**\*\* Send the .CPP files to** balqrashi@ksu.edu.sa

1. **Write A program containing the following**
2. Define a base class called **Person**, which has the following members:

**Private**

 Name;

**Protected**

ssn **;**

**Public**

 Age ;

 set\_Personal\_info() // set for the above info

 print() // prints all the info for the class.

 // constructor print a message "person constructor"

1. Now define a class called **Student**, which is **privately** **derived** from **Person**. It should have the following public members:

**Protected**

 GPA

**Public**

 set\_Student\_info() // a function that sets for student info

 print() // print the stored information

 // constructor print a message "student constructor"

 // destructor do nothing

Write a short main() program which instantiates as an object of the class Student **yourself** (the object name will be your name ).

Supply all the information through functions and print the data out .

1. **Write A program containing the following**

class Date

 {

 protected:

 int day;

 int month;

 int year;

 public:

 Date(){day=month=year=0;} //constructor

 ~Date(){cout<<"object destroyed date"<<endl;} //destructor

 void display()

 {cout<<"the date :" <<month<<"/"<<day<<"/"<<year<<endl;}

 void set(int d, int m, int y){day=d;month=m;year=y;}

 };

class Time

 {

 protected:

 int hour;

 int minute;

 int second;

 public:

 Time(){hour=minute=second=0;} //constructor

 ~Time(){cout<<"object destroyed Time "<<endl;} //destructor

 void display()

 // displays the time on the screen

 {cout <<"the time is : " << hour<<":"<<minute<<":"<<second<<endl;}

 void set(int h, int m,int s)

 {hour=h; minute=m; second=s ;}

 };

1. Create a class that inherit **publicly** from both **Date** and **Time** Class and named as **DateAndTime**
2. Define the **DateAndTime** class member as follows

 String day\_night; //for am or pm

 public:

 void display(); // prints date and time

1. In main

Define an instance **object** of class DateAndTime called **Watch**.

Display the content of this object

Then allows the attributer in the object **Watch** to take value through the set () with the current date and time .and display the results.