

Quiz # 3

Question#1

5+5 marks

Consider the following Class Test and Write down the output/errors of the given code segments :

<pre>#include<iostream> using namespace std; class Test { private: int i; double d; int * data; public: Test(); Test(int, double); Test(double, int); Test(Test &); ~Test(); void createCopy(Test * ref); }; Test::Test() { cout << "default cons " << endl; i = 5; d = 0.0; data = new int[5]; } Test::Test(int a, double b) { cout << "parameterized cons 1" << endl; i = a; d = b; data = new int[i]; } Test::~~Test() { cout << "destructor"; cout << " Value of i is: " << i << endl; delete[] data; }</pre>	<pre>Test::Test(double b, int a) { cout << "parameterized cons 2" << endl; i = a; d = b; data = new int[i]; } Test::Test(Test & ref) { cout << "copy cons " << endl; i = ref.i; d = ref.d; data = new int[i]; for (int j = 0; j < i; j++) { data[j] = ref.data[j]; } } void Test::createCopy(Test * ref) { ref->i = i; ref->d = d; ref->data = new int[i]; for (int j = 0; j < i; j++) { ref->data[j] = data[j]; } }</pre>
<pre>int main() { Test t1; Test t2(10, 3.0); Test t3=Test(0.2, 9); Test t4(t2); t2.~Test(); t3.createCopy(&t2); return 0; }</pre>	
<pre>void f(Test t){ Test obj; t.~Test(); obj.createCopy(&t); cout << "F () " << endl; } int main(){ Test t1; Test t2(10, 3.0); f(t1); return 0; }</pre>	

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Question # 2**[10 marks]**

Write down the definition of the following function of Class Matrix;

void resizeAndTranspose(int newRows, int newCols);

resize the calling object with newRows and newCols. And Copy pervious data in transpose form. If newRows or newCols are less than pervious skip extra data, if newRows or newCols are greater than pervious data set 0 to all new extra entries.