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CSE. A.

Assignment No. (1) Unit No. (1) Date :

(1) Write an essay of object model?

A) Object model:-

The elements of the object oriented technology known as the object model.

The object model encompasses the principles of abstraction encapsulation, modularity, hierarchy, typing, concurrency and persistency.

Evaluation of the object model:-

* The shift in focus from programming in the small to programing in the large
* The evolution of high order programming languages
* Development of more expressive programmin languages advances the decompositon, abstraction and hierarchy

Evolution of the object model:-

In structured design model, build complex system using algorithm as their fundamental building block.

* An object oriented programming languages, class el object as basic building block.
* We would add to this list three more contributions to the foundation of object model.
* Advances in database models
* Research in artificial intelligence
* Advances in philosophy and cognitive science

Benefits of the object model:-

Object model introduces seven as new elements which are advantageous over traditional method of structured programming

* use of objut model encourages the reuse of software and entire designs, which results in the creati of reusable application frameworks

(2) Explain about the evolution of object model?

A Evolution of object model :-

* The shift in focus from programming in the small to large programing.
* The evolution of high-order programing languages.
* New industrial strength software systems are larger and more complex than their predecessors.
* Development of more expensive programming languages advances the decomposition, abstraction.
* wegnar has classified some of more popular programming languages in generations according to the language features

The generation of programming languages:

1. First Generation languages (1954-1958)
   - used for specific and Engineering expressions
   - Generally consists of mathematical expressions
2. Second generation languages (1959-1961)
   - Emphasized on algorithm abstraction
   - FORTRAN II - traversing features of subroutines, separate compilation
   - ALGOL 60 - traversing features of data,

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3 Third generation languages (1962-1970)
- Supports data abstraction
- Pascal simple successor to ALGOL 60
- simula - classes, data abstraction.

4. The generation Gap (1970-1980)
- C - efficient, small executables
- FORTAN 77 - ANSI standardization.

5 object oriented BOOM (1980-1990)
- small talk 80 - pure object oriented language.
- C++ - Derived from C and simula.
- Eiffel - Derived from ada & simula.

3, Discuss about the structure of the complexity?

A, Structure of complex systems:-

Systems with a set of parts are called as elements and a set of connections between these parts are called relations.

* These parts can be ordered or unordered
Ex: Parts of a car, organs in our body.

* Software might be reffered to as simple or complex depending upon their functionality and behaviours.

* Generally industrial strength software are more complex than those developed individually or by user developers

* Time and space are considered to be general complexities

* Additionally, confining integrity of hundreds of

thousands of records while allowing concurrent updates and queries (or) managing command and control of real-world entities like air traffic are also examples of complex systems.

* For example, in smart grids the physical layer is the power network together with its physical components
* while cyber-layer comprises the sensors, the local and distributed controllers, as well as the overall communication and compilation infrastructure
* The interaction between system components of complex systems is often formalised by networks (or) layers of networks.
* The network structure can be relatively fixed, but also may involve in time, depending on external (or) internal inputs (or) events.

4, What is an object? What are the foundation of object model?

Ans Object :- A object is a real-world element in an object oriented environment that may have a physical (or) conceptual existence.

* objects can be modelled according to the needs of the application

Foundations of the object model :-

An object is a real-world element in an object oriented. In structured design method, build complex system using algorithm as their

OOA (object oriented analysis):

During software requirement phase, requirement analysis and object analysis. It is a method of analysis that examines requirements from the perspective of classes and objects as related to problem domain.

OOD (object oriented design):-

During requirement phase, OOD involves understanding of the application domain and build an objed model

* Object oriented design is a method of design encompassing the process of objects oriented decomposition and anotation for depicting both logical and physical as well as static

OOP (object oriented programming)

During system implementation phase. it is a method of implementation in which programs are cooperate collection of objects, each of which represents an instance of some class and whose classes are all members of a hierarchy of classes united in inheritance relationships