

Figure C16: Case Study Two : Geometry Lesson One

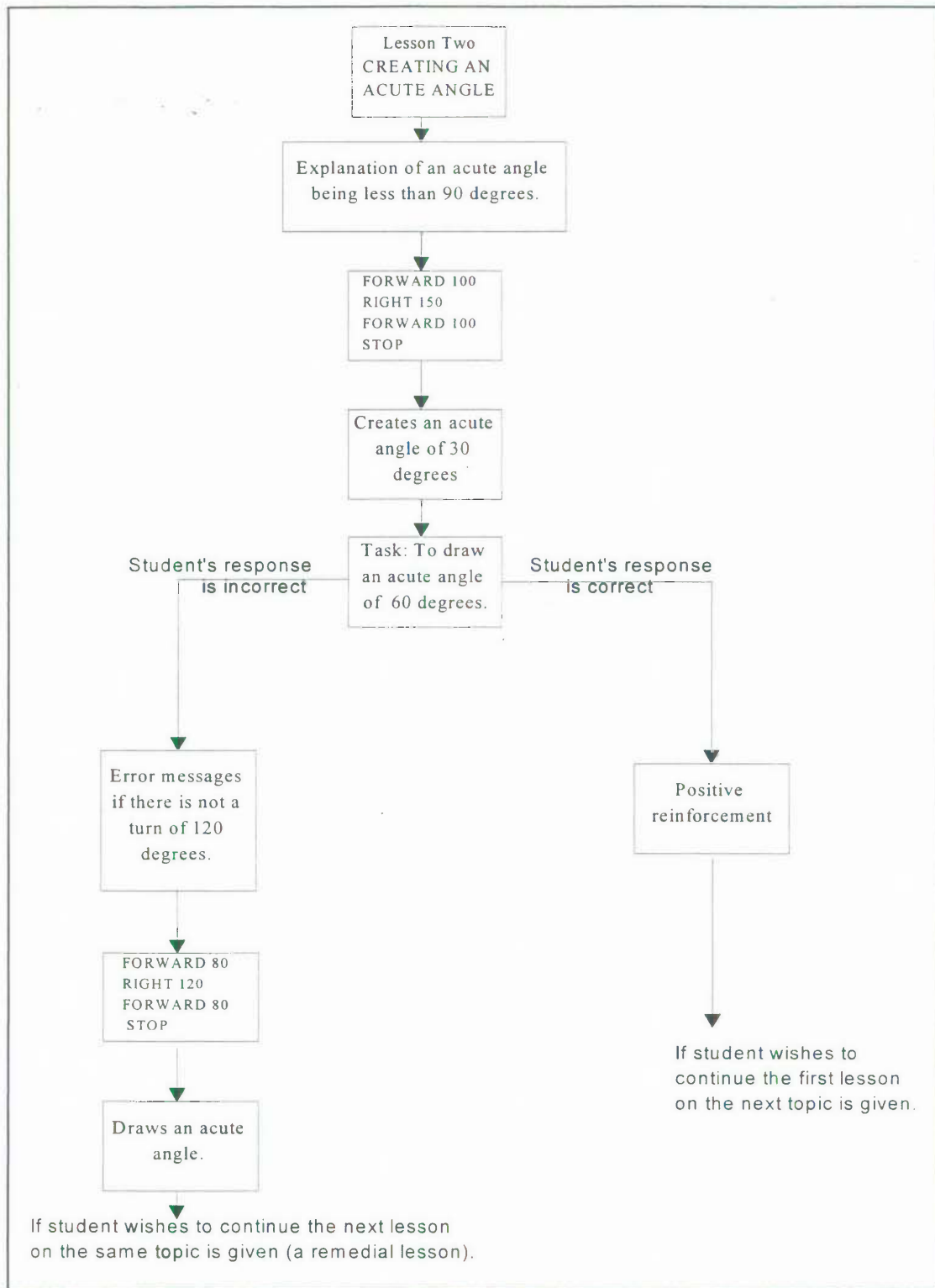


Figure C17: Case Study Two : Geometry Lesson Two

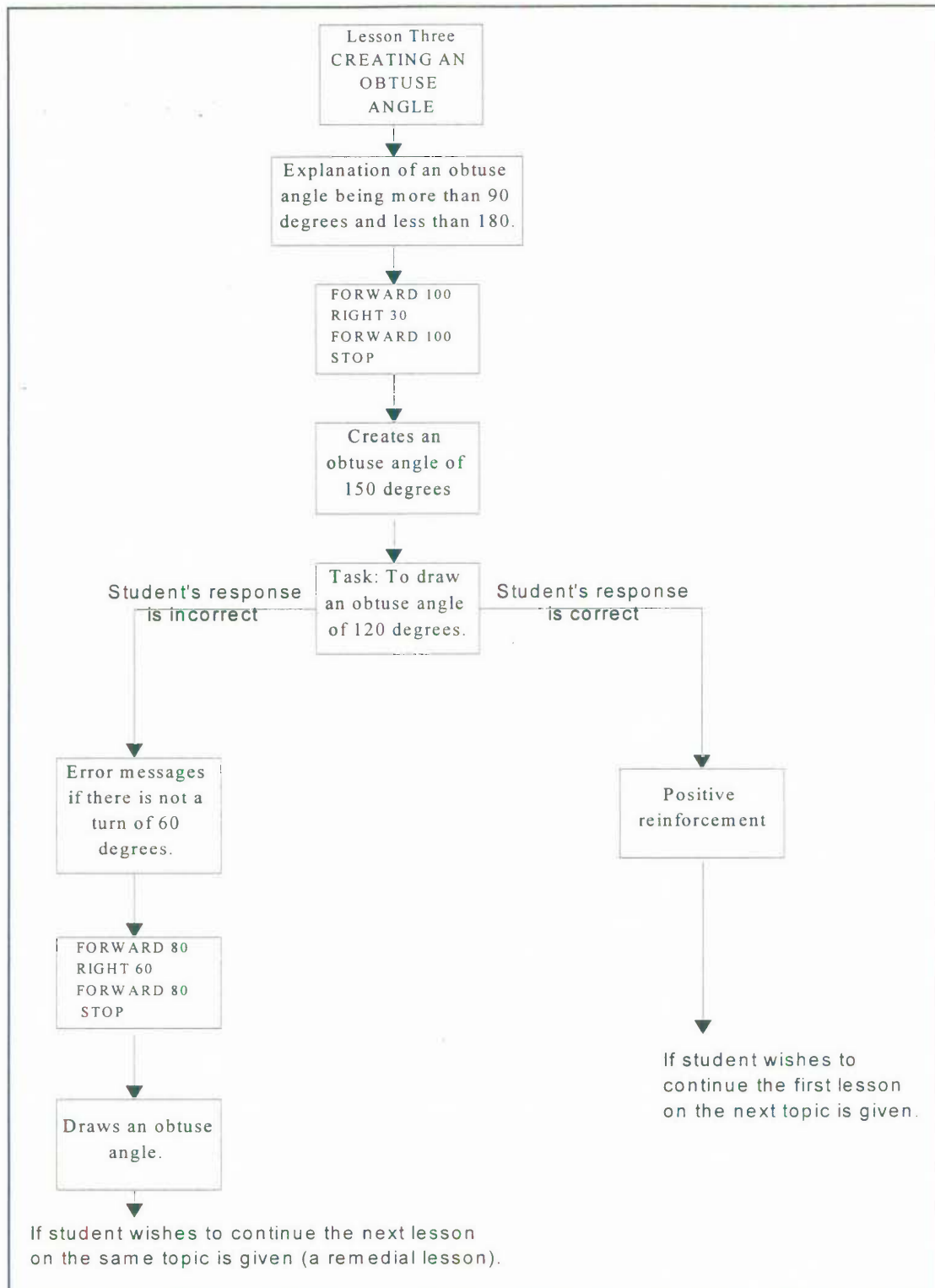


Figure C 18: Case Study Two : Geometry Lesson Three

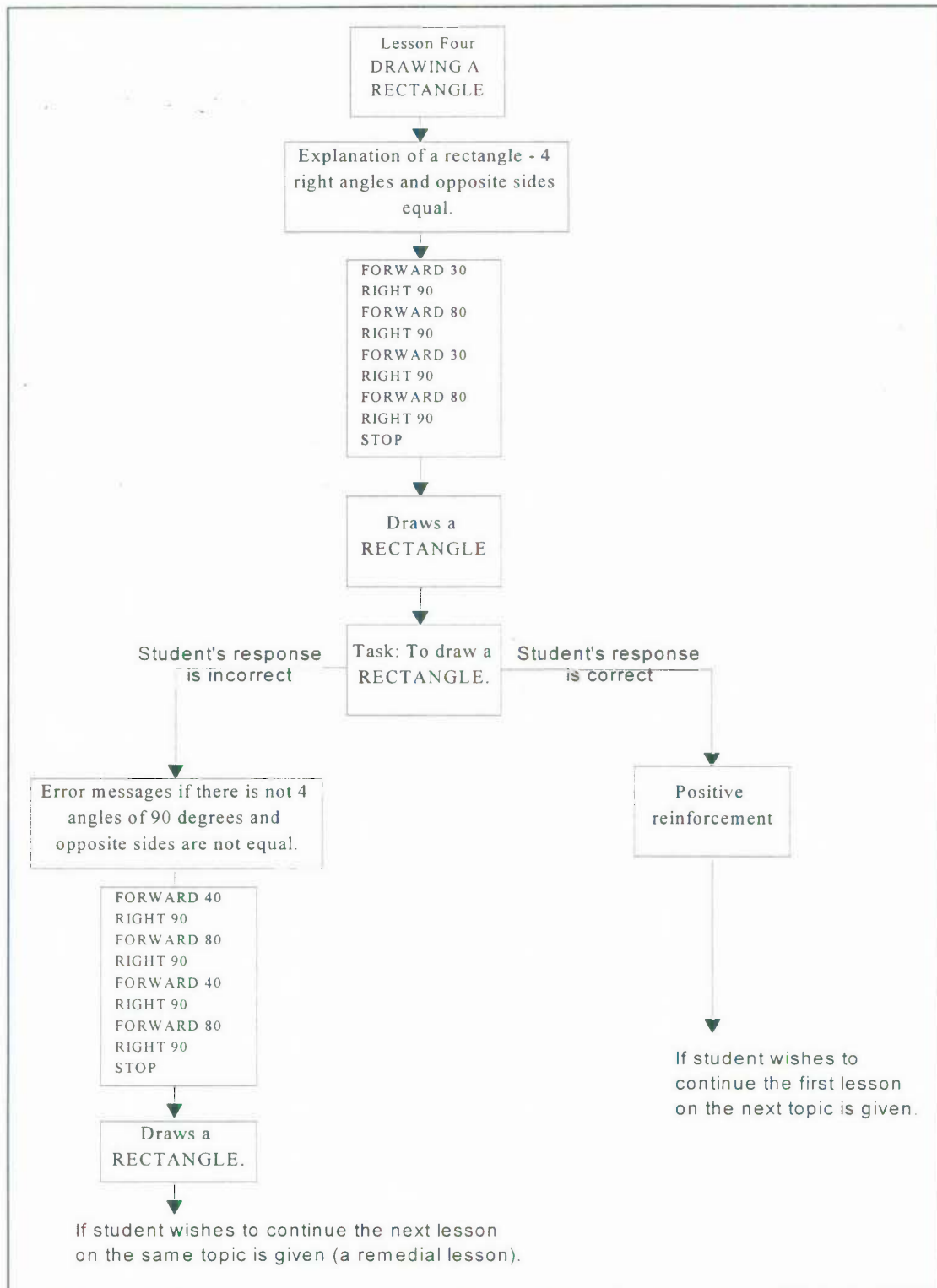


Figure C19: Case Study Two : Geometry Lesson Four

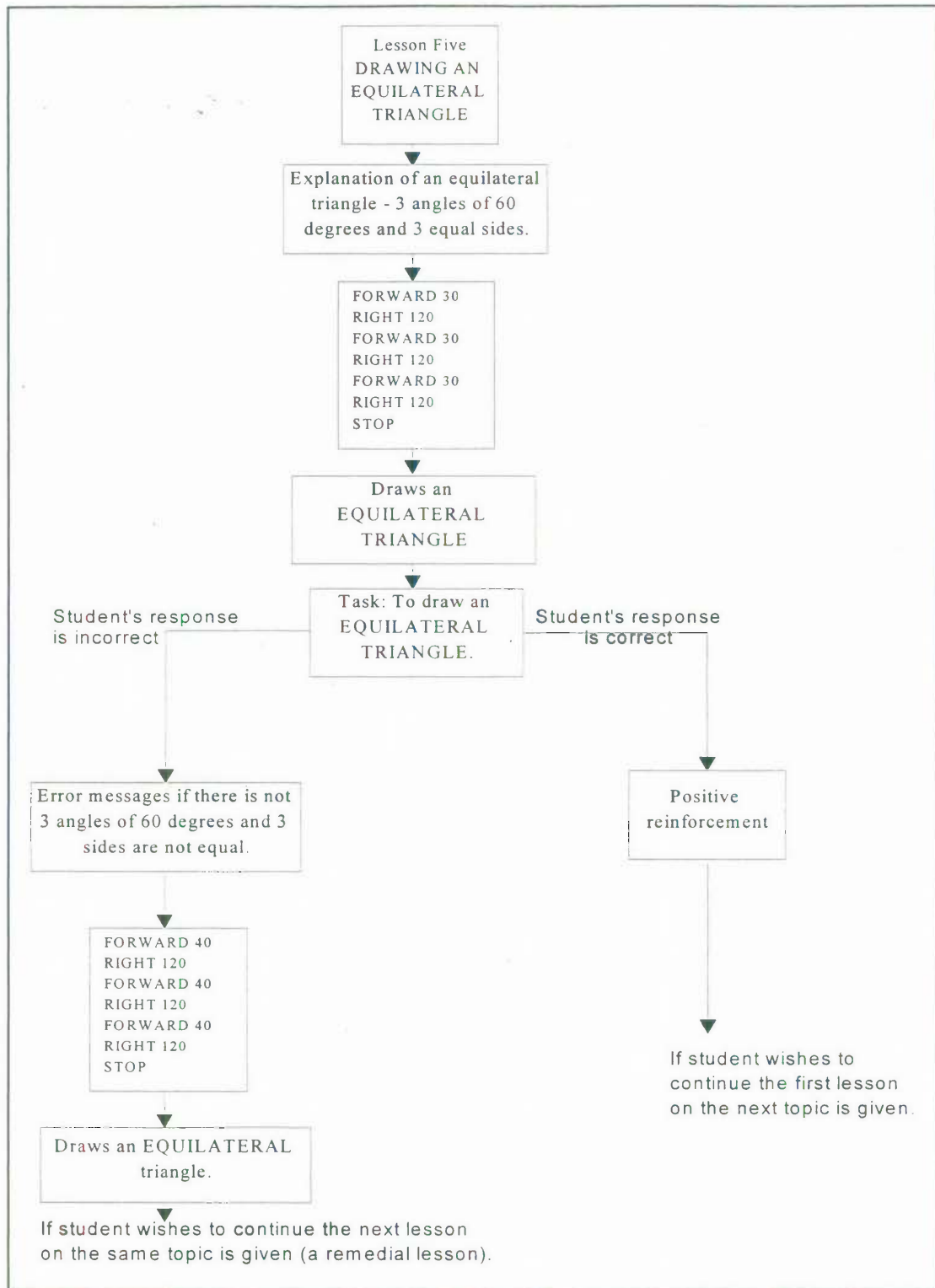


Figure C20: Case Study Two : Geometry Lesson Five

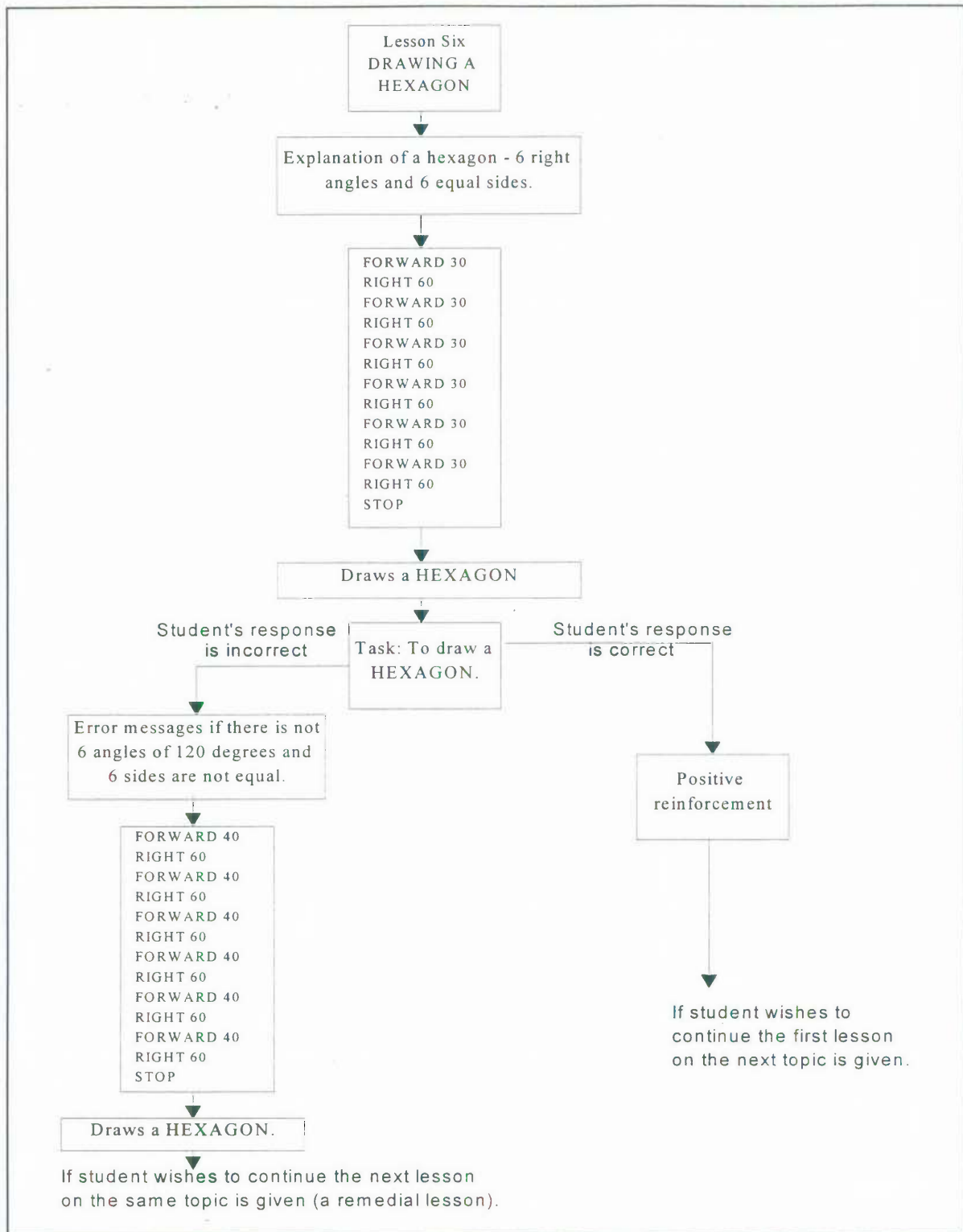


Figure C21: Case Study Two : Geometry Lesson Six

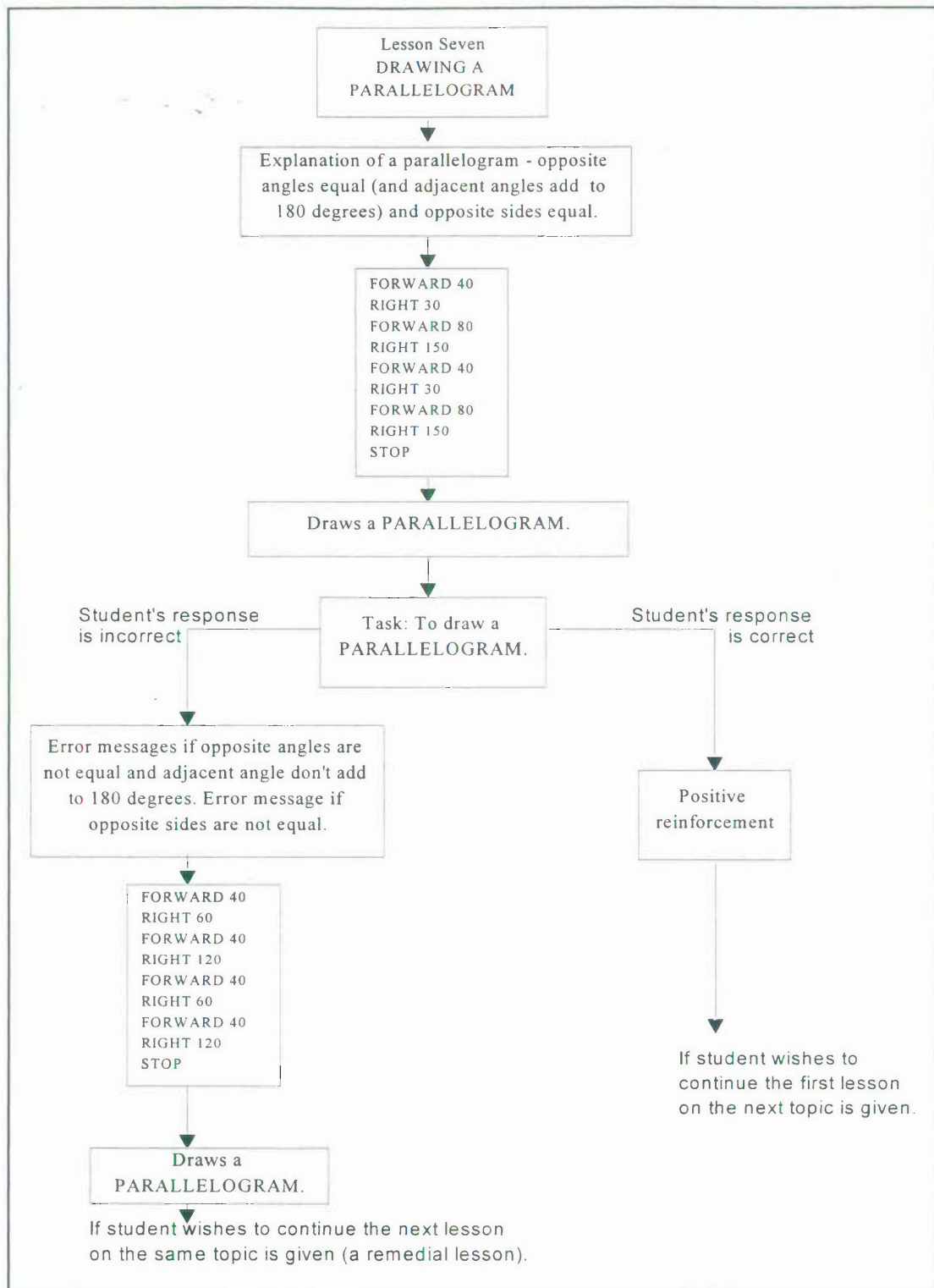


Figure C22: Case Study Two : Geometry Lesson Seven

Appendix D

Description of Databases

Database Name: **LOGO Commands**

Attribute Name	Type	Table Name	Description
LOGO command	String	LOGO Commands	Recognised symbol for a LOGO command.
Input String	String	LOGO Commands	Acceptable inputs for LOGO command.
Parameters	Integer	LOGO Commands	Number of parameters for the LOGO command.
Arithmetic Operator	String	Arithmetic Operators	Recognised arithmetic operator.
LOGO Editing Command	String	Editing Commands	Recognised command for editing a LOGO procedure.
ASCII Code	Integer	Editing Commands	Corresponding ASCII code for LOGO editing command.

Database Name: **Expert Solutions**

<u>Attribute Name</u>	<u>Type</u>	<u>Table Name</u>	<u>Description</u>
Lesson No	Integer	Expert Solutions	Unique Number assigned to a lesson frame.
Solutions	List	Expert Solutions	List of all possible solutions for the task within the lesson.
Lesson No	Integer	Solution Variables	Unique Number assigned to a lesson frame.
Variable Values	List	Solution Variables	List of default values for each variable in the expert solution. (Can be an empty list.)
Lesson No	Integer	Details of Sides	Unique Number assigned to a lesson frame.
Increase/Decrease	String	Details of Sides	Flags whether the sides are increasing or decreasing (usually used for spirals).
No of sides	List	Details of Sides	List of all sets of matching sides (eg, a rectangle would be 2,2)
True/False	Character	Details of Sides	True if all sides are equal, otherwise False.
Lesson No	Integer	Angle details	Unique Number assigned to a lesson frame.
Degrees	Integer	Angle Details	Sum of all turns (external angles). Used to indicate whether turtle lands up pointing in same direction as it started.
No of angles	List	Angle Details	List of all sets of matching sides (eg, a parallelogram would be 2,2)
True/False	Character	Angle Details	True if all angles are equal, otherwise False.

Database Name: **Lessons**

<u>Attribute Name</u>	<u>Type</u>	<u>Table Name</u>	<u>Description</u>
Lesson No	Integer	Example	Unique Number assigned to a lesson frame.
Line No	Integer	Example	Line no of text in the example.
Example Text	String	Example	Line of text for given line no.
Lesson No	Integer	Example Variables	Unique Number assigned to a lesson frame.
Variable Values	List	Example Variables	List of default values for each variable in the example. (Can be an empty list.)
Lesson No	Integer	Description	Unique Number assigned to a lesson frame.
Line No	Integer	Description	Line no of text in the description.
Description Text	String	Description	Line of text for given line no.
Lesson No	Integer	Task	Unique Number assigned to a lesson frame.
Line No	Integer	Task	Line no of text in the task.
Task Text	String	Task	Line of text for given line no.
Lesson No	Integer	Angle Error Messgae	Unique Number assigned to a lesson frame.
Line No	Integer	Angle Error Message	Line no of text in the first error message (related to angles).
Error message Text	String	Angle Error Message	Line of text for given line no.