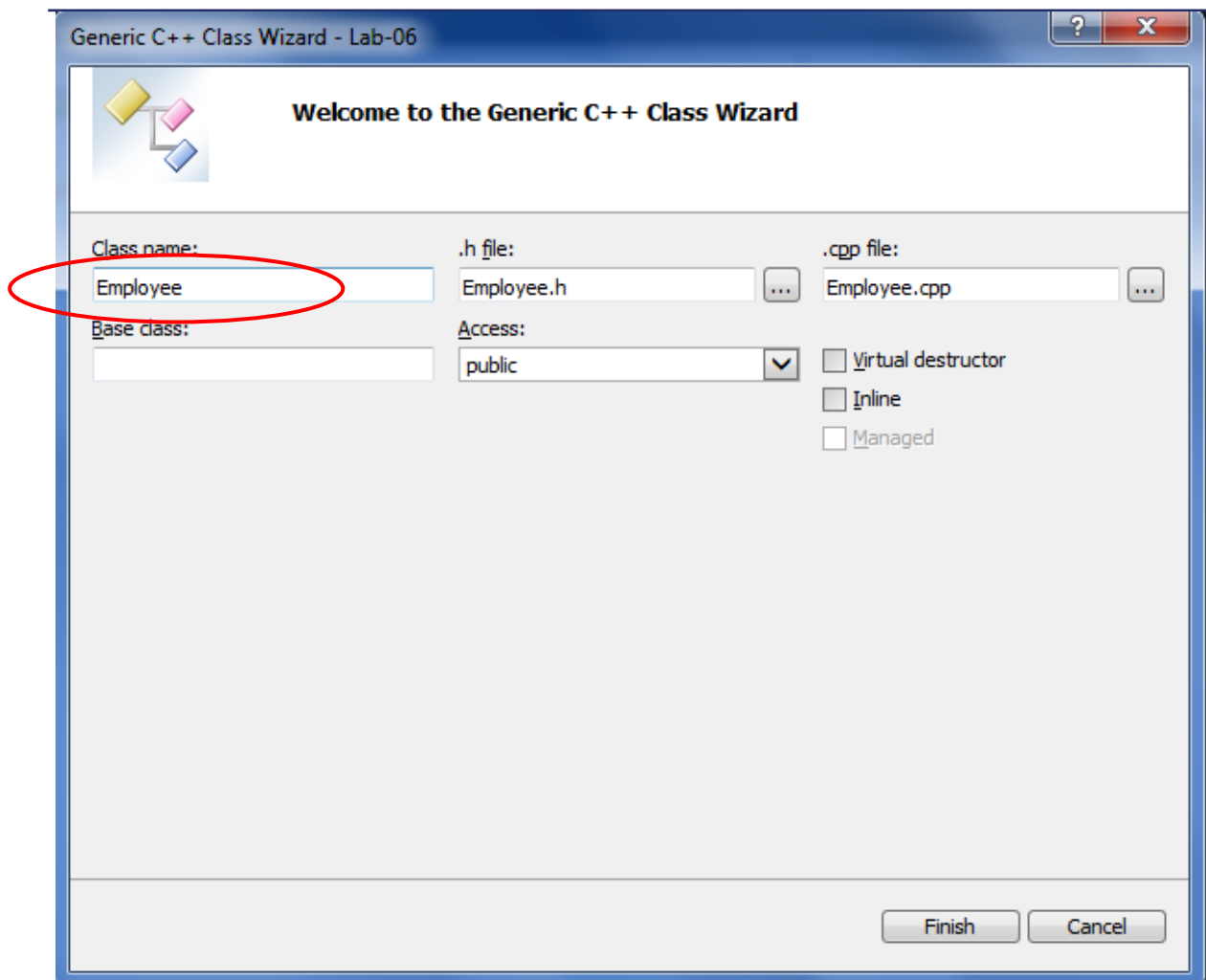
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Select the C++ Class Template.
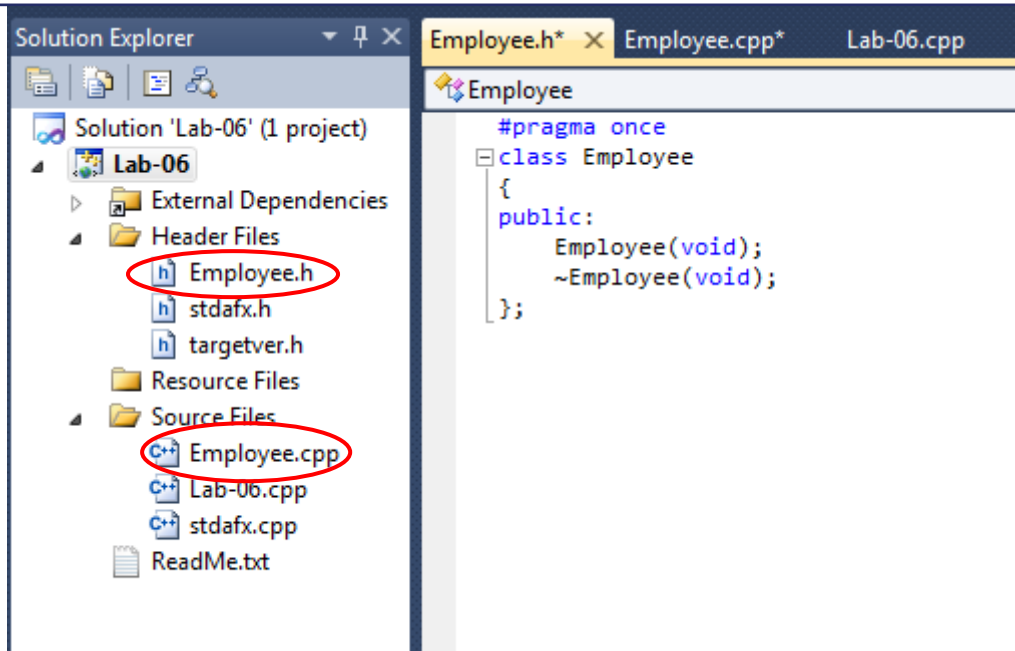
(b) We will create a Class called Employee. When you specify the Class Name the Wizard creates the header file and the .cpp file.

Lab Exercise 6

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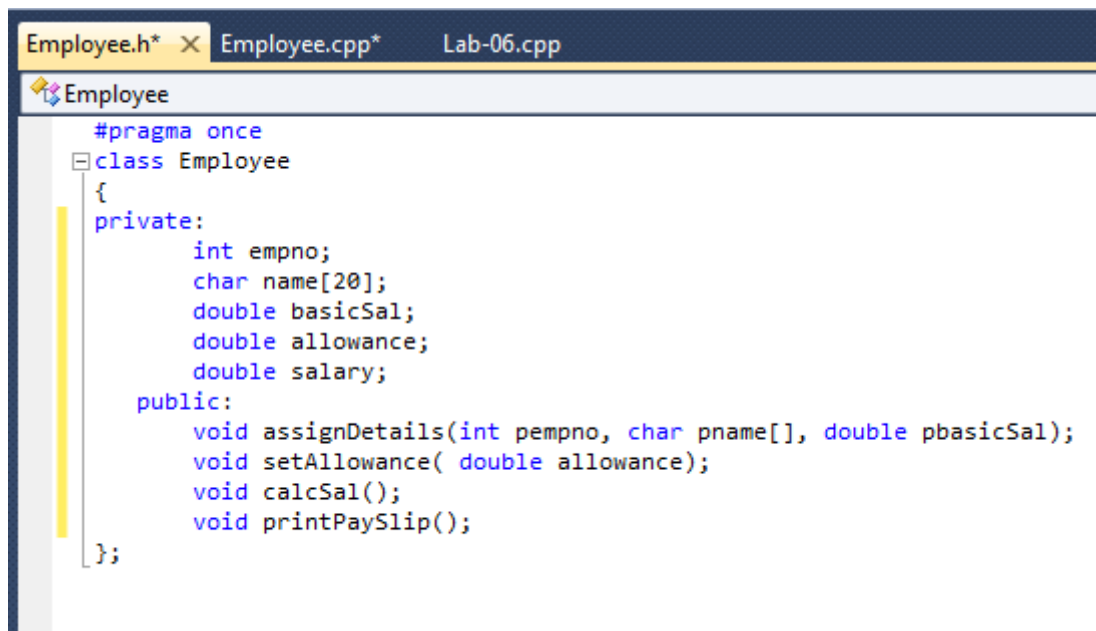

Click the "Finish" button at the bottom of the "C++ Class Wizard"
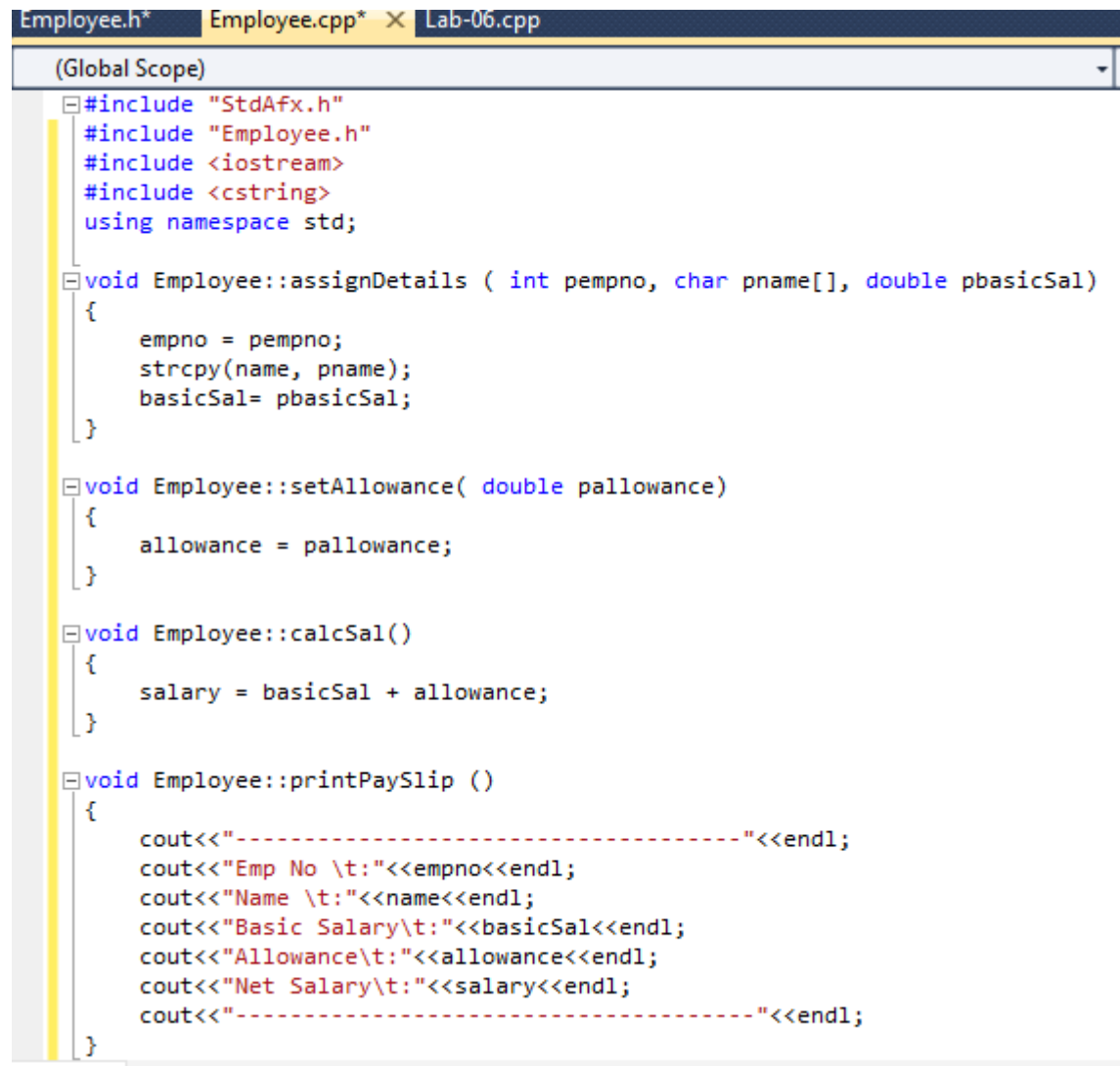
Then you can see the *Employee.h* and the *Employee.cpp* files in the "Solution Explorer"

Lab Exercise 6

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```
Solution Explorer            ▾ ╨ ✕    Employee.h* ✕  Employee.cpp*    Lab-06.cpp
                                      ⚙ Employee
Solution 'Lab-06' (1 project)            #pragma once
▲  Lab-06                               □class Employee
   ▷   External Dependencies             {
   ▲   Header Files                      public:
          h  Employee.h                      Employee(void);
          h  stdafx.h                        ~Employee(void);
          h  targetver.h                 };
       Resource Files
   ▲   Source Files
          C++ Employee.cpp
          C++ Lab-06.cpp
          C++ stdafx.cpp
       ReadMe.txt
```

c) Write the definition of the Employee class in *Employee.h* header file. (Double click *Employee.h* from the Solution Explorer).

```
Employee.h* ✕  Employee.cpp*    Lab-06.cpp
⚙ Employee
    #pragma once
  □class Employee
   {
   private:
          int empno;
          char name[20];
          double basicSal;
          double allowance;
          double salary;
      public:
          void assignDetails(int pempno, char pname[], double pbasicSal);
          void setAllowance( double allowance);
          void calcSal();
          void printPaySlip();
   };
```

d) Implement Student class in Employee.cpp (Double click on *Employee.cpp* from the Solution Explorer.

```
Employee.h*     Employee.cpp*  ×  Lab-06.cpp

(Global Scope)                                                          ▼

#include "StdAfx.h"
#include "Employee.h"
#include <iostream>
#include <cstring>
using namespace std;

void Employee::assignDetails ( int pempno, char pname[], double pbasicSal)
{
    empno = pempno;
    strcpy(name, pname);
    basicSal= pbasicSal;
}

void Employee::setAllowance( double pallowance)
{
    allowance = pallowance;
}

void Employee::calcSal()
{
    salary = basicSal + allowance;
}

void Employee::printPaySlip ()
{
    cout<<"------------------------------------"<<endl;
    cout<<"Emp No \t:"<<empno<<endl;
    cout<<"Name \t:"<<name<<endl;
    cout<<"Basic Salary\t:"<<basicSal<<endl;
    cout<<"Allowance\t:"<<allowance<<endl;
    cout<<"Net Salary\t:"<<salary<<endl;
    cout<<"------------------------------------"<<endl;
}
```
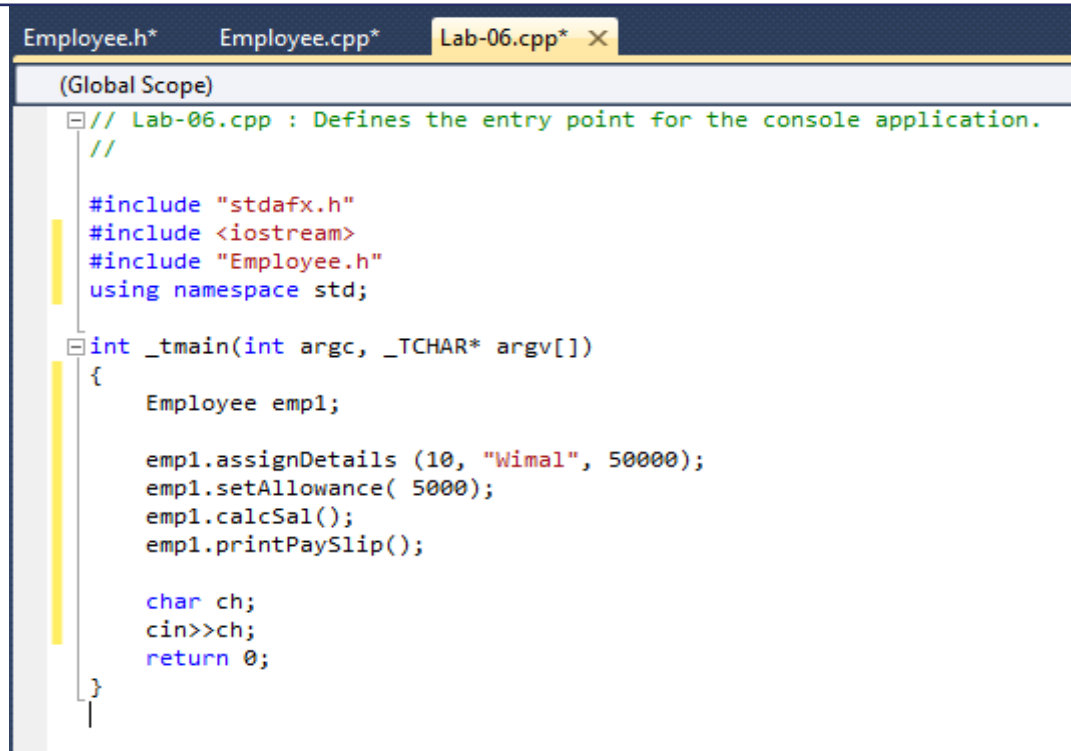
e) Double click the "Lab-06.cpp" in the Solution explorer and implement the main program.

Lab Exercise 6

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```
Employee.h*      Employee.cpp*     Lab-06.cpp*  ×

(Global Scope)

// Lab-06.cpp : Defines the entry point for the console application.
//

#include "stdafx.h"
#include <iostream>
#include "Employee.h"
using namespace std;

int _tmain(int argc, _TCHAR* argv[])
{
    Employee emp1;

    emp1.assignDetails (10, "Wimal", 50000);
    emp1.setAllowance( 5000);
    emp1.calcSal();
    emp1.printPaySlip();

    char ch;
    cin>>ch;
    return 0;
}
```

Main Program in Lab-06.cpp

 (f) Compile and Run the above program.

Exercise 2:

Add another method called "**setOtDetails()**" to assign the *otHrs* and *otRate* to the object. You need to add two more attributes called *otHrs* and *otRate* to the class.

Calculate the new salary by adding the OT amount and display the details

Exercise 3:

Change the main program to input the details from the keyboard and send them to the relevant methods to assign details to the attributes.

You can also change the existing methods such as "assignDetails()", "setAllowance()" and "setOtDetails()" to input values from the keyboard.

Eg :

```
void Employee::InputDetails()
{
      cout<<"Input Employee No : ";
      cin >>empno;
      cout<<"Input Name    : ";
      cin>>name;
      cout<<"Input Basic Salary :";
      cin>>basicSalary;
}
```