OOP LAB #09
LAB TASK- Polymorphism & Virtual Function

Submission:

Task-1
Run and compile the code given in lab manual
Add another class Square (Square is a shape means inheritance will apply)
Add appropriate constructor and a member function area that prints and return the area of square
Area of square =2l+2w

Task-2
Run and compile the code given in video 2

Task-3
Design a base class named Worker to allow the following private data members:
   a) A pointer to a character variable named workerName
   b) A string SSN in the format xxx-xx-xxxx
   c) Worker should allow the following public member methods:
   d) A constructor to dynamically allocate enough memory to hold the employee's name setting workerName to 0 and SSN to null
   e) An overloaded constructor to dynamically allocate enough memory to hold the employee's name (the string length plus 1)
   f) A destructor to free the unused memory
   g) A member method setWorkerName to setfworkerName if workerName does not equal 0
   h) A member method setSSN to set the social security number
   i) A member method getWorkerName that returns the workerName
   j) A member method getSSN that returns the SSN
   k) A virtual void method printValues to print the data members
Design a derived class named PayWorker from the Worker class and allow the following private data members:
   l) An integer dependents
   m) A double payRatef

PayWorker should allow the following public member methods:
   n) A member method setPayRate to set the pay rate
   o) A member method setDependents to set the number of dependents
   p) A member method getPayRate that returns the PayRate
   q) A member method getDependents that returns the dependents

r)   A member method printValues that displays the data members.

Write a test program that creates a worker named Jesus Guerra, with a social security number 555-22-7788, a pay rate of $12.50, and 5 dependents.
Output:

```
In base class Worker workerName is Jesus Guerra
In base class Worker SSN is 555-22-7788
In derived class PayWorker payRate is 12.50
In derived class PayWorker dependents is 5
Worker Name: Jesus Guerra
Social Security Number: 555-22-7788
Pay Rate: $12.50
Number of Dependents: 5
```