Modifications on iBench

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My modifications on iBench is as follows:

1 Mapping Primitives

- ADD
  1. Enhanced genTargetRels to pass types of attributes as argument to addRelation
  2. Enhanced genSourceRels to pass types of attributes as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class
  3. Enhanced to check whether keySize is greater than number of source relation attributes
- ADL
  1. Enhanced genTargetRels to pass types of attributes as argument to addRelation
  2. Enhanced genSourceRels to pass types of attributes as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class
  3. Enhanced to check whether keySize is greater than number of source relation attributes
- CP
  1. Enhanced genTargetRels to pass types of attributes as argument to addRelation
  2. Enhanced genSourceRels to pass types of attributes as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class
  3. Fixed keySize in chooseSourceRels
- DL
  1. Enhanced genTargetRels to pass types of attributes as argument to addRelation

2. Enhanced genSourceRels to pass types of attributes as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class
3. Fixed keySize in chooseTargetRels

- HP - (I don't really understand target reusability in this mapping primitive)

1. Fixed tries in chooseSourceRels and chooseTargetRels
2. Enhanced genTargetRels to pass types of attributes as argument to addRelation
3. Enhanced genSourceRels to pass types of attributes as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class

- ME

1. Fixed NumOfAttributes in chooseSourceRels
2. Fixed joinAttrs in chooseSourceRels
3. Fixed chooseTargetRels to correctly set numOfUseAttrs which is needed to generate source relations
4. Enhanced genTargetRels to pass types of attributes of target relation as argument to addRelation
5. Modified criteria for choosing target relation in chooseTargetRels
6. Enhanced genSourcRels to pass types of attributes of source relations as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class
7. Fixed primaryKeys in chooseSourceRels
8. Fixed numOfUseAtrrs in chooseSourceRels
9. **To Do**: perhaps we'll change the criteria for choosing target relation in chooseTargetRels

- MA

1. Implemented chooseSourceRels and chooseTargetRels
2. Fixed genTargetRels
3. Enhanced genTargetRels to pass types of attributes of target relations as argument to addRelation
4. Modified chooseSourceTargetRels
5. Enhanced genSourceRels to pass types of attributes of source relations as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class

6. **To Do**: perhaps we'll change the criteria for choosing target relation in chooseTargetRels

- OF
- SJ - (I don't understand some parts of the code of chooseSourceRels - chooseSourceRels does not work properly (there are some issues) - discuss it with Patricia)
  1. Fixed K (primary key); it had not been set correctly
  2. Fixed E (number of src relation attributes)
  3. Enhanced genTargetRels to pass types of attributes of target relations as argument to addRelation
  4. Implemented chooseTargetRels
  5. Enhanced genSourceRels to pass types of attributes of source relations as argument to addRelation
- SU
  1. Implemented chooseSourceRels and chooseTargetRels
  2. Enhanced genTargetRels to pass types of attributes of target relation as argument to addRelation
  3. Enhanced genSourceRels to pass types of attributes of source relation as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class
  4. **To Do**: perhaps we'll modify genTargetRels to generate primary key in target relation; refer to code (we have not done it yet because of STBenchmark)
- VP - (test target reusability)
  1. Implemented chooseSourceRels and chooseTargetRels
  2. Enhanced genTargetRels to pass types of attributes of target relation as argument to addRelation
  3. Modified chooseSourceRels to check primaryKey position
  4. Enhanced genSourceRels to pass types of attributes of source relation as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class
- VH - (test target reusability)
  1. Implemented chooseSourceRels and chooseTargetRels

2. Enhanced genTargetRels to pass types of attributes of target relation as argument to addRelation
3. Enhanced genSourceRels to pass types of attributes of source relation as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class

- VI - (test target reusability)
  1. Implemented chooseSourceRels and chooseTargetRels
  2. Enhanced genTargetRels to pass types of attributes of target relation as argument to addRelation
  3. Enhanced genSourceRels to pass types of attributes of source relation as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class

- VNToM - (test target reusability)
  1. Implemented chooseSourceRels and chooseTargetRels
  2. Enhanced genTargetRels to pass types of attributes of target relation as argument to addRelation
  3. Enhanced genSourceRels to pass types of attributes of source relation as argument to addRelation. To do that, I added new attribute called "targetReuse" to the related class
  4. Fixed attrsTypeLast in genTargetRels

2 Inclusion Dependencies

1. Implemented SourceInclusionDependencyGenerator and TargetInclusionDependencyGenerator classes
2. **To Do** we should define a new tag in .xml file for regular inclusion dependencies
3. **To Do** enhance classes to generate inclusion dependencies that have more than one attribute in left-hand and right-hand sides

3 .XSD, .XSML and .MAPJOB Writers

1. Implemented .MAPJOB writer in STBenchmark.java
2. Implemented .XSMLWriter. java to write .xsml files
3. Enhanced .XSDWriter.java to write primary keys and foreign keys in .xsd files

4 Random Configuration Files Generator