

CASE TOOLS

Learning Units

14.1 CASE tools and their importance

14.2 Some CASE tools and their use

Learning Goals

- What are CASE tools?
- Why are they important in systems analysis and design?
- When are they used?
- How are they used?

Motivation

- Industries routinely use CASE tools as productivity aid to reduce time to develop systems.
- A student should know what these tools are and how they are useful
- The intention of this module is not to make you an expert in the use of these tools but to make you aware about them and their importance in industrial practice

CASE Tools and their importance

- CASE tools stand for Computer Aided Software Engineering tools
- As the name implies they are computer based programs to increase the productivity of analysts
- They permit effective communication with users as well as other members of the development team.
- They integrate the development done during each phase of a system life cycle.
- They assist in correctly assessing the effects and cost of changes so that maintenance cost can be estimated.

Available CASE tools

- Commercially available systems provide tools (i.e computer program packages) for each phase of the system development life cycle. A typical package is Visual Analyst which has several tools integrated together.
- Tools are also in the open domain which can be downloaded and used. They do not usually have very good user interfaces.

Available CASE tools

- System requirements specification documentation tool
- Data flow diagramming tool
- System flow chart generation tool
- Data dictionary creation
- Formatting and checking structured English process logic

Available CASE tools

- Decision table checking
- Screen design for data inputting
- Form design for outputs.
- E-R diagramming
- Data base normalization given the dependency information

When are tools used

- Tools are used throughout the system design phase
- CASE tools are sometimes classified as upper CASE tools and lower CASE tools.
- The tools we have described so far are upper CASE tools
- Tools are available which will generate computer screen code from higher level descriptions such as structured English and decision tables, They are called lower CASE tools

Object Oriented System Design Tools

- Unified Modelling Language is currently the standard
- UML tool set is marketed by Rational Rose a company whose tools are widely used.
- This is an expensive tool and not in our scope in his course.

How to use the tools

- Most tools have a user's guide which is given as help files along with the tool
- Many have FAQ's and search capabilities
- Details on several open domain tools and what they do is given as notes.