



Computer-based-training

Erasmus+ program

Presentation by Sebastian Hübner and Leon Rose

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Preparation

Preparation

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Skype-sessions with Estonians

creating the requirements:

- number of answers?
- explanation?
- timer?
- categories?
- question import / export?

Skype-sessions with Estonians

requirements of the program:

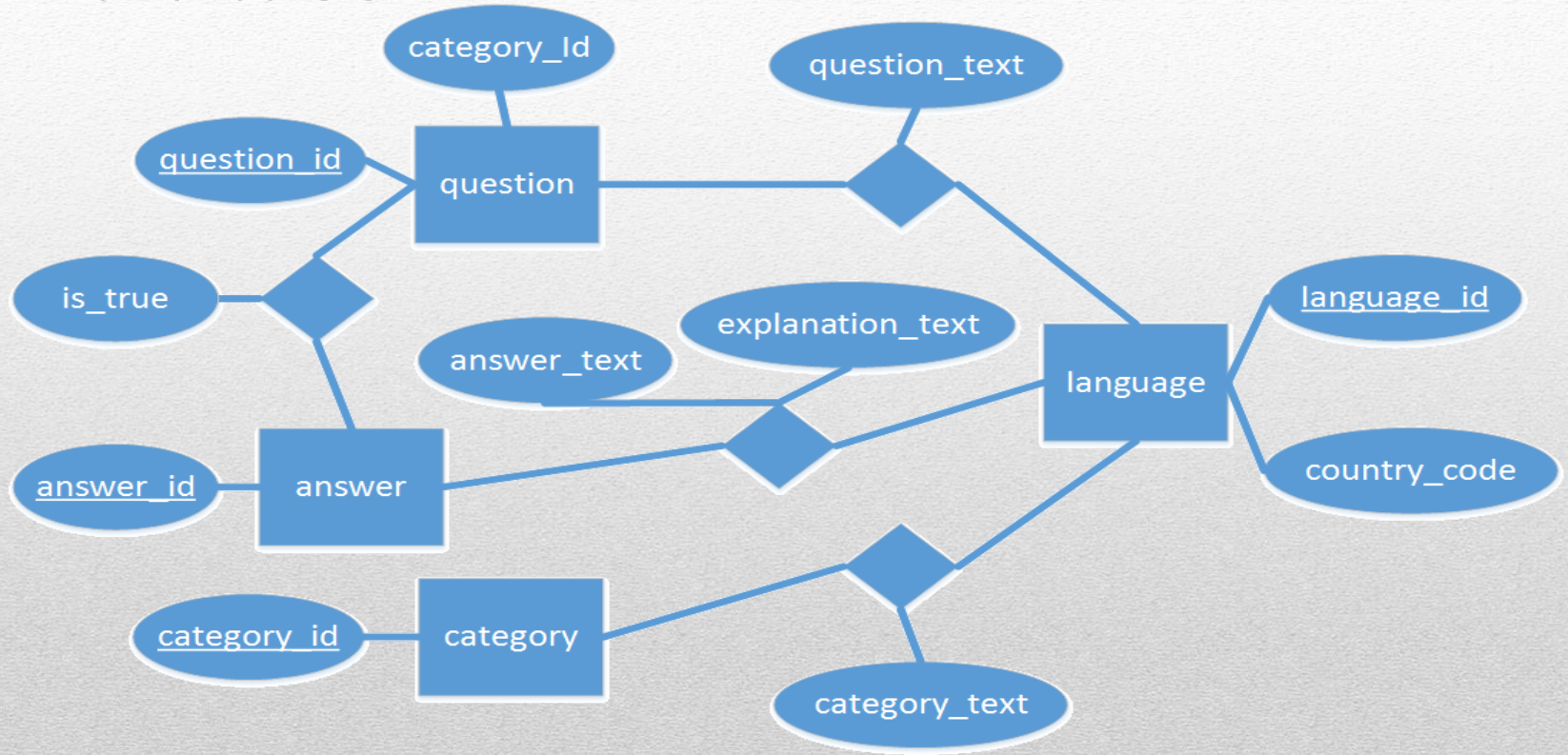
- multiple languages (DE, EE, EN)
- at least four answers per question
- explanation after every question
- timer with deactivation function
- question import / export via keyboard and CSV file

Database

requirements for the database:

- questions, answers and categories in different languages
- multiple answers per question
- explanation per answer

Database





Program presentation

Preparation

Program

Programming

Manage Questions

- four answers per question
- language limitation of 3 (removable)
- no category and question limitation
- every right answer has to have an explanation

Programming

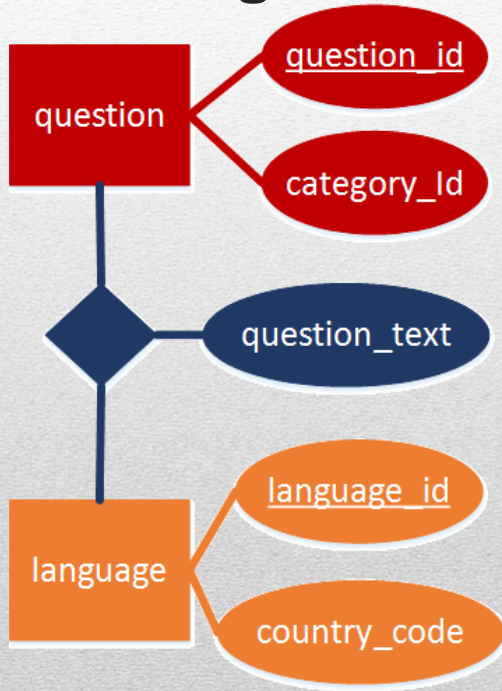
Preparation

Program

Programming

SQLITE Database

creating tables:



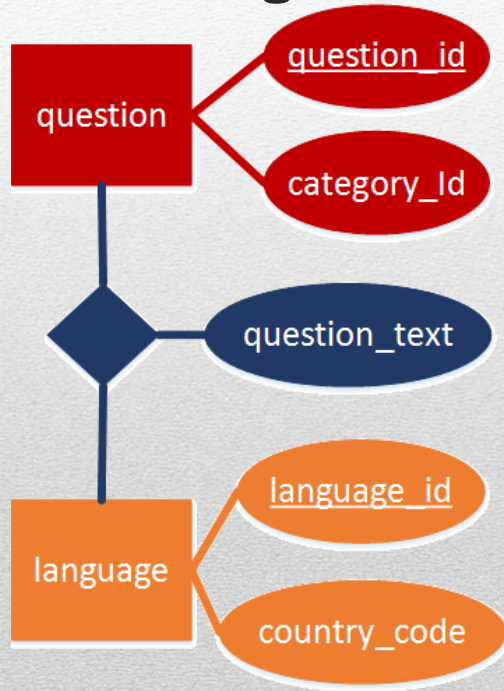
```
create table question(  
    question_id integer primary key autoincrement not null,  
    category_id integer not null  
);
```

```
create table question_lang(  
    question_id integer not null,  
    lang_id integer not null,  
    question_text varchar(250) not null,  
    primary key(question_id, lang_id)  
);
```

```
create table lang(  
    lang_id integer primary key autoincrement not null,  
    country_code varchar(50)  
);
```

SQLITE Database

inserting tests:



```
insert into question( 1, 1 );
```

```
insert into question_lang values  
    ( 1, 1, 'Was ergibt 1 + 1?' );  
insert into question_lang values  
    ( 1, 2, 'What results in 1 + 1?' );  
insert into question_lang values  
    ( 1, 3, 'Mis põhjustab 1 + 1?' );
```

```
insert into lang values( 1, 'DE' );  
insert into lang values( 2, 'EN' );  
insert into lang values( 3, 'EE' );
```

Computer-based-training

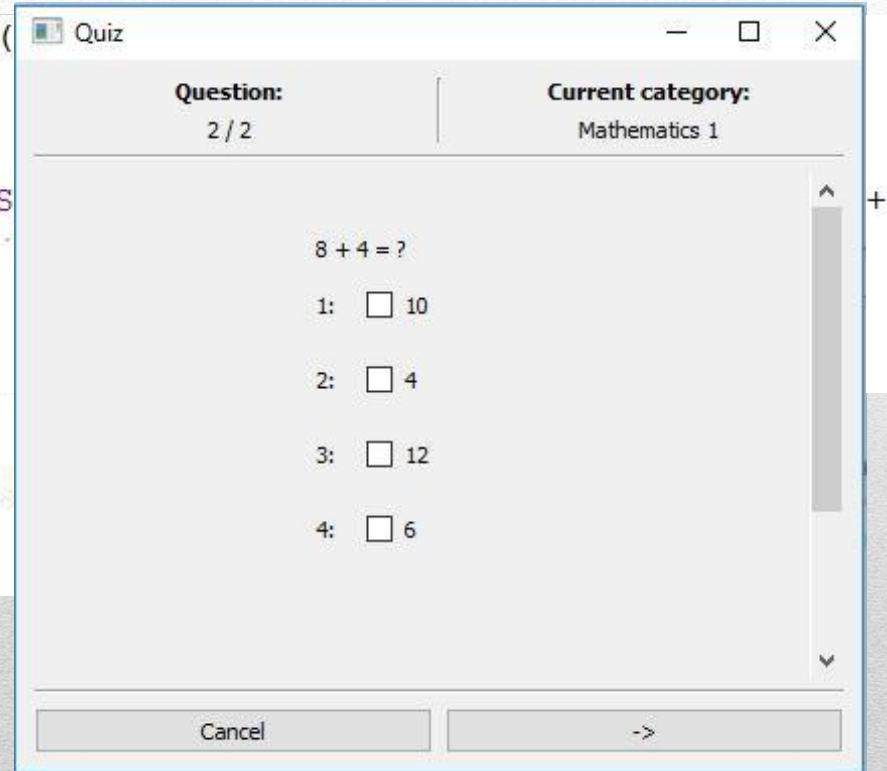
- programming using C/C++ in Qt
- using the MVC pattern



CBT | Model-View-Controller

```
QString DatabaseErasmusApp::getQuestionTextAt (
{
  QSqlQuery query( "SELECT question_text"
  ..... ".....FROM question_lang"
  ..... ".....WHERE lang_id = " + QS
  ..... ".....AND question_id =
  query.first();
  return query.value( 0 ).toString();
}
} {
  return db.getQuestionTextAt
}
```

View



Quiz

Question:	Current category:
2 / 2	Mathematics 1

8 + 4 = ?

1: 10

2: 4

3: 12

4: 6

Cancel ->



Thank you for your attention!

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