

Phase 1.Creating scheme

Innopolis University,
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Bykov Anton

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1 Task

We are needed to transform scheme from technical task into relations

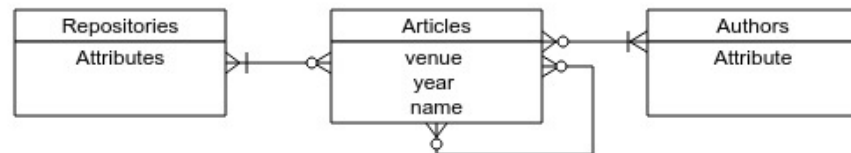


Figure 1: Structure from technical task

2 Relations transformations

There are three many-to-many relations. So, we are needed to transform them all into many-to-one relations.

2.1 Repositories-Articles

A repository can contain many articles. So, many-to-many field transforms into a table Contains:

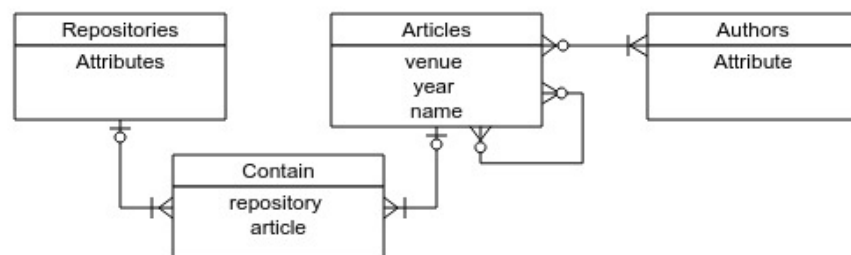


Figure 2: Structure from technical task

2.2 Articles-Articles

This relation stands for referencing. In article's bibliography can be many articles. So, it transforms from Article-Article many-to-many relation into:

1. Article-References one-to-many
2. Reference-Article many-to-one.

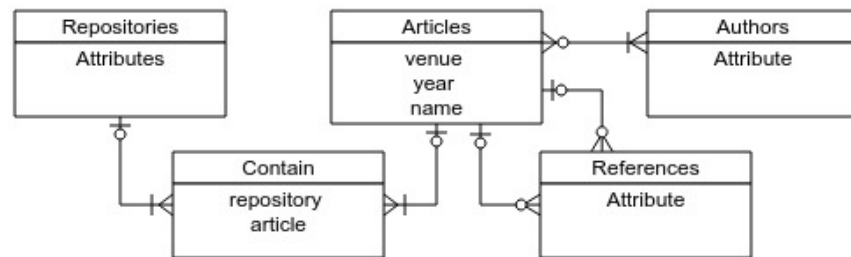
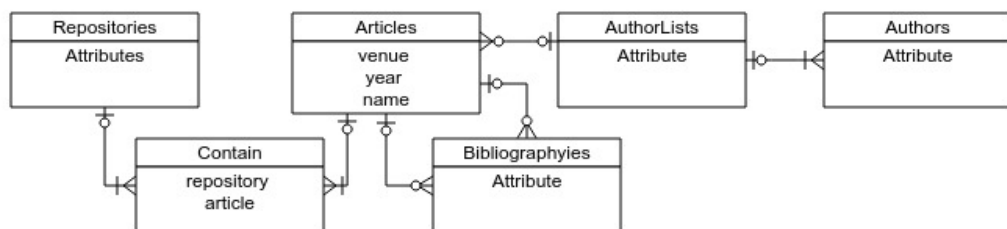


Figure 3: Our structure with Bibliography

2.3 Articles-Authors

There can be many authors of one article and each author may have many publication. So, we'll transform Articles-Authors relation into:

1. Article-AauthorList
2. AuthorList



3 Writing relations forms

Repositories(*id*,url,name)

Contain(*id*, repository_id, article_id)

Articles(*id*,venue, year, name)

Bibliography(*id*, article_id, cited_article_id)

AuthorList(*id*, article_id, author_id)

Authors(*id*, name)