



University of Technology
Department of Computer Science
Final Exam / 2016 -2017



Subject: Object Oriented Prog.
Branch: SW, IS, & AI
Examiners: Eklas Falih

Year: second
Time: 3 Hours
Date: 13/9/2017

Note: Answer Four questions only (12.5 marks for each question)

Q1// Write an object oriented program to decrement the area of rectangle using (- -) oprerator overloading. The program includes a class called *rectangle*. The content of class rectangle are private integer numbers *length* , *width* ,and *ar* .A function *get_data()* to read the values of *length and width*, and a function *show()* to print the value of *ar* after decrement . In the main program define an array of 20 pointers of type rectangle objects and compute the summation of area.

Q2// Write an object oriented program to compute the division value of two integer numbers. The program includes a class called *number* which contains *x* and *y* as private data values and a constructor as public member. The program also includes a friend function called *div()* which receives an object of type *number* and returns the result value of division between *x* and *y*.

Q3// Write an object oriented program that include a class called *Min* for reading two data items *item1*, *item2* from the keyboard and find the minimum between two data items. class *min* includes two functions *get()* to read *item1* and *item2* ,and *min_value()* to display the minimum value. Use the concept of *template class* to write the program on three objects of type integer elements, float elements and long elements.

Q4 // create a class called *employee* that stores the *name (string)* and *number (int)*. From this class derives two classes: First class called *manager*, which has *title(string)*.Second class called *scientist*, which has *publications (int)*. Each of the three classes should have a *getdata()* function to get its data from the user at the keyboard, and a *putdata()* function to display the data.

Q5// Complete the following segments of code:

1) int main() { first f(4); f.show(); return 0; }	2) int main() { D3 d1(6); point d2(3,2); d1.func1(d2); return 0; }	3) int main() { Counter c1(3); ++c1; return 0; }
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Signature: _____

Date: 11 /9 /2017

Best Wishes