Review-Activity1-Introduction

Thursday, January 23, 2020

8:35 AM

Review Activity 1

Introduction to Algorithms and Data Structures

1) "An algorithm is a sequence of instructions" as a definition does not address three important aspects/properties of algorithm design. List the three missing aspects/properties.

Aspect2:	Aspect3:
//precisely defined instructions	//not a solution but a procedure for deriving solutions
<i>-</i>	//precisely defined

2) Data structures play an important role with respect to algorithm design. Explain that role.

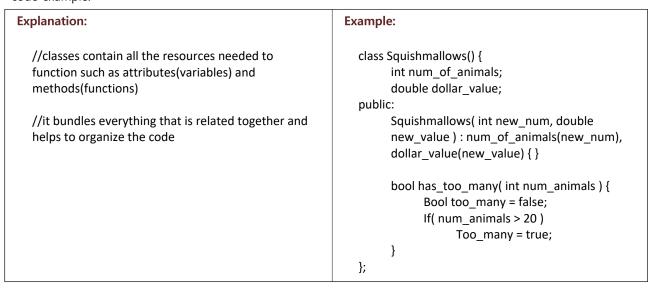
Explanation:

//they help organize data so that algorithms can easily manipulate their values //helps streamline the functionality of algorithms

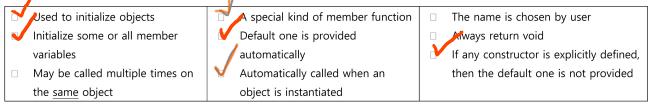
3) Abstract Data Type (ADT) exposes only the interface (the operations) to external users, and hides the internal organization of data items. Explain two benefits realized through this design.

Benefit1:	Benefit2:
//it prevents the code from being changed by an outsider either purposefully or unintentionally (because they don't understand what's going on)	//its neater code and easier to test and maintain

4) Explain the <u>encapsulation</u> principle of ADT design. Just stating the definition is not enough. Also, give a short code example.



5) In the list below, check all statements that apply to class constructors. That is, insert a checkmark for all the items that are true when it comes to constructors.



6) In the list below, check all statements that apply to class destructors. That is, insert a checkmark for all the items that are true when it comes to destructors.

