Some Important Topic Regarding P.A.2 Examination

Object Oriented Programming (OOP)

OOP approach binds the data and the functions into a single entity, such an entity is called object. Functions of an object can only access its data. Thus, object oriented programming language model around 'objects' rather than 'actions' and 'data' rather than 'logic'. OOP treats data as an important and critical element in the program development. It has data more closely to the functions that operate on it and thus avoids global access. In our real life, we encounter various objects like a chain, pen, mobile, TV, desk, etc. Thus, object oriented programming revolves around real life.

Main features of Object Oriented Programming

- ❖ OOp is more data oriented.
- ❖ Data and function are bind together.
- ❖ Data security exists.
- ❖ Object communicates through functions.
- ❖ Addition of new data and function is easy.
- ❖ OOp follows a bottom up approach and supports user defined data types. E.g. C++, Java, .NET, etc.

Data Hiding:- Data hiding is the member data and member functions are binded into a single unit then the data is not accessible to the outside world and only those functions, which are wrapped in the class can access it.

These functions are referred to as member functions and also provide the interface between the object's data and the program. This insulation of data from direct access by the program is called data hiding. In other word we can say that encapsulation is implemented through data hiding.

Inheritance: - Inheritance is the process by which objects of one calss acquire the properties of objects of another class. It supports the concept of hierarchical classification. The principle

behind inheritance is that each derived class shares common characteristics with the class from which it is derived.

Data Encapsulation:- Data encapsulation wrapping up the data and functions into a single unit is known as data encapsulation. It is the most fundamental concept of OOPs. The data is not accessible to the outside world and only those functions which are wrapped in that class can access it. These functions are referred to as member functions and also provide the interface between the objects data and the program.

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