Hello, everyone.

This week we’re asked to discuss the topic of ADT’s (abstract data types) with respect to program modularity. Moreover, if we are to understand the advantages of this, we should know and understand what ADT’s are, as well as, what is meant by program modularity.

Let us start by looking at program modularity. In my opinion, the concept of modular programs is quite simple and I am pretty sure we have all had to deal with this concept, maybe even without us knowing we are dealing with it. Nonetheless, program modularity is a technique used in programming that implies that your code is broken up into small building blocks. Furthermore, depending on the language you use to implement this technique, you can achieve this by the use of functions or methods, if the language has Object-Oriented-Programming capabilities. The idea of this technique is that you write a function/method that does something specific in a program, however, if you put all the functions/methods together you get a complete program. In my opinion, this concept helps with debugging.

Now let’s have a look at what abstract data types are. In my opinion, the concept of abstract data types only come into play when working with data structures. Furthermore, the reason for this is because they play a key role in topic data structures. Simply put, abstract data types is skeleton of the data structure. It defines all the data that will be handled as well as all the operations that will be done by the data structure. An abstract data type only holds definitions and not implementations. Nonetheless, by combining abstract data types and program modularity you get a data structure.

The advantages of using abstract data types for program modularity is quite simple, by using abstract data types we can improve the abstraction of our code, keep bugs local, make changes in one place, encapsulating the code, and improve robustness of the software (Harwell, 2019).

**Words 328.**

**References**

Harwell, C. (2019, May 2). *Advantages of ADTs for program modularity.* Medium.com.https://chrisharwell94.medium.com/advantages-of-adts-for-program-modularity-4449f9f08b07