Ministry of Higher Education and Scientific Research
University of Technology
Department of Computer Science
Final Exam / 2014 -2015

Subject: Object Oriented Prog.
Branch: All Branches
Examiners: Dr. Rana F. Ghani & L. Eklas Falih

Year: second
Time :3 Hours
Date: 27/5/2015

Answer all questions

Q1// Correct the Error(s) of the following programs: (10 marks)

Program a	Program b
class alpha	class alpha
{	{
private:	protected:
static int total;	int data;
public:	public:
alpha ()	alpha() : data (1) { }
{total++; }	};
static void showtotal()	class beta: public alpha
{cout << total << endl;}	{ };
};	class gamma: public alpha
int main()	{ } ;
{	class theta: public beta, public gamma
alpha a1, a2, a3;	{
a1. showtotal();	public:
return 0;	int get()
}	{ return data; }
	};
	int main()
	{
	theta t;
	Cout<< t.get();
	return 0;
	}

Q2// write an object oriented program to declare a class template called sample that includes two data items value1, value2 as private variable of template type. As public functions, class sample includes:

- A function to set value to the value1 and value2
- A function to find the sum of the given two data items.
- A function to show the summation result.

(12 marks)

Q3// Answer <u>one</u> of the following: (13 marks)

A/ Write an object oriented program that convert a weight expressed in kilogram into its equivalent in pound. Create two classes called Kilogram and Pound. The program includes a friend function that convert a kilogram weight into its equivalent in pound according to the formula 1Kg=2.204 pounds.

B/ Write an object oriented program that overload += operator for the Distance class. Class Distance include two private variables feet(int) and inches(float). This overloaded operator should allow statements like d1+= d2; where d1 and d2 are objects of type Distance.

Q4// write an object oriented program that includes a class called publication that stores the title (a string) of a publication. Also publication class should have a getname() function to get the name of the publication, and a putname() function to display the name of the publication.

From this class drive two classes: First class called book, which includes publisher as a private variable (type string) and as public functions: getdata() to read the name and publisher and putdata()to display the name and publisher.

Second class called research, which includes journal as a private variable (type string) and as public functions: getdata() to read the name and journal and putdata()to display the name and journal.

Write a main () function that creates an array of pointers to 100 publications, read data that related to each publication and then print these data.

(15 marks)