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Formal Method.

Assignment No:01.

QUESTION:
Provide detail comparative Analysis of following Z-specificition Tool.

Formal method have been criticized for the limited availibility of tools to supports the software engineer in writing the formal specifiction and in conducting proof. Z is the widely used formal specifiction language and it is based on zermal set theory. It is used a mathematical notation that is similar to VDM and the visually striking schema calculus. Z is used for formal specifiation of software system and it was published as an JOS standard. There are several tool availibes to support the engineer in writing Z specifiation. There are widely selection of tools availibe.

ZTC:

The community of Z users (CZT) is an open source project that has developed a suite of Z tools including parsers and type checker.

CadiZ:

It is the set of free software tools that checks the syntactic and type correctness of Z specification. It support the interactive proofs of conjectures.

Z/EVES:

It is the graphical user interface that allow Z-specification to be entered, edited and analyed in their typest form and it support the analysis of specification. Z/EVES support almost the entire Z notation and interection with the tool is via its GUI. It runs on Linux and windows and its used for commercial, academic and education purpose.

QUESTION NO: 02.

Analysis of following VDM tools.

IFAD:

The IFAD Toolbox is a support tool for the VDM-SL tool for the VDM-SL specificidion language and its provide support for syntax and type checking an interpreter and debugger to execute and debug the specificidion and code generator to convert for VDM-SL to C++. It was orignally developed by IFAD in Denmark, but they later sold the toolbox to CSK in Japan, and it was later renamed to VDM-tools.

Overture Integrated Development:-

IDE is an open-source tool for formal modelling and analysis of VDM-SL specifiaction. It cover three dialects of VDM. It wase develop by community of volunteer on the Eclipse platform. The tool is intended to be industrial strength, supporting in describing abstract model in software development.