Class public and private variables

```
#include <iostream.h>

   class emprecord
   {public :
      void getinfo();
      double gross, net, fed, state, fica, fedtax, statetax;
      int id;
      double hours, rate;
   };




   int main ()
   { int i;
      emprecord employee;
      //-------------------------------------------------
      for (i=0;i<2;i++)
      {  employee.getinfo();
      //-------------------------------------------------
         employee.gross = employee.hours*employee.rate;
         employee.net = employee.gross*0.7;
      //-------------------------------------------------
         cout.setf(ios::fixed);
         cout.setf(ios::showpoint);
         cout.precision(2);
         cout << "Gross : $ " <<  employee.gross <<  "\t";
         cout << "Hours : " <<  employee.hours <<  endl;
         cout << "Rate  : " <<  employee.rate <<  endl;
         cout << "net   : " <<  employee.net <<  endl;
      }
      return (0);
   }

void emprecord :: getinfo()
   {  cout << " Enter id ";
      cin >> id;
      cout << " Enter Hours  ==> ";
      cin >> hours;
      cout << " Enter Rate ==> ";
      cin >> rate;
   }
```

```
#include <iostream.h>

   class emprecord

   {public :
      void getinfo();
      void calcinfo();
      double gross, net, fed, state, fica, fedtax, statetax;
   private :
      int id;
      double hours, rate;
   };

   int main ()
   { int i;
      emprecord employee;
      //-----------------------
      for (i=0;i<2;i++)
      {  employee.getinfo();
         //-------------------------------------------------
         employee.calcinfo();
         //employee.gross=employee.hours*employee.rate;
         employee.net = employee.gross*0.7;
      //-------------------------------------------------
         cout.setf(ios::fixed);
         cout.setf(ios::showpoint);
         cout.precision(2);
         cout << "Gross : $ " <<  employee.gross <<  "\t";
         //cout << "Hours : " <<  employee.hours <<  endl;
         //cout << "Rate  : " <<  employee.rate <<  endl;
         cout << "net   : " <<  employee.net <<  endl; }
      return (0);
   }

   void emprecord :: getinfo()
   {  cout << " Enter id ";
      cin >> id;
      cout << " Enter Hours  ==> ";
      cin >> hours;
      cout << " Enter Rate ==> ";
      cin >> rate;
   }
   void emprecord :: calcinfo()
   { gross= hours*rate;
   }
```

The variables in the old version that are related to the employee are now in the ***class*** emprecord and are considered to be fields in the class. They are declared to be of type ***public***.

The variables id, hours and rate are now private and can be only accessed through function calls that are part of the class.

Invalid access since the variables are private.

Valid access since the variables are being accessed by a function in the class.