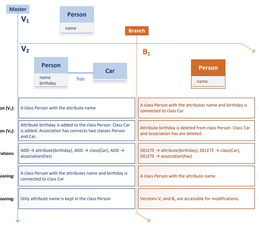
(37) Add New Class vs Add New Reference vs Add New Attribute

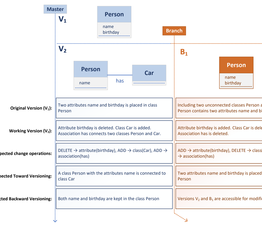
Versioning **Description:** New attribute, association, and class are added to the diagram in the master branch. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person with the attribute name	A class Person with the attributes name and birthday is connected to class Car	Current Version (V1)
Working Version (V2):	Attribute birthday is added to the class Person. Class Car is added. Association has connects two classes Person and Car.	Attribute birthday is deleted from class Person. Class Car and association has are deleted.	Working Branch Version (B1)
Expected change operations:	ADD -> attribute(birthday), ADD -> class(Car), ADD -> association(has)	DELETE -> attribute(birthday), DELETE -> class(Car), DELETE -> association(has)	Reversed Change Operations
Expected Toward Versioning:	A class Person with the attributes name and birthday is connected to class Car	A class Person with the attribute name	Expected Reverse Versioning
Expected Backward Versioning:	Only attribute name is kept in the class Person	Versions V1 and B1 are accessible for modifications.	Development lines

(38) Add New Class vs Add New Reference vs Delete an Attribute

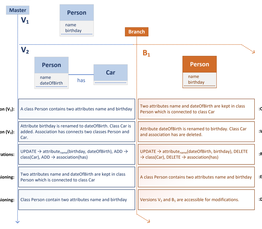
Versioning **Description:** New association and class are added to the diagram. An attribute is deleted. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Two attributes name and birthday is placed in class Person	Including two unconnected classes Person and Car. Person contains two attributes name and birthday.	Current Version (V1)
Working Version (V2):	Attribute birthday is deleted. Class Car is added. Association has connects two classes Person and Car.	Attribute birthday is added. Class Car is deleted. Association has is deleted.	Working Branch Version (B1)
Expected change operations:	DELETE -> attribute(birthday), ADD -> class(Car), ADD -> association(has)	ADD -> attribute(birthday), DELETE -> class(Car), DELETE -> association(has)	Reversed Change Operations
Expected Toward Versioning:	A class Person with the attributes name is connected to class Car	Two attributes name and birthday is placed in class Person	Expected Reverse Versioning
Expected Backward Versioning:	Both name and birthday are kept in the class Person	Versions V1 and B1 are accessible for modifications.	Development lines

(39) Add New Class vs Add New Reference vs Update an Attribute

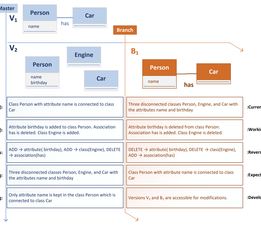
Versioning **Description:** New association and class are added to the diagram. A property of an attribute is changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person contains two attributes name and birthday	Two attributes name and dateOfBirth are kept in class Person which is connected to class Car	Current Version (V1)
Working Version (V2):	Attribute birthday is renamed to dateOfBirth. Class Car is added. Association has connects two classes Person and Car.	Attribute dateOfBirth is renamed to birthday. Class Car and association has are deleted.	Working Branch Version (B1)
Expected change operations:	UPDATE -> attribute(____birthday, dateOfBirth), ADD -> class(Car), ADD -> association(has)	UPDATE -> attribute(____dateOfBirth, birthday), DELETE -> class(Car), DELETE -> association(has)	Reversed Change Operations
Expected Toward Versioning:	Two attributes name and dateOfBirth are kept in class Person. Two disconnected classes Person and Car are exists	A class Person contains two attributes name and birthday	Expected Reverse Versioning
Expected Backward Versioning:	Class Person contain two attributes name and birthday	Versions V1 and B1 are accessible for modifications.	Development lines

(40) Add New Class vs Delete a Reference vs Add New Attribute

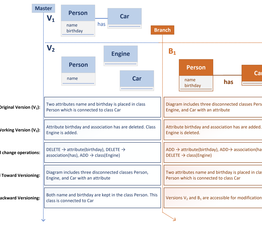
Versioning **Description:** New attribute and class are added. An existing association is deleted. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Class Person with attribute name is connected to class Car	Three disconnected classes Person, Engine, and Car with the attributes name and birthday	Current Version (V1)
Working Version (V2):	Attribute birthday is added to class Person. Association has is deleted. Class Engine is added.	Attribute birthday is deleted from class Person. Association has is added. Class Engine is deleted.	Working Branch Version (B1)
Expected change operations:	ADD -> attribute(birthday), ADD -> class(Engine), DELETE -> association(has)	DELETE -> attribute(birthday), DELETE -> class(Engine), ADD -> association(has)	Reversed Change Operations
Expected Toward Versioning:	Three disconnected classes Person, Engine, and Car with the attributes name and birthday	Class Person with attribute name is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	Only attribute name is kept in the class Person which is connected to class Car	Versions V1 and B1 are accessible for modifications.	Development lines

(41) Add New Class vs Delete a Reference vs Delete an Attribute

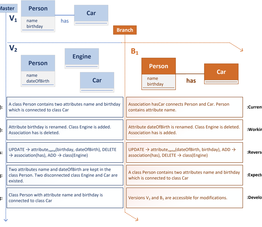
Versioning **Description:** An attribute and an existing association are deleted. A new class is added. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Two attributes name and birthday is placed in class Person which is connected to class Car	Diagram includes three disconnected classes Person, Engine, and Car with no attribute	Current Version (V1)
Working Version (V2):	Attribute birthday and association has are deleted. Class Engine is added.	Attribute birthday and association has are added. Class Engine is deleted.	Working Branch Version (B1)
Expected change operations:	DELETE -> attribute(birthday), DELETE -> association(has), ADD -> class(Engine)	ADD -> attribute(birthday), ADD -> association(has), DELETE -> class(Engine)	Reversed Change Operations
Expected Toward Versioning:	Diagram includes three disconnected classes Person, Engine, and Car with an attribute	Two attributes name and birthday is placed in class Person which is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	Both name and birthday are kept in the class Person. This class is connected to class Car.	Versions V1 and B1 are accessible for modifications.	Development lines

(42) Add New Class vs Delete a Reference vs Update an Attribute

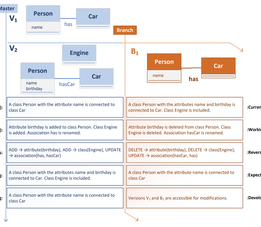
Versioning **Description:** A property of an attribute is changed. An existing association is deleted. A new class is added. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person contains two attributes name and birthday	Association hasCar connects Person and Car. Person contains attribute name.	Current Version (V1)
Working Version (V2):	Attribute birthday is renamed. Class Engine is added. Association has is deleted.	Attribute dateOfBirth is renamed. Class Engine is deleted. Association has is added.	Working Branch Version (B1)
Expected change operations:	UPDATE -> attribute(____birthday, dateOfBirth), DELETE -> association(has), ADD -> class(Engine)	UPDATE -> attribute(____dateOfBirth, birthday), ADD -> association(has), DELETE -> class(Engine)	Reversed Change Operations
Expected Toward Versioning:	Two attributes name and dateOfBirth are kept in the class Person. Two disconnected class Engine and Car are exists	A class Person contains two attributes name and birthday which is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	Class Person with attribute name and birthday is connected to class Car	Versions V1 and B1 are accessible for modifications.	Development lines

(43) Add New Class vs Update a Reference vs Add New Attribute

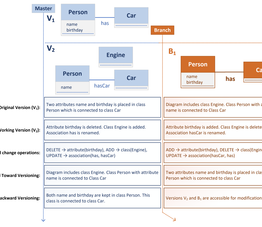
Versioning **Description:** A new attribute and class are added. A property of an association is changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person with the attribute name is connected to class Car	A class Person with the attributes name and birthday is connected to Car. Class Engine is included.	Current Version (V1)
Working Version (V2):	Attribute birthday is added to class Person. Class Engine is added. Association has is renamed.	Attribute birthday is deleted from class Person. Class Engine is deleted. Association hasCar is renamed.	Working Branch Version (B1)
Expected change operations:	ADD -> attribute(birthday), ADD -> class(Engine), UPDATE -> association(has, hasCar)	DELETE -> attribute(birthday), DELETE -> class(Engine), UPDATE -> association(hasCar, has)	Reversed Change Operations
Expected Toward Versioning:	A class Person with the attributes name and birthday is connected to Car. Class Engine is included.	A class Person with the attribute name is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	A class Person with the attribute name is connected to class Car	Versions V1 and B1 are accessible for modifications.	Development lines

(44) Add New Class vs Update a Reference vs Delete an Attribute

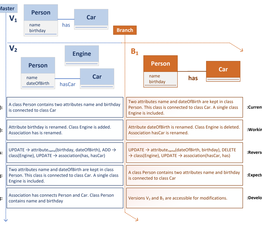
Versioning **Description:** An attribute is deleted. A new class is added. A property of an association is changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Two attributes name and birthday is placed in class Person which is connected to class Car	Diagram includes class Engine. Class Person with attribute name is connected to class Car	Current Version (V1)
Working Version (V2):	Attribute birthday is deleted. Class Engine is added. Association has is renamed.	Attribute birthday is added. Class Engine is deleted. Association hasCar is renamed.	Working Branch Version (B1)
Expected change operations:	DELETE -> attribute(birthday), ADD -> class(Engine), UPDATE -> association(has, hasCar)	ADD -> attribute(birthday), DELETE -> class(Engine), UPDATE -> association(hasCar, has)	Reversed Change Operations
Expected Toward Versioning:	Diagram includes class Engine. Class Person with attribute name is connected to class Car	Two attributes name and birthday is placed in class Person which is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	Both name and birthday are kept in class Person. This class is connected to class Car.	Versions V1 and B1 are accessible for modifications.	Development lines

(45) Add New Class vs Update a Reference vs Update an Attribute

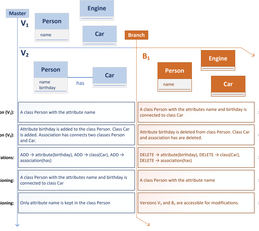
Versioning **Description:** A property of an attribute and association are changed. A new class is added. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person contains two attributes name and birthday	Two attributes name and dateOfBirth are kept in class Person which is connected to class Car. A single class Engine is included.	Current Version (V1)
Working Version (V2):	Attribute birthday is renamed. Class Engine is added. Association has is renamed.	Attribute dateOfBirth is renamed. Class Engine is deleted. Association hasCar is renamed.	Working Branch Version (B1)
Expected change operations:	UPDATE -> attribute(____birthday, dateOfBirth), ADD -> class(Engine), UPDATE -> association(has, hasCar)	UPDATE -> attribute(____dateOfBirth, birthday), DELETE -> class(Engine), UPDATE -> association(hasCar, has)	Reversed Change Operations
Expected Toward Versioning:	Two attributes name and dateOfBirth are kept in class Person. This class is connected to class Car. A single class Engine is included.	A class Person contains two attributes name and birthday is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	Association has connects Person and Car. Class Person contains name and birthday	Versions V1 and B1 are accessible for modifications.	Development lines

(46) Delete a Class vs Add New Reference vs Add New Attribute

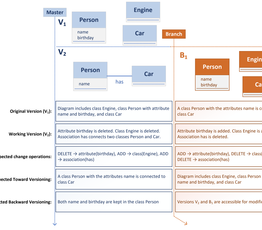
Versioning **Description:** New attribute and association are added to the diagram. An existing class is deleted. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person with the attribute name	A class Person with the attributes name and birthday is connected to class Car	Current Version (V1)
Working Version (V2):	Attribute birthday is added to the class Person. Class Car is added. Association has connects two classes Person and Car.	Attribute birthday is deleted from class Person. Class Car and association has are deleted.	Working Branch Version (B1)
Expected change operations:	ADD -> attribute(birthday), ADD -> class(Car), ADD -> association(has)	DELETE -> attribute(birthday), DELETE -> class(Car), DELETE -> association(has)	Reversed Change Operations
Expected Toward Versioning:	A class Person with the attributes name and birthday is connected to class Car	A class Person with the attribute name	Expected Reverse Versioning
Expected Backward Versioning:	Only attribute name is kept in the class Person	Versions V1 and B1 are accessible for modifications.	Development lines

(47) Delete a Class vs Add New Reference vs Delete an Attribute

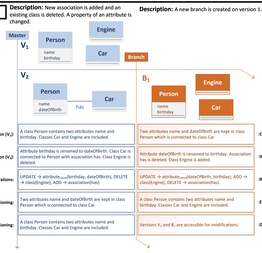
Versioning **Description:** New association is added while an existing class and attribute are deleted. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Diagram includes class Engine. Class Person with attribute name and birthday, and class Car	A class Person with the attributes name is connected to class Car	Current Version (V1)
Working Version (V2):	Attribute birthday is deleted. Class Engine is added. Association has connects two classes Person and Car.	Attribute birthday is added. Class Engine is deleted. Association has is deleted.	Working Branch Version (B1)
Expected change operations:	DELETE -> attribute(birthday), ADD -> class(Engine), ADD -> association(has)	ADD -> attribute(birthday), DELETE -> class(Engine), DELETE -> association(has)	Reversed Change Operations
Expected Toward Versioning:	A class Person with the attributes name is connected to class Car	Diagram includes class Engine, Class Person with attribute name and birthday, and class Car	Expected Reverse Versioning
Expected Backward Versioning:	Both name and birthday are kept in the class Person	Versions V1 and B1 are accessible for modifications.	Development lines

(48) Delete a Class vs Add New Reference vs Update an Attribute

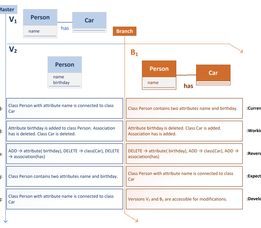
Versioning **Description:** New association is added and an existing class is deleted. A property of an attribute is changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person contains two attributes name and birthday. Classes Car and Engine are included.	Two attributes name and dateOfBirth are kept in class Person which is connected to class Car	Current Version (V1)
Working Version (V2):	Attribute birthday is renamed to dateOfBirth. Class Car is connected to Person with association has. Class Engine is deleted.	Attribute dateOfBirth is renamed to birthday. Association has is deleted. Class Engine is added.	Working Branch Version (B1)
Expected change operations:	UPDATE -> attribute(____birthday, dateOfBirth), DELETE -> class(Engine), ADD -> association(has)	UPDATE -> attribute(____dateOfBirth, birthday), ADD -> class(Engine), DELETE -> association(has)	Reversed Change Operations
Expected Toward Versioning:	Two attributes name and dateOfBirth are kept in class Person. This is connected to class Car.	A class Person contains two attributes name and birthday. Classes Car and Engine are included.	Expected Reverse Versioning
Expected Backward Versioning:	A class Person contains two attributes name and birthday. Classes Car and Engine are included.	Versions V1 and B1 are accessible for modifications.	Development lines

(49) Delete a Class vs Delete a Reference vs Add New Attribute

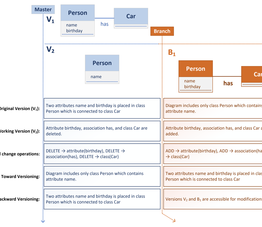
Versioning **Description:** New attribute is added. An existing association and class are deleted. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Class Person with attribute name is connected to class Car	Class Person contains two attributes name and birthday.	Current Version (V1)
Working Version (V2):	Attribute birthday is added to class Person. Association has is deleted. Class Car is deleted.	Attribute birthday is deleted. Class Car is added. Association has is added.	Working Branch Version (B1)
Expected change operations:	ADD -> attribute(birthday), DELETE -> class(Car), DELETE -> association(has)	DELETE -> attribute(birthday), ADD -> class(Car), ADD -> association(has)	Reversed Change Operations
Expected Toward Versioning:	Class Person contains two attributes name and birthday.	Class Person with attribute name is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	Class Person with attribute name is connected to class Car	Versions V1 and B1 are accessible for modifications.	Development lines

(50) Delete a Class vs Delete a Reference vs Delete an Attribute

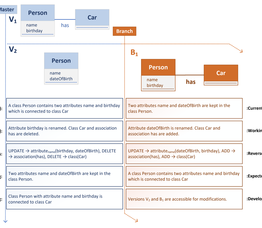
Versioning **Description:** An existing attribute, class, and association are deleted in the master branch. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Two attributes name and birthday is placed in class Person which is connected to class Car	Diagram includes only class Person which contains attribute name.	Current Version (V1)
Working Version (V2):	Attribute birthday, association has, and class Car are deleted.	Attribute birthday, association has, and class Car are added.	Working Branch Version (B1)
Expected change operations:	DELETE -> attribute(birthday), DELETE -> association(has), DELETE -> class(Car)	ADD -> attribute(birthday), ADD -> association(has), ADD -> class(Car)	Reversed Change Operations
Expected Toward Versioning:	Diagram includes only class Person which contains attribute name.	Two attributes name and birthday is placed in class Person which is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	Two attributes name and birthday is placed in class Person which is connected to class Car	Versions V1 and B1 are accessible for modifications.	Development lines

(51) Delete a Class vs Delete a Reference vs Update an Attribute

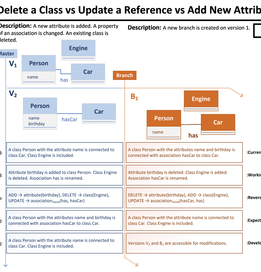
Versioning **Description:** A property of an attribute is changed. An existing class and association are deleted in the master branch. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Two attributes name and birthday is placed in class Person which is connected to class Car	Two attributes name and dateOfBirth are kept in the class Person.	Current Version (V1)
Working Version (V2):	Attribute birthday is renamed. Class Car and association has are deleted.	Attribute dateOfBirth is renamed. Class Car and association has are added.	Working Branch Version (B1)
Expected change operations:	UPDATE -> attribute(____birthday, dateOfBirth), DELETE -> class(Car), DELETE -> association(has)	UPDATE -> attribute(____dateOfBirth, birthday), ADD -> class(Car), ADD -> association(has)	Reversed Change Operations
Expected Toward Versioning:	Two attributes name and dateOfBirth are kept in class Person.	A class Person contains two attributes name and birthday which is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	Class Person with attribute name and birthday is connected to class Car	Versions V1 and B1 are accessible for modifications.	Development lines

(52) Delete a Class vs Update a Reference vs Add New Attribute

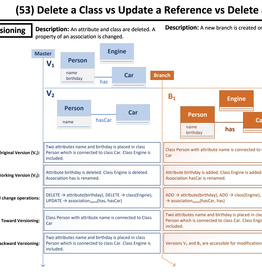
Versioning **Description:** A new attribute is added. A property of an association is changed. An existing class is deleted. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person with the attribute name is connected to class Car. Class Engine is included.	A class Person with the attributes name and birthday is connected with association hasCar to class Car.	Current Version (V1)
Working Version (V2):	Attribute birthday is added to class Person. Class Engine is deleted. Association has is renamed.	Attribute birthday is deleted. Class Engine is added. Association hasCar is renamed.	Working Branch Version (B1)
Expected change operations:	ADD -> attribute(birthday), DELETE -> class(Engine), UPDATE -> association(____has, hasCar)	DELETE -> attribute(birthday), ADD -> class(Engine), UPDATE -> association(____hasCar, has)	Reversed Change Operations
Expected Toward Versioning:	A class Person with the attributes name and birthday is connected with association hasCar to class Car.	A class Person with the attribute name is connected to class Car. Class Engine is included.	Expected Reverse Versioning
Expected Backward Versioning:	A class Person with the attribute name is connected to class Car. Class Engine is included.	Versions V1 and B1 are accessible for modifications.	Development lines

(53) Delete a Class vs Update a Reference vs Delete an Attribute

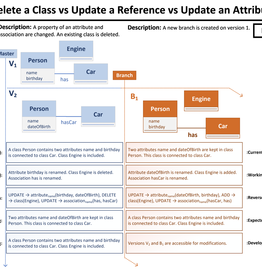
Versioning **Description:** An attribute and class are deleted. A property of an association is changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Two attributes name and birthday is placed in class Person which is connected to class Car. Class Engine is included.	Class Person with attribute name is connected to class Car	Current Version (V1)
Working Version (V2):	Attribute birthday is deleted. Class Engine is deleted. Association has is renamed.	Attribute birthday is added. Class Engine is added. Association hasCar is renamed.	Working Branch Version (B1)
Expected change operations:	DELETE -> attribute(birthday), DELETE -> class(Engine), UPDATE -> association(____has, hasCar)	ADD -> attribute(birthday), ADD -> class(Engine), UPDATE -> association(____hasCar, has)	Reversed Change Operations
Expected Toward Versioning:	Class Person with attribute name is connected to class Car	Two attributes name and birthday is placed in class Person which is connected to class Car. Class Engine is included.	Expected Reverse Versioning
Expected Backward Versioning:	Two attributes name and birthday is placed in class Person which is connected to class Car. Class Engine is included.	Versions V1 and B1 are accessible for modifications.	Development lines

(54) Delete a Class vs Update a Reference vs Update an Attribute

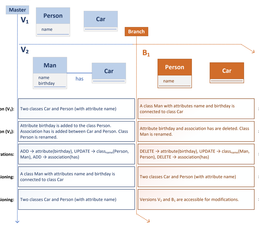
Versioning **Description:** A property of an attribute and association are changed. An existing class is deleted. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person contains two attributes name and birthday. Class Car is included.	Two attributes name and dateOfBirth are kept in class Person. This class is connected to class Car.	Current Version (V1)
Working Version (V2):	Attribute birthday is renamed. Class Car is deleted. Association has is renamed.	Attribute dateOfBirth is renamed. Class Car and Association has are added. Association has is deleted.	Working Branch Version (B1)
Expected change operations:	UPDATE -> attribute(____birthday, dateOfBirth), DELETE -> class(Car), UPDATE -> association(has, hasCar)	UPDATE -> attribute(____dateOfBirth, birthday), ADD -> class(Car), UPDATE -> association(hasCar, has)	Reversed Change Operations
Expected Toward Versioning:	Two attributes name and dateOfBirth are kept in class Person. This class is connected to class Car.	A class Person contains two attributes name and birthday. Class Car is included.	Expected Reverse Versioning
Expected Backward Versioning:	A class Person contains two attributes name and birthday. Class Car is included.	Versions V1 and B1 are accessible for modifications.	Development lines

(55) Update a Class vs Add New Reference vs Add New Attribute

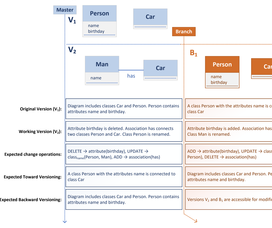
Versioning **Description:** New attribute and association are added to the diagram. A property of a class is changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Two classes Car and Person (with attribute name)	A class Man with attributes name and birthday is connected to class Car	Current Version (V1)
Working Version (V2):	Attribute birthday is added to the class Person. Association has is added between Car and Person. Class Person is renamed.	Attribute birthday and association has are deleted. Class Man is renamed.	Working Branch Version (B1)
Expected change operations:	ADD -> attribute(birthday), UPDATE -> class(____Person, Man), ADD -> association(has)	DELETE -> attribute(birthday), UPDATE -> class(____Man, Person), DELETE -> association(has)	Reversed Change Operations
Expected Toward Versioning:	A class Man with attributes name and birthday is connected to class Car	Two classes Car and Person (with attribute name)	Expected Reverse Versioning
Expected Backward Versioning:	Two classes Car and Person (with attribute name)	Versions V1 and B1 are accessible for modifications.	Development lines

(56) Update a Class vs Add New Reference vs Delete an Attribute

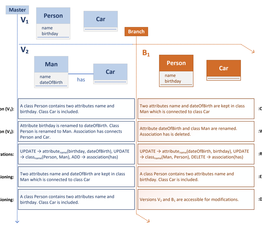
Versioning **Description:** New association is added while an existing attribute is deleted. A property of class is changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Diagram includes Car and Person. Person contains attributes name and birthday.	A class Person with the attributes name is connected to class Car	Current Version (V1)
Working Version (V2):	Attribute birthday is deleted. Association has connects two classes Person and Car. Class Person is renamed.	Attribute birthday is added. Class Man is renamed.	Working Branch Version (B1)
Expected change operations:	DELETE -> attribute(birthday), UPDATE -> class(____Person, Man), ADD -> association(has)	ADD -> attribute(birthday), UPDATE -> class(____Man, Person), DELETE -> association(has)	Reversed Change Operations
Expected Toward Versioning:	A class Person with the attributes name is connected to class Car	Diagram includes class Car and Person. Person contains attributes name and birthday.	Expected Reverse Versioning
Expected Backward Versioning:	Diagram includes class Car and Person. Person contains attributes name and birthday.	Versions V1 and B1 are accessible for modifications.	Development lines

(57) Update a Class vs Add New Reference vs Update an Attribute

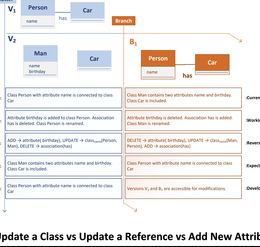
Versioning **Description:** New association is added. A property of an attribute and class are changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person contains two attributes name and birthday. Class Car is included.	Two attributes name and dateOfBirth are kept in class Man. Class Car is included.	Current Version (V1)
Working Version (V2):	Attribute birthday is renamed to dateOfBirth. Class Person and Car are renamed. Association has is added.	Attribute dateOfBirth and class Man are renamed. Association has is deleted.	Working Branch Version (B1)
Expected change operations:	UPDATE -> attribute(____birthday, dateOfBirth), UPDATE -> class(____Person, Man), ADD -> association(has)	UPDATE -> attribute(____dateOfBirth, birthday), UPDATE -> class(____Man, Person), DELETE -> association(has)	Reversed Change Operations
Expected Toward Versioning:	Two attributes name and dateOfBirth are kept in class Man. Class Car is included.	A class Person contains two attributes name and birthday. Class Car is included.	Expected Reverse Versioning
Expected Backward Versioning:	A class Person contains two attributes name and birthday. Class Car is included.	Versions V1 and B1 are accessible for modifications.	Development lines

(58) Update a Class vs Delete a Reference vs Add New Attribute

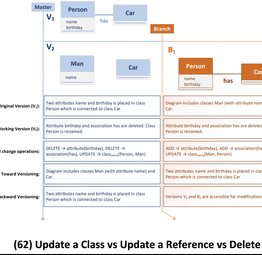
Versioning **Description:** New attribute is added. An existing association is deleted. A property of class is changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Class Person with attribute name is connected to class Car	Class Man contains two attributes name and birthday. Class Car is included.	Current Version (V1)
Working Version (V2):	Attribute birthday is added to class Person. Association has is deleted. Class Person is renamed.	Attribute birthday is deleted. Association has is added. Class Man is renamed.	Working Branch Version (B1)
Expected change operations:	ADD -> attribute(birthday), UPDATE -> class(____Person, Man), DELETE -> association(has)	DELETE -> attribute(birthday), UPDATE -> class(____Man, Person), ADD -> association(has)	Reversed Change Operations
Expected Toward Versioning:	Class Man contains two attributes name and birthday. Class Car is included.	Class Person with attribute name is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	Class Person with attribute name is connected to class Car	Versions V1 and B1 are accessible for modifications.	Development lines

(59) Update a Class vs Delete a Reference vs Delete an Attribute

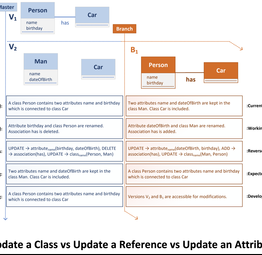
Versioning **Description:** An existing attribute and association are deleted in the master branch. A property of class is changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Two attributes name and birthday is placed in class Person which is connected to class Car	Diagram includes classes Man (with attribute name) and Car.	Current Version (V1)
Working Version (V2):	Attribute birthday and association has are deleted. Class Person is renamed.	Attribute birthday and association has are added. Class Man is renamed.	Working Branch Version (B1)
Expected change operations:	DELETE -> attribute(birthday), DELETE -> association(has), UPDATE -> class(____Person, Man)	ADD -> attribute(birthday), ADD -> association(has), UPDATE -> class(____Man, Person)	Reversed Change Operations
Expected Toward Versioning:	Diagram includes classes Man (with attribute name) and Car.	Two attributes name and birthday is placed in class Person which is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	Two attributes name and birthday is placed in class Person which is connected to class Car	Versions V1 and B1 are accessible for modifications.	Development lines

(60) Update a Class vs Delete a Reference vs Update an Attribute

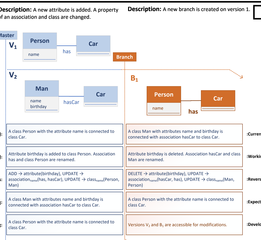
Versioning **Description:** A property of an attribute and class are changed. An existing association is deleted in the master branch. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person contains two attributes name and birthday which is connected to class Car	Two attributes name and dateOfBirth are kept in the class Man. Class Car is included.	Current Version (V1)
Working Version (V2):	Attribute birthday and class Person and association has are renamed. Association has is deleted.	Attribute dateOfBirth and class Man and association hasCar are renamed. Association has is added.	Working Branch Version (B1)
Expected change operations:	UPDATE -> attribute(____birthday, dateOfBirth), DELETE -> association(has), UPDATE -> class(____Person, Man)	UPDATE -> attribute(____dateOfBirth, birthday), ADD -> association(hasCar), UPDATE -> class(____Man, Person)	Reversed Change Operations
Expected Toward Versioning:	Two attributes name and dateOfBirth are kept in class Man. This class is connected to class Car using association hasCar.	A class Person contains two attributes name and birthday. Class Car is included.	Expected Reverse Versioning
Expected Backward Versioning:	A class Person contains two attributes name and birthday. Class Car is included.	Versions V1 and B1 are accessible for modifications.	Development lines

(61) Update a Class vs Update a Reference vs Add New Attribute

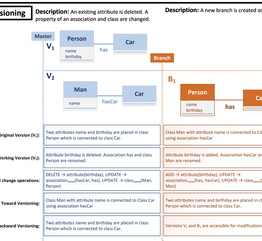
Versioning **Description:** A new attribute is added. A property of an association and class are changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	A class Person with the attribute name is connected to class Car	A class Man with attributes name and birthday is connected with association hasCar to class Car.	Current Version (V1)
Working Version (V2):	Attribute birthday is added to class Person. Association has and class Person are renamed.	Attribute birthday is deleted. Association hasCar and class Man are renamed.	Working Branch Version (B1)
Expected change operations:	ADD -> attribute(birthday), UPDATE -> association(____has, hasCar), UPDATE -> class(____Person, Man)	DELETE -> attribute(birthday), UPDATE -> association(____hasCar, has), UPDATE -> class(____Man, Person)	Reversed Change Operations
Expected Toward Versioning:	A class Man with attributes name and birthday is connected with association hasCar to class Car.	A class Person with the attribute name is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	A class Person with the attribute name is connected to class Car.	Versions V1 and B1 are accessible for modifications.	Development lines

(62) Update a Class vs Update a Reference vs Delete an Attribute

Versioning **Description:** An existing attribute is deleted. A property of an association and class are changed. **Description:** A new branch is created on version 1. **Branching**



Original Version (V1):	Two attributes name and birthday are placed in class Person which is connected to class Car.	Class Man with attribute name is connected to class Car using association hasCar	Current Version (V1)
Working Version (V2):	Attribute birthday is deleted. Association has and class Person are renamed.	Attribute birthday is added. Association hasCar and class Man are renamed.	Working Branch Version (B1)
Expected change operations:	DELETE -> attribute(birthday), UPDATE -> association(____has, hasCar), UPDATE -> class(____Person, Man)	ADD -> attribute(birthday), UPDATE -> association(____hasCar, has), UPDATE -> class(____Man, Person)	Reversed Change Operations
Expected Toward Versioning:	Class Man with attribute name is connected to class Car using association hasCar	Two attributes name and birthday are placed in class Person which is connected to class Car	Expected Reverse Versioning
Expected Backward Versioning:	Two attributes name and birthday are placed in class Person which is connected to class Car.	Versions V1 and B1 are accessible for modifications.	Development lines

(63) Update a Class vs Update a Reference vs Update an Attribute

Versioning **Description:** A property of an attribute, association, and class are changed. **Description:** A new branch is created on version 1. **Branching**