

ASSIGNMENT:6TH

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SECTION: BSSE 6TH B

SUBMITTED TO MAM MANEEHA

Question 1: What is what is Z Specification and why we use it.

Answer:

Z- Specification is designed as a Set of schemes_ a box-shaped Structure that introduces variables, and Clarifies the relationship between these Variables. Schema is actually the official specific analogue of a subroutine for Programming language or Process. In Same way that processes and - Subroutines are Used to build a system Schemas are Used to setup formal Specification. Z specification is useful for those who find the requirements, those who implement programs to meet those requirements, those who test the consequences and those whose write instruction manuals for the system.

Question 2: Explain in detail about Z specification in formal methods.

Answer:

Z is a model oriented formal specification language based on Zermelo- frantel axiomatic set theory and first Order Predicale logic. It i s a mathematical Specification language with the help of which natural language requirements can be converted into mathematical form. A formal S/w specification is a statement expressed in a language whose vacabulery , Syntax and Semantics are formally defined. The Z notation as a strongly typed, mathematical, Specification language. It cannot be executed, interpreted or Compiled into a running program. It allows Specification to be decomposed into Small pieces called Schemas. The Z Specification describes the data model, system state and operations of the system. Z Specifications us useful for those who find the requirements.

Question 3:Explain Syntactical abbreviation with example.

Answer:

Agenda Cumple Contactos : PNOMBRE Cumple : NOMBRE FECHA
Contactos = dom Cumple

Inaciar Agenda Cumple Inaciar Agenda Cumple Agenda Cumple
Cumple = 0 Contactos = 0

Agregar cumple
 Δ Agenda cumple
 nombre ? : NOMBRE
 fecha ? : FECHA
 nombre ? contactos
 cumple = cumple \cup {(nombre? \rightarrow fech ?)}

Buscar cumple
 Agenda Cumple
 nombre ? : NOMBRE
 Fecha ! : FECHA
 nombre?
 contactos fecha
 != cumple (nombre?)

Recordatono
 Agenda Cumple hoy?
 : FECHA
 tarjetas! P NOMBRE
 tarjetas != {n : NOMBRE\Cumple(n)=hoy?}