	2013.2 Object-Oriented Pi	rogramming and Design	supervisor	
	Midterm Exam (Oct.	lidterm Exam (Oct. 23th 7pm-8:20pm)		
			Signature	
StudentID#:()	, Name:()
* You may answer in either Korean of	c English in problem 2~4. How	vever, you should insert English	h words in proble	em 1.
 (24 points) Fill out the blanks (a)~(One of the main benefits of data a 	f) with the most appropriate E	English words.	means a change	in implementation
should not affect (b.) seen by clients	s of a class.	means a change	in implementation
• (c.) temporary substitute for yet-to-be-	is a simple dummy routines v -developed code.	with no behavior or with very	limited behavior	, and it can be a
• (d.) is or other attributes	the modification of a software	e product after delivery to corr	rect faults, to imp	prove performance
 Don't write a copy constructor if (e) 	2.) are OK.		
• If you need copy constructor, you	also need (f.) and operator= f	unction.	
2. (14 points) Explain the possible a passing when function call.	dvantage and disadvantage of	using "call-by-value (pass-b	y-value)" mechar	uism for argument
(1) advantage : ()
(2) disavantage : ()
3. (14points)				
 What is "coupling" (OOP concept)? 	Explain.)
(2) Why is it desirable to minimize "co (oupling"? Explain with sufficien	nt details.)
4 (14points)				
(1) What is the meaning of "static" in	line 2 of the following code?	(You should explain the meaning	ng of static meml	oer variable.)
()
(2) What is the meaning of "static" in	line 8 of the following code?	(Your should explain the mean	ing of static mem	uber function.)
()
1: class File {				
2: <u>static int open_files;</u>	// static member varia	ble of class File		
3: // detail omitted				
4: public :				
5: File(const String& filename 6: File(const File)):	, const String& modes);			
7: ~File();				
8: <pre>static int existing();</pre>	// static member functi	on		
9: // detail omitted				
10:}				

5. (34points) In our Project #2, class inf int is defined as follows. It can represent an arbitrarily big integer number and the limit it can represent is maximized. Insert your code in (1), (2), and (3). In (1), (2), and (3), Do not call other member functions. Instead, You may use standard library in your code. Your code should manage the memory correctly and efficiently. Your code should be grammatically and logically correct. _____ class inf int { private: // points to a string of digits. Perform dynamic allocation when necessary. char* digits; unsigned int length; // stores the number of actual digits bool thesign; // we assume that thesign is false if negative integer, true otherwise. // ex) 1531111111111111 : digits -> "11111111111111351", length=17, thesign=true; // ex) -12345555555555 : digits -> "5555555554321" , length=14, thesign=false public : inf int(); // constructor. assign 0 as a default value. int_int(int n); // constructor. the input integer n is converted to inf int format. inf int(const inf int& x); // copy constructor friend bool operator==(const inf int& , const inf int&); friend ostream& operator<<(ostream& , const inf_int&);</pre> // other member functions should be here but they are just not shown. }; _____ (1) Write C++ code for following function. (2) Write C++ code for following constructor. bool operator==(const inf_int& x, const inf_int& y) inf_int::inf_int(const char* str) {

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