Solution 3

List of 5 mistakes:

1. Incorrect identification in table Software System.

- Table originally identified records by name, version and reldate.
- Table now identifies records by name and version, or version and reldate.

2. Syntactical Error near Employee table, * symbol next to attribute e#. This symbol does not belong here, or anywhere else nearby.

3. Incorrect Association of Involvement to Programmer, Involvement should be an association class between Module and Programmer. Remove multiplicity 1..* as a result, as well as association label / role "Is-involved"

4. Missing generalization from class Software System; Enterprise Software, Educational Software and Engineering Software. Generalization should be of (t-e) type.

5. Association between Tool and Software System is many-to-many, without any association class. An association class must be added here. Tool Identification also incorrect, should be identifiable by name and version number together.

Modified Schema:

EMPLOYEE
- e#   ID1
- fname
- lname
- dob
- salary

SALPOS
- pname   ID
- salary   ID
- date-changed

* Changed-to ▷

(t-e)

ADMIN
- duties

PROGRAMMER

INVOLVEMENT
- when-compl[0..1]
- when-started

1..*   Works-on

1..*

(t-o)

MODULE
- name   ID1
- version   ID1
- fspecs

1..*

1..*

Consists-of ▷

PROGRAMMING

MAINTENANCE

fname

TOOL
- name   ID
- Version   ID
- company

Used-for ▽   1..*

TOOLS USED

1..*

◁ Consists-of

SOFTWARE SYSTEM
- name   ID1
- version   ID1   ID2
- reldate   ID2
- type-of-system

(t-e)

ENTERPRISE

EDUCATIONAL

ENGINEERING

△
Belongs-to

0..1

FUNCTION
- plang
- Source-code

Has▷   *

PARAMETER
- pname   ID
- type