EECS 341 FINAL REPORT

A Database Approach to World War I

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Overview

The purpose of our project was to collect and store information on World War I to make accessing and utilizing the information easier. Therefore, we came up with project entitled A Database Approach to World War I. It is a web application that allows users to view information about World War I specifically. Originally we intended to provide information about World War I, World War II, and significant battles. However, for the sake of time constraints we chose to only import information for World War I. The project can be expanded to other wars and conflicts but this would include more work on the process of importing data. The database stores a wide variety of information about the conflicts including start date, end date, participants and more. Our web application lets users query this date in a number of ways. Some of the queries are longest or shortest battle for a given participant, battles in a specific location, number of wins by participant and more. The interface is straightforward and easy to navigate so that users and quickly get the information that they need from the database.

Application Requirements Specification

The application is an interface built with options for pre-made queries and to enter a battle participant to focus the queries on. It is built using Foundations, a JavaScript library that generates CSS formats to allow easy creation of a web interface.

The application is built in PHP, HTML, CSS, and JavaScript that allows the user a comfortable graphical user interface to run several pre-defined queries on our data. The landing page is a list of queries that can be run on our data. Once the user has selected a query type the page is redirected to results and a table of the query results is dynamically generated. The application's goals and specifications is to be able to run queries and display results. The landing page is hardcoded per select input and each input has a query type to run as its name attribute. When the form is submitted the results page knows which query type to run based on the name of the currently selected html element. The landing page also allows user input so there is a text box for location input and a dropdown box that has all participants the user can ask about. The drop down is dynamically generated by PHP. The code connects to the database, executes a guery that retrieves all of the participants from the participant table in the database and populates the drop down. The drop down then displays the name of the country/participant to the user and stores the id of the participant in the name attribute of the selected value from the dropdown. When the form is submitted the result PHP script can obtain which country is selected by looking at the value that is currently selected by the drop down. Several queries use the dropdown's contents and the contents of the textbox.

The result is generated by two PHP scripts. The first is just an array that is hardcoded with the SQL to run the queries and the title to display the results based on which query type is selected by the user. The array also stores the table header that is different per query

result. The other script calls methods to get the queries sometimes requiring a databse connection. The database connection is needed by the static array to run SQL sanitization on the user input. Once the result script has the SQL to run it creates and executes the query. If there are no results from the query the database object essentially displays an error to the user. This output is to avoid blank pages when something goes wrong and attempts to be robust by displaying what went wrong. Once the result is obtained each field in each tuple returned is looped through and HTML to display a table row per each result. Once the result is reached the actual HTML of the result page is displayed with the title and results table echoed from the PHP script - this allows the hardcoding of the HTML of the page and just injecting in the results once the page is loaded.

In an attempt to keep development time minimal and the interface clean we chose to use a JavaScript library that has predefined CSS and templates for each type of HTML element. This ensures the same look and feel across all pages of the interface and is easier to make sure all HTML and elements are properly formed and valid syntactically. We used a library called "foundations" that allows developers to mix and match display elements easily. The default theme was selected for its simplicity and style. This library also made a reasonable attempt at responsive design. Even though the results are displayed in tables the window can be resized and will move the table around to fit the screen the best which is a nice feature to have built into a library. The application's goals are to be really simple to use and to easily find results to queries; the technology selected to build the interface was designed to this end.

Database Requirements Specifications

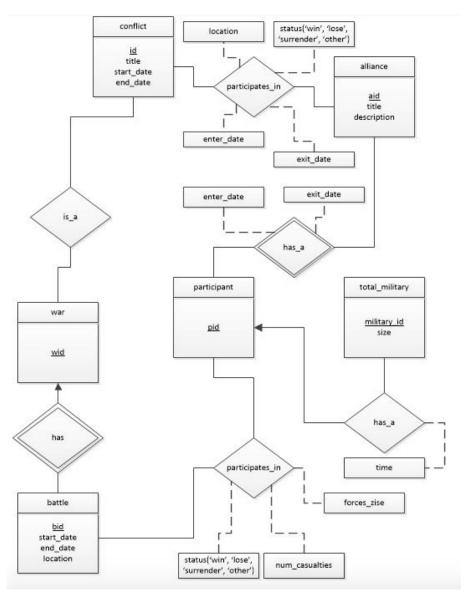
The database represents battles, wars and their participants. The primary unit of interest is the "battle" entity with attributes of start date, end date, location and a unique id number as the primary key. The "participant" entity is related to the battle via the relationship "participates_in_battle." The table for that relation contain the participant id, battle id, the size of the forces that participated in the battle from that participant and the casualties they sustained. An enum attribute of the relationship states whether the participant "won", "lost", "surrendered" or "other." This is the only way to determine if two participants are on the same side of a battle. Each "participant" has a participant id (pid), alliance id(aid), and name. All of these attributes are required. The participant also "has" multiple "military" entities associated with it. These all have a military and participant id, as well as size and the year that the military was this size, "size".

All participants are part of an "alliance" by way of their alliance id, the primary key. The "alliance" entity has its id attribute, a "description" and "title" attributes. The alliance entities participate in the "conflict" entity via the "participates_in_conflict" relation. The "participates_in_conflict" entity has attributes for the conflict id, the participant id, enter and exit date for the conflict, an enum for their role in the outcome, "status", with

the same possible inputs as battle, and a location attribute. It should be noted that there can be an alliance with only one participant meaning a participant (such as a country) can participate in a conflict independently. The word "conflict" was chosen to incorporate interactions that are not technically wars, such as the US "police action" more colloquially known as the Korean War. The "conflict" entity has an id, title and start and end dates. If the conflict is a war, then it can have battles associated through the "is_a_war" relation containing war and conflict ids. The "war" entity has a war id and can associated with an infinite number of battles. The "battle" entity has already been explained.

The constraints are such that the ids match up for all relations as a foreign key constraint. "Alliance" must have at least one associated "participant," but can have many more than that. Only one conflict can be each war, so each "conflict_is_a_war" instance will not share neither ids and either an be used as the primary key.

ER Data Model Design



Everything is many to many relationships except for the many to one from battle to war and the many to one from total_military to participant.

Relations

 war_has_battle :

Battle is a weak entity so in each row of battle there is the wid to specify which war it is a

part of. This wid must be an id in the table war. The relation is many to one from battles to war ie a war can have lots of battles but a battle can't belong to more than one war.

$war_is_a_conflict$:

conflict_id (part of primary key), integer, foreign key constraint to conflict primary key war_id (part of primary key), integer, foreign key constraint to war primary key

$participates_in_conflict$:

conflict_id (part of primary key), integer, foreign key constraint to conflict primary key alliance_id (part of primary key), integer, foreign key constraint to alliance primary key enter_date year only must be before exit_date can be null exit_date year only must be after enter_date can be null status enum of 'win', 'lose', 'surrender', 'other' default other location varchar can be null

$participates_in_battle$:

battle_id part of primary key, integer, foreign key constraint to battle primary key participant_id part of primary key, integer, foreign key constraint to participant force_size integer, can be null num_casualties integer, can be null status enum of 'win', 'lose', 'surrender', 'other' default other

$participant_has_a_total_military$:

time is a four digit year expressed as an integer there is a military_id and participant_id that must obey foreign key constraints the participant may have many associated total_military entities, but does not have to have any

Entities

conflict: id(primary key), start_date, end_date, location
id is an integer, simple, unique
start_date and end_date are years, simple
location is a String, simple

alliance: alliance_id (primary key), title, description alliance_id is an integer, simple, unique title is a String, simple description is a String, simple

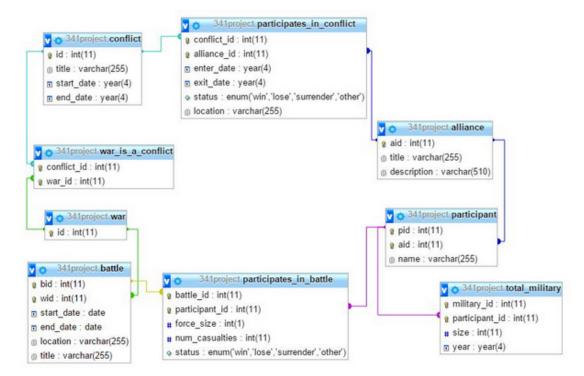
participant: pid (primary key), name (not shown above) pid is an integer, simple, unique name is a String, simple

total_military: military_id (primary key), total_size military_id is an integer, simple, unique total_size is an integer, simple

battle: bid, start_date, end_date, location bid is an integer, simple, unique start_date and end_date are dates in the SQL date format, start_date < end_date location is a String

war: wid wid is an integer, simple, unique

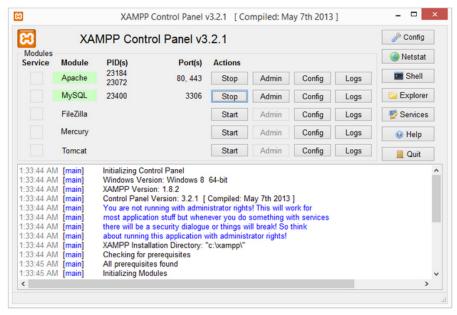
Transforming the ER Model to the Relational Model



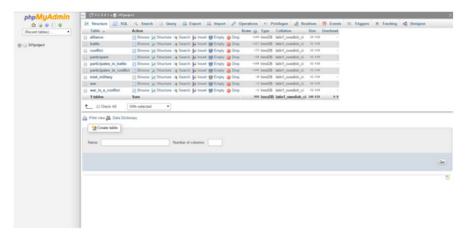
Creating the Database

We used XAMPP with MySQL. The XAMPP interface is very easy to use. We downloaded and installed all the necessary software, MYSQL is included with XAMPP. The GUI in phpMyAdmin allows very easy addition of tables and tuples. XAMPP is a full server stack for local web testing. XAMPP includes Apache, PHP, MySQL, FileZilla, Mercury version control, and Tomcat. This application only utilizes the Apache, PHP, and MySQL components of the stack. The HTML and PHP pages for the interface are stored in a folder in the XAMPP install and Apache serves them as functioning webpage. PHP 5 is installed on the server and MySQL comes with phpMyAdmin as an interface to the databases. phpMyAdmin is an excellent interface and it was easy to create tables and foreign key constraints.





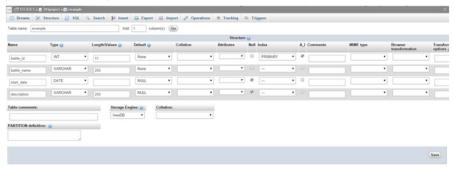
Here is the home screen for the "341-project" database showing all of the tables.



Adding a table is as easy in typing in the name and the number of columns:



The next page displays the attributes about each attribute/field/column in the table. From here the name, type, length/values(for enums), default values, auto incrementing, primary keys, nullable values, and other attributes can be set.



Once the table has been created you can view and alter the structure you can view the attributes for each table.



From the above screen you can click "Relation View" (boxed above) and that is where you can set foreign keys for the attributes that are primary keys, or have indexes. Each attributes with a foreign key constraint has to have an index.



The phpMyAdmin SQL dump of create table commands and the foreign key constraints is in Appendix D.

SQL Queries and an Exercise in Relational Algebra and Tuple Relational Calculus

Longest/Shortest Battle

Description:

Select from the database the battle with the most/least number of days from the start date to the end date.

SQL:

```
SELECT b.start_date, b.end_date, b.title, b.location, DATEDIFF(b.end_date, b.start_date) as num_days FROM battle as b WHERE DATEDIFF(b.end_date, b.start_date) IN (SELECT MAX(DATEDIFF(b.end_date, b.start_date)) as num_days FROM battle as b);
```

Alternatively:

```
SELECT b.start_date, b.end_date, b.title, b.location, DATEDIFF(b. end_date, b.start_date) as num_days FROM battle as b ORDER BY DATEDIFF(b.end_date, b.start_date) DESC LIMIT 1;
```

However this limits the query to only display one if there are two battles with the same number of days both being the highest.

Tuple Relational Calculus:

```
 \{t^{(4)}|(\exists b)(battle(b) \land b[start\_date] = t[start\_date] \land b[end\_date] = t[end\_date] \land b[title] = t[title] \land b[location] = t[location] \land \neg((\exists b2)(battle(b2) \land b2[bid] \neq b[bid] \land (b[end\_date] - b[start\_date])) \}
```

$Relational\ Algebra:$

 $\Pi_{start_date,end_date,title,location,(end_date-start_date)asnum_days}(i_dG_{Max(end_date-start_date)}(battle))$

Country Pair Number of Battles

Description:

List of pairs of countries that fought on the same side in a battle and the number of battles for which they fought together

SQL:

```
SELECT pl.name as 'Participant_l', p2.name as 'Participant_2', COUNT(pl.battle_id) as 'Number_of_Battles_Fought_Together' FROM

(SELECT * FROM (participates_in_battle as pib LEFT JOIN participant as p ON p.pid = pib.participant_id)) as pl, (SELECT * FROM (participates_in_battle as pib LEFT JOIN participant as p ON p.pid = pib.participant_id)) as p2

WHERE pl.pid < p2.pid AND pl.battle_id = p2.battle_id AND (pl.aid = p2.aid OR pl.status = p2.status) GROUP BY pl.name, p2.name

Tuple Relational Calculus:

\{t^{(3)}|(\exists p1)(\exists p2)(participant(p1) \land participant(p2) \land p1.pid < p2.pid \land (p1.aid = p2.aid \lor p1.status = p2.status) \land p1[name] = t[Participant1] \land p2[name] = t[Participant2] \land ((\exists b1)(\exists b2)(participates_in_battle(b1) \land participates_in_battle(b2) \land b1[battle_id] = b2[battle_id] \land b1[participant_id] = p1[pid] \land b2[participant_id] = p2[pid] \land (\exists s)(battle(s) \land s[bid] = b1[battle_id] \land b1[participant_id] = p1[pid] \land b2[participant_id] = p2[pid] \land (\exists s)(battle(s) \land s[bid] = b1[battle_id] \land b1[participant_id] = p2[pid] \land (\exists s)(battle(s) \land s[bid] = b1[battle_id] \land b1[participant_id] = p2[pid] \land (\exists s)(battle(s) \land s[bid] = b1[battle_id] \land b1[battle_id] \land b2[battle_id] \land
```

```
t[title] = s[title]))
  Relational\ Algebra:
            \Pi_{p1.name,p2.name,Count(p1.battle\_id)}(p1.name,p2.name)G_{Count(p1.name)}
  (\sigma_{p1.bid=p2.bid}((\rho_{p1}(participates\_in\_battle\bowtie_{participant.pid=participates\_in\_battle.participant\_id} participant))
                                                    \bowtie_{p1.pid < p2.pid \land (p1.aid = p2.aid \lor p1.status = p2.status)} (\rho_{p2}(participates\_in\_battle))
                                                                                                                                             \bowtie_{participant.pid=participates\_in\_battle.participant\_id} participant)) (1)
  List Battles on User Input
  Description:
  A dynamic query example: List the battles for a given participant
  SQL:
SELECT p.name, b.title, b.location, pib.num_casualties, pib.
                        status FROM participant as p, participates_in_battle as pib,
                        battle as b WHERE pib.participant_id = p.pid AND p.pid = "
                      USERINPUT" AND pib.battle_id = b.bid;
   Tuple Relational Calculus:
  \{t^{(2)}|(\exists p)(participant(p) \land ((\exists b)(participates\_in\_battle(b) \land b[battle\_id] = p[pid] \land p[name] = battle(b) \land b[battle\_id] = battle(b) \land b[batt
  t[name] \land b[status] = 'win' \land p[name] = 'USERINPUT' \land ((\exists s)(battle(s) \land b[battle\_id] = 'win') \land ((\exists s)(battle(s) \land b[battle] = 'win') \land ((\exists s)(battle] = 'win') \land ((\exists 
  s[bid] \wedge s[title] = t[title])))))
  Relational\ Algebra:
            \Pi_{participant.name,battle.title,battle.location,participates\_in\_battle.num\_casualties}
                                                                                             (\sigma_{participant.name='USERINPUT'}((participates\_in\_battle)))
                                                                                        \bowtie_{participates\_in\_battle.participant\_id=participant.pid}\ participant)
                                                                                                                                                                                                                         \bowtie_{participates\_in\_battle\_battle\_id=battle\_bid} battle)) (2)
  Most Battles Won
  Description:
```

Find the participant that has the most number of battles won

SQL:

```
SELECT p.name, COUNT(p.name) as num_other FROM participant as p, participates_in_battle as pib WHERE pib.participant_id = p.pid AND pib.status = 'win' GROUP BY p.name ORDER BY num_other DESC LIMIT 1;
```

Tuple Relational Calculus:

```
 \{t^{(6)}|(\exists p)(participant(p) \land p[name] = t[name] \land ((\exists s)(participates\_in\_battle(s) \land s[participant\_id] = p[pid] \land ((\exists b)(battle(b) \land b[bid] = s[battle\_id] \land b[title] = t[title] \land b[location] = t[location] \land b[start\_date] = t[start\_date] \land b[end\_date] = t[end\_date])) \land s[status] =' win' \land t[force\_size] = s[force\_size]t[num\_casualties = s[num\_casualties]))) \}
```

The aggregate function Count cannot be expressed in tuple relational calculus however this query lists the battles for each

$Relational\ Algebra:$

 $\Pi_{p.name}(p.nameG_{Count(pib.battle_id)}(\sigma_{pib.status=?win?}((\rho_{pib}(participates_in_battle)\bowtie_{pib.participant_id=p.pid}\rho_{p}(participant))\bowtie_{pib.battle_id=b.bid}(\rho_{b}(battle)))$

Number of Soldiers per Battle

Description:

List battles by number of soldiers on the ground in the battle

SQL:

```
SELECT b.start_date, b.end_date, b.title, b.location, forces.
force_size FROM battle as b, (SELECT p.battle_id as bid, SUM(p
.force_size) as force_size FROM participates_in_battle as p
GROUP BY p.battle_id) as forces WHERE forces.bid = b.bid AND
forces.force_size IS NOT NULL ORDER BY forces.force_size DESC;
```

Tuple Relational Calculus:

```
 \{t^{(6)}|(\exists p)(participates\_in\_battle(p) \land ((\exists b)(battle(b) \land b[bid] = p[battle\_id] \land \neg ((\exists p2)(participates\_in\_battle(p2) \land p2[battle\_id] \neq p[battle\_id] \land p2[participant\_id] \neq p[participant\_id] \land p2[force\_size] > p[force\_size]))b[title] = t[title] \land b[location] = t[location] \land b[start\_date] = t[start\_date] \land b[end\_date] = t[end\_date] \land ((\exists s)(participant(s) \land s[pid] = p[participant\_id] \land t[participant] = s[name])) \land t[force\_size] = p[force\_size]))) \} 
The aggregate function sum connect be expressed in tuple relational calculus but this query
```

The aggregate function sum cannot be expressed in tuple relational calculus but this query will return the battle and participant for which there was the highest number of soldiers on the ground.

$Relational\ Algebra:$

 $forces \leftarrow \Pi_{p.battle_id,(\rho force_size(Sum(p.force_size)))}(p.battle_idG_{(Sum(p.force_size))}(\rho_p(participates_in_battle)))$ $\Pi_{b.start_id,b.end_date,b.title,b.location,forces.force_size}(forces \bowtie_{forces.bid=b.id} battle)$

Integrity Constraints

There are integrity constraints on the entity ids, such as uniqueness and that some of them must exist in the relations associated with the entity. "War id" must exist in "conflict_is_a_war" and "conflict id" in that relation must exist in the "conflict" entity. At least one alliance must participate in a conflict, meaning that any "conflict id" that exists in "conflict" must also be in the relation "participates_in_conflict" with an "alliance id" that also exists. All enter dates must be before the exit dates. Also the enter and exit dates of a participant in a conflict must be within the bounds of the conflict time. The ids are expected foreign key constraints that are fulfilled. The foreign key constraint SQL statements can be found above with the create table SQL statements. Some attributes (such as all primary keys) are not allowed to be null, having a non-null constraint. There are no triggers because the user cannot insert or delete values.

Our entities information is all entirely dependent on the id of the relation. So, the relations are structured such that they are already in third normal form by virtue of the design of the model.

Relation Database Design - Applying the Dependency Theory

R = {conflict_id, conflict_title, conflict_start_date, conflict_end_date, alliance_id, enter_date, exit_date, conflict_status, conflict_location, aid, alliance_title, a_description, participant_id, participant_name, military_id, size, year, battle_id, force_size, num_casualties, battle_status, war_id, battle_start_date, battle_end_date, battle_location, battle_title}

 $F = \{ conflict_id \rightarrow conflict_title, conflict_start_date, conflict_end_date \; ; \; conflict_id, alliance_id \rightarrow enter_date, \; exit_date, \; conflict_status, \; conflict_location; \; alliance_id \rightarrow alliance_title, \; a_description \; participant_id, alliance_id \rightarrow participant_name \; military_id, \; participant_id \rightarrow size, \; year \; battle_id, \; participant_id \rightarrow force_size, \; num_casualties, \; battle_status \; battle_id, \; war_id \rightarrow battle_start_date, \; battle_end_date, \; battle_location, \; battle_title \}$

Minimal cover process:

Step 1: eliminate RHS redundancies

 $conflict_id \rightarrow conflict_title$

conflict_id →conflict_start_date

 $conflict_id \rightarrow conflict_end_date$

conflict_id,alliance_id \rightarrow enter_date conflict_id,alliance_id \rightarrow enter_date, exit_date, conflict_status, conflict_location;

```
conflict_id,alliance_id \( \rightarrow \) exit_date
conflict_id,alliance_id \( \rightarrow \) conflict_status
alliance_id \( \rightarrow \) alliance_ittle
alliance_id \( \rightarrow \) a_description
participant_id,alliance_id \( \rightarrow \) participant_name
military_id, participant_id \( \rightarrow \) size
battle_id, participant_id \( \rightarrow \) force_size
battle_id, participant_id \( \rightarrow \) num_casualties
battle_id, participant_id \( \rightarrow \) battle_status
battle_id, war_id \( \rightarrow \) battle_start_date
battle_id, war_id \( \rightarrow \) battle_title
battle_id, war_id \( \rightarrow \) battle_title
battle_id, war_id \( \rightarrow \) battle_location
```

Step 2: eliminate LHS redundancies None to eliminate

Step 3: nothing to eliminate Min cover is what exists

```
BCNF and 3NF is
```

```
R1 = {conflict_id,conflict_title,conflict_start_date,conflict_end_date}, F1={conflict_id} \rightarrow conflict_title,conflict_start_date,conflict_end_date}

R2 = { conflict_id,alliance_id, enter_date, exit_date, conflict_status, conflict_location}, F2={ conflict_id,alliance_id} \rightarrow enter_date, exit_date, conflict_status, conflict_location}

R3 = { alliance_id, alliance_title, a_description}, F3={ alliance_id} \rightarrow alliance_title, a_description}

R4 = {participant_id,alliance_id, participant_name} F4={participant_id,alliance_id} \rightarrow participant_name}

R5 = {military_id, participant_id, size, year}, F5={military_id, participant_id} \rightarrow size, year}

R6 = {battle_id, participant_id, force_size, num_casualties, battle_status}, F6={battle_id, participant_id} \rightarrow force_size, num_casualties, battle_status}

R7 = {battle_id, war_id, battle_start_date, battle_end_date, battle_location, battle_title},

F7={battle_id, war_id} \rightarrow battle_start_date, battle_end_date, battle_location, battle_title}
```

Revisiting the Relational Database Schema

During the creation of our schema we only had to make minor tweaks to the original design that we decided on. In the early iterations of our design we had enter_date and

exit_date as part of each participant entity. However, we came to realize that this was not the most efficient place to have that data. Participants was then simplified to only store two IDs and the name of the participant. Enter_date and exit_date is still stored in our database, however it is now part of the participates_in_conflict entity. The other small change we make was getting rid of non-war conflicts. This was simply for lack of data. We didn't see the need for this part of our database because there was no data to populate it and thus wouldn't be useful for the user. If we expanded our application to reach beyond the confines of the first World War this entity would likely become more useful but is outside the scope of our project.

DBMS Implementation

To view the data that was populated for this database please see the SQL Dump in Appendix E. The main components of the code include forms for picking query types and a results page that runs the query and displays the results. For more detailed information on how the code works see the Programmer's Guide in the documentation.

Revisiting the Whole Project

Provided separately by each member.

Team Work

Provided separately by each member.

Conclusion

In conclusion our project was a success. Once the idea of World War 1 was chosen the E-R diagram was made there weren't any large changes that had to happen. The implementation was simple and culminated in a simple but efficient user application. In the documentation directory of our code you will find a number of very helpful files including a README, Installation Guide, Users Guide, and Programmer's Guide. These documents can also be found as appendices in this document The README provides a quick summary of the following three whereas each individual guide goes into depth on each specific topic. All the information that anyone needs to install, use or build upon our application is provided in those guides.

Appendix A: Installation Guide

As this is essentially a website it will need a local server stack with php and MySQL installed. This guide uses XAMPP however any stack will work.

- 1. Install XAMPP in a convenient place for windows typically that means the C:/ drive a. https://www.apachefriends.org/download.html
- 2. Place all of the contents of the zipped file you found this document in into the /htdocs directory (or equivalent serving directory).
- 3. XAMPP Control Panel > Apache > Start
- 4. XAMPP Control Panel > MySQL > Start
- 5. Go to the MySQL management for your stack. For XAMPP open up a web browser and navigate to localhost/phpmyadmin
- 6. Click Import at the top of the page.
- 7. Choose the file '341project.sql' found in the root directory of the code.
- 8. This will create a database called 341Project and a user with the name 'read_only' and the password 'password.' This lack of strong password comes from the fact that this password must be used in a php file that is plainly visible.
- 9. Now to verify the install go to localhost/ in your browser and you should see the main page. (the url may be different depending on if you put the code in a subdirectory).

Appendix B: User Guide

Once you have the system up and running using the interface it relatively easy.

There are three buttons at the top of every page "Static Queries", "Dynamic Queries", and "User Generated." Each corresponds to a page. The Static Queries page displays radio buttons of the prebuilt queries you can run. Just click one and click Submit. A page will display with a table of the results of the query. The three buttons remain at the top and you can navigate from there or at the bottom of the table there is a button "Choose Another Query" that will take you back to the initial page.

The Dynamic Queries has a few queries that require user input to run. Essentially it is the same process of clicking a radio button then inputting the parameter like location into the input field next to the radio button. Other queries require you to select a country from a dropdown.

The User Generated Page allows you to write your own SQL queries but only SELECT queries. Provided for your convenience is a picture of the database schema so you know what everything is called.

Appendix C: Programmer's Guide

Overview

There are six main pages: index.php dynamixIndex.php createYourOwn.php result.php queries.php templates.php

The index, dynamic index, and create your own pages are the user front end for selecting the query type or giving user input. The result page is what is loaded after the user submits a form on any of the above three pages. All three index pages go to the same result page. The templates pages stores the header that is the same for every page and for any additional page you create it should require templates.php and call getHeader(). To add a static query all you need to do is add to the static array stored in the queries.php and a radio button will be added to the index page and the results will generate themselves without additional code.

Note: the table headers created for the results come from the SQL so in the SELECT clause if you would like to give it a nice heading title you have to rename the attributes using 'as' if you would like spaces in the header you can say things like: num_casualties as 'Number of Casualties' and it will format appropriately.

To add a dynamic query you have to add the SQL and title to display to the other array in queries.php for dynamic queries. The user input must be sanitized and the name of the input that holds the user input must be put into the array. As such you have to manually add the query to the dynamicIndex.php this includes adding the radio button with the appropriate name (the one that matches what you put in the queries.php) and an input that matches the appropriate name (the one you put into queries.php).

Results are generated dynamically and the same way for every type of query that way the result generation code does not have to change for each new query. First a database connection is made and the appropriate array of queries is loaded from queries.php. At this point the link that is put in after the results is created to go back to the page from which the user came ie if they were on the dynamic index and go to results the Choose Another query will go back to the dynamic index instead of say just index every time.

After the queries are loaded the appropriate query is run and the result fields are looped through to generate the table header row. Then the resulting rows are looped through to generate each table row. After the query logic has occurred the html that was generated is

echoed out and the database connection is closed. If an error occurred it should generate the header and the back button but instead of a table it should display the error.

Method summary

templates.php
getHeader()

- takes no input and returns an html screen to echo out the header of the page
- this method is called by every page including results

getDropdown(\$name)

- takes a name for the html element generates a dropdown from the list of participants in the database with that name. The name is important because the value of the dropdown at the time of the form submission can be accessed through the name given to the input ie \$POST[\$name] will contain the value of the dropdown when the user submits a form.
- this method is currently only used by the dynamic index page

```
queries.php
getStaticQueries()
```

- takes no input and returns an array of queries that are static ie do not require user input to display results
- Each entry of the array is an array containing the title and the SQL to run the query. For example to list all battles the "query type" is 'listBattles' so the array queries has an entry called 'listBattles that is:

```
queries['listBattles'] = array();
```

\$queries['listBattles']['title'] = "List of Battles";

\$queries['listBattles']['sql'] = "SELECT b.start_date, b.end_date, b.title, b.location FROM battle as b":

- this array currently generates the radio buttons on the index page and the list of possible SQL queries for the List all Queries query.

getDynamicQueries(\$db)

- takes a database connection (for use in sanitizing the user input string)
- returns an array similar to the static queries
- The dynamic part comes from an additional field in the array that can be used to place the sanitized user input into the SQL. For example:

```
queries = array();
```

```
queries['byLocation'] = array();
```

\$queries['byLocation']['userInput'] = mysqli_real_escape_string(\$db, \$_POST['location']);

\$queries['byLocation']['title'] = "List of Battles in Location: ". \$queries['byLocation']['userInput'];

\$queries['byLocation']['sql'] = "SELECT b.start_date, b.end_date, b.title, b.location FROM

Appendix D: SQL Create Table Statements

```
-- phpMyAdmin\ SQL\ Dump
-- version 4.0.4.1
-- http://www.phpmyadmin.net
-- Host: 127.0.0.1
-- Generation Time: Apr 24, 2015 at 07:55 AM
-- Server version: 5.5.32
-- PHP Version: 5.4.16
SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
SET time_zone = "+00:00";
/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS
   */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8 */;
-- Database: '341 project'
CREATE DATABASE IF NOT EXISTS '341 project' DEFAULT CHARACTER SET
   latin1 COLLATE latin1_swedish_ci;
USE '341 project';
-- Table structure for table 'alliance'
CREATE TABLE IF NOT EXISTS 'alliance' (
  'aid' int (11) NOT NULL AUTO_INCREMENT,
  'title 'varchar (255) DEFAULT NULL,
  'description 'varchar (510) DEFAULT NULL,
  PRIMARY KEY ('aid')
) ENGINE=InnoDB DEFAULT CHARSET=latin 1 AUTO_INCREMENT=147 ;
-- Table structure for table 'battle'
```

```
CREATE TABLE IF NOT EXISTS 'battle' (
  'bid' int (11) NOT NULL AUTO_INCREMENT,
  'wid' int (11) NOT NULL,
  'start_date' date DEFAULT NULL,
  'end_date' date DEFAULT NULL,
  'location' varchar (255) DEFAULT NULL,
  'title 'varchar(255) DEFAULT NULL,
  PRIMARY KEY ('bid', 'wid'),
  KEY 'wid' ('wid')
) ENGINE=InnoDB DEFAULT CHARSET=latin 1 AUTO_INCREMENT=118 ;
-- Table structure for table 'conflict'
CREATE TABLE IF NOT EXISTS 'conflict' (
  'id' int(11) NOT NULL AUTO_INCREMENT,
  'title 'varchar (255) DEFAULT NULL,
  'start_date ' year (4) DEFAULT NULL,
  'end_date' year(4) DEFAULT NULL,
  PRIMARY KEY ('id')
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=74 ;
-- Table structure for table 'participant'
CREATE TABLE IF NOT EXISTS 'participant' (
  'pid' int (11) NOT NULL AUTO_INCREMENT,
  'aid' int (11) NOT NULL,
  'name' varchar (255) NOT NULL,
  PRIMARY KEY ('pid', 'aid'),
  KEY 'aid' ('aid')
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=33 ;
-- Table structure for table 'participates_in_battle'
CREATE TABLE IF NOT EXISTS 'participates_in_battle' (
  'battle_id' int(11) NOT NULL,
  'participant_id' int(11) NOT NULL,
  'force_size ' int(1) DEFAULT NULL,
```

```
'num_casualties' int(11) DEFAULT NULL,
  'status 'enum('win', 'lose', 'surrender', 'other') NOT NULL
     DEFAULT 'other',
 PRIMARY KEY ('battle_id', 'participant_id'),
 KEY 'participant_id' ('participant_id')
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
-- Table structure for table 'participates_in_conflict'
CREATE TABLE IF NOT EXISTS 'participates_in_conflict' (
  'conflict_id' int(11) NOT NULL,
  'alliance_id' int(11) NOT NULL,
  'enter_date ' year (4) DEFAULT NULL,
  'exit_date ' year (4) DEFAULT NULL,
  'status' enum('win', 'lose', 'surrender', 'other') NOT NULL
    DEFAULT 'other',
  'location 'varchar (255) DEFAULT NULL,
 PRIMARY KEY ('conflict_id', 'alliance_id'),
 KEY 'alliance_id' ('alliance_id')
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
-- Table structure for table 'total_military'
CREATE TABLE IF NOT EXISTS 'total_military' (
  'military_id' int(11) NOT NULL AUTO_INCREMENT,
  'participant_id' int(11) NOT NULL,
  'size 'int (11) NOT NULL,
  'year' year(4) NOT NULL,
 PRIMARY KEY ('military_id'),
  UNIQUE KEY 'participant_id' ('participant_id')
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=1 ;
-- Table structure for table 'war'
CREATE TABLE IF NOT EXISTS 'war' (
  'id' int (11) NOT NULL AUTO_INCREMENT,
 PRIMARY KEY ('id')
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=2 ;
```

```
-- Table structure for table 'war_is_a_conflict'
CREATE TABLE IF NOT EXISTS 'war_is_a_conflict' (
  'conflict_id' int(11) NOT NULL,
  'war_id' int (11) NOT NULL,
 PRIMARY KEY ('conflict_id', 'war_id'),
 KEY 'war_id' ('war_id')
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
-- Constraints for dumped tables
- Constraints for table 'battle'
ALTER TABLE 'battle'
 ADD CONSTRAINT 'battle_ibfk_1' FOREIGN KEY ('wid') REFERENCES '
     war ' ('id') ON UPDATE CASCADE;
-- Constraints for table 'participant'
ALTER TABLE 'participant'
 ADD CONSTRAINT 'participant_ibfk_1' FOREIGN KEY ('aid')
     REFERENCES 'alliance' ('aid') ON UPDATE CASCADE;
-- Constraints for table 'participates_in_battle'
ALTER TABLE 'participates_in_battle'
 ADD CONSTRAINT 'participates_in_battle_ibfk_1 ' FOREIGN KEY ('
     battle_id ') REFERENCES 'battle ' ('bid ') ON UPDATE CASCADE,
  ADD CONSTRAINT 'participates_in_battle_ibfk_2 ' FOREIGN KEY ('
     participant_id ') REFERENCES 'participant ' ('pid ') ON UPDATE
     CASCADE;
-- Constraints for table 'participates_in_conflict'
ALTER TABLE 'participates_in_conflict'
 ADD CONSTRAINT 'participates_in_conflict_ibfk_1 ' FOREIGN KEY ('
     conflict_id ') REFERENCES 'conflict ' ('id') ON UPDATE CASCADE
```

```
ADD CONSTRAINT 'participates_in_conflict_ibfk_2' FOREIGN KEY ('
     alliance_id ') REFERENCES 'alliance ' ('aid ') ON UPDATE
     CASCADE:
-- Constraints for table 'total_military'
ALTER TABLE 'total_military'
 ADD CONSTRAINT 'total_military_ibfk_1' FOREIGN KEY ('
     participant_id ') REFERENCES 'participant ' ('pid') ON UPDATE
     CASCADE;
-- Constraints for table 'war_is_a_conflict'
ALTER TABLE 'war_is_a_conflict'
 ADD CONSTRAINT 'war_is_a_conflict_ibfk_1 ' FOREIGN KEY ('
     conflict_id ') REFERENCES 'conflict ' ('id'),
 ADD CONSTRAINT 'war_is_a_conflict_ibfk_2' FOREIGN KEY ('war_id
     ') REFERENCES 'war' ('id');
/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;
Appendix E: SQL Data Dump
-- phpMyAdmin SQL Dump
-- version 4.0.4.1
-- http://www.phpmyadmin.net
-- Host: 127.0.0.1
-- Generation Time: Apr 26, 2015 at 05:22 PM
-- Server version: 5.5.32
-- PHP Version: 5.4.16
SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
SET time_zone = "+00:00";
/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS
   */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
```

```
/*!40101 SET NAMES utf8 */;
-- Database: '341 project'
CREATE DATABASE IF NOT EXISTS '341 project' DEFAULT CHARACTER SET
   latin1 COLLATE latin1_swedish_ci;
USE '341 project';
-- Dumping data for table 'alliance'
INSERT INTO 'alliance' ('aid', 'title', 'description') VALUES
(1, 'Allied Powers', NULL),
(2, 'Central_Powers', NULL),
(3, 'United_Kingdom', NULL),
(4, 'Ashanti Empire', NULL),
(5, 'British_Empire\n_Ethiopian_Empire\n_Italian_Empire', NULL),
(6, 'Dervish_State', NULL),
(7, 'United Kingdom', NULL),
(8, 'Aro_Confederacy', NULL),
(9, 'Portuguese_Empire', NULL),
(10, 'Ovimbundu_Kingdoms', NULL),
(11, 'Venezuela', NULL),
(12, 'German_Empire\n_United_Kingdom\n_Kingdom_of_Italy', NULL),
(13, 'Ottoman_Empire', NULL),
(14, 'Internal_Macedonian_Revolutionary_Organization', NULL),
(15, 'United Kingdom', NULL),
(16, 'Tibet', NULL),
(17, 'Emirate_of_Nejd_and_Hasa', NULL),
     'Emirate_of_Ha'', NULL),
(18,
(19, 'Ottoman_Empire', NULL),
(20, 'Armenian_rebels', NULL),
     'German_Empire_(including_German_colonial_forces)', NULL),
(21,
    'Herero_and_Namaqua_peoples', NULL),
(22,
(23, 'Empire_of_Japan', NULL),
(24, 'Russian_Empire\n_Principality_of_Montenegro', NULL),
     'Hellenic _Macedonian _Committee', NULL),
     'Internal_Macedonian_Revolutionary_Organization', NULL),
(27, 'Russian Empire', NULL),
```

```
'Polish_worker_militias', NULL),
(29,
     'Russian Empire', NULL),
     'Revolutionaries', NULL),
(30,
(31,
     'German_Empire', NULL),
(32,
     'Indigenous rebels', NULL),
     'The_Netherlands', NULL),
(33,
     'Badung\nTabanan\nKlungkung', NULL),
(34,
(35,
     'British_Empire', NULL),
     'Zulu', NULL),
(36,
(37,
     'Ottoman_Empire', NULL),
     'Cretan_rebels', NULL),
(38,
(39,
     'Kingdom of Romania', NULL),
     'Romanian_peasants', NULL),
(40,
(41,
     'Nicaragua', NULL),
     'Honduras', NULL),
(42,
     'The Netherlands', NULL),
(43,
(44,
     'Karangasem\nKlungkung\nGelgel', NULL),
(45,
     'The_Netherlands', NULL),
     'Venezuela', NULL),
(46,
(47,
     'Spain', NULL),
     'Riffian people', NULL),
(48,
(49,
     'France', NULL),
     'Ouaddai_Empire', NULL),
(51, 'Maderistas\nOrozquistas\nVillistas\nZapatistas\
   nCarrancistas\nMagonistas\nSeditionistas', NULL),
(52, 'Mexico', NULL),
(53, ', NULL),
(54, ",", NULL),
(55,
     'German_Empire', NULL),
     'Soheks_rebels', NULL),
     'Ottoman_Empire', NULL),
     'Albanian rebels', NULL),
(58,
     'Qing_Empire_of_China', NULL),
(59,
     'Anti_Qing_rebels', NULL),
     'France', NULL),
(61,
     'Morocco', NULL),
(62,
     `Kingdom\_of\_Italy', \ \textbf{NULL})\;,
(63,
     'Ottoman_Empire', NULL),
     'Tongmenghui', NULL),
(65.
(66, 'Qing_Empire_of_China', NULL),
```

```
(67, 'Kingdom_of_Bulgaria\n_Kingdom_of_Greece\n_Kingdom_of_Serbia
   \n_Kingdom_of_Montenegro', NULL),
(68, 'Ottoman_Empire', NULL),
    'Albanian rebels', NULL),
(70, 'Ottoman_Empire', NULL),
     'Brazilian_Governists', NULL),
(71,
(72,
     'Rebels', NULL),
(73, 'United_States', NULL),
     'Nicaraguan rebels', NULL),
     'Cuba\n_United_States', NULL),
    'Independent_Party_of_Color', NULL),
(76,
(77, 'Ottoman_Empire\n_Kingdom_of_Greece\n_Kingdom_of_Serbia\n_
   Kingdom_of_Montenegro\n_Kingdom_of_Romania', NULL),
     'Kingdom_of_Bulgaria', NULL),
(78,
     'Kingdom_of_Serbia', NULL),
     'Internal Macedonian Revolutionary Organization', NULL),
     'Kingdom_of_Serbia', NULL),
(82,
     'Internal Macedonian Revolutionary Organization', NULL),
(83, 'France', NULL),
    'Zaian Confederation', NULL),
(85, 'United_States', NULL),
(86, 'Mexico', NULL),
(87, 'Union_of_South_Africa', NULL),
(88, "Bitterenders", NULL),
     'British_Empire', NULL),
(89,
(90, 'Nyasland_rebels', NULL),
(91, 'British Empire', NULL),
(92, 'Bussa_warriors', NULL),
(93, 'United_States', NULL),
(94, 'Haiti', NULL),
(95, 'British Empire', NULL),
     'Senussi\n_Ottoman_Empire\nDarfur_Emirate', NULL),
(97, 'Republic_of_China', NULL),
(98, 'Empire_of_China', NULL),
(99, 'France', NULL),
(100, 'Tuareg_guerrillas', NULL),
(101, 'British_Army\nDublin_Metropolitan_Police\nRoyal_Irish_
   Constabulary', NULL),
(102, 'Irish_Republican_Brotherhood\nIrish_Volunteers\nIrish_
```

Citizen_Army\nCumann_na_mBan\nHibernian_Rifles\nFianna_?

ireann', **NULL**),

```
(103, 'United_States', NULL),
(104,
      'Dominican_rebels', NULL),
      'Hashemite\_Arabs \setminus nUnited\_Kingdom \setminus n
(105,
                                   -\nSultanate_of_Nejd_(Unification
   _of_Saudi_Arabia)', NULL)
(106, 'Ottoman_Empire', NULL),
(107,
      'Russian_revolutionaries', NULL),
(108, 'Russian Empire', NULL),
(109, 'French_colonial_empire', NULL),
(110, 'Vietnamese_rebels', NULL),
     'United_States', NULL),
(111,
(112, 'Anti_draft_rebels', NULL),
(113, 'Bolsheviks', NULL),
(114, 'Russian Provisional Government', NULL),
(115, '* Victorious _in _ Russia, _ Ukraine, _ Georgia, _ Armenia, _
   Azerbaijan , \_Kazakhstan , \_\backslash nand \_Mongolia *: \backslash n \backslash n \_Russian \_SFSR \backslash
   nOther_Soviet_republics\nMongolian_People'''s_Party\n
                                   -\n\n*Victorious_in_their_
   respective_countries:*\nKingdom_of_Finland\nRepubli', NULL),
(116, 'White\_Movement\n\n*Central\_Powers*\_(until\_1918):\n\_Austro-
   Hungarian_Empire\n_German_Empire_(including_German_colonial_
   forces)\n_Ottoman_Empire\n*Allied_Forces*_(from_1918):\
   nCzechoslovakia \ nRepublic of China \ nFrance \ nKingdom of Greece
   \n_Kingdom_of_Italy\n_Empire_of_', NULL),
(117, 'Ottoman_Empire', NULL),
(118, 'Russian SFSR', NULL),
(119, 'Ukrainian SSR\n_Russian SFSR', NULL),
(120, 'Ukrainian_People'''s_Republic\n\nWest_Ukrainian_People'''s_
   Republic\nWhite_Movement', NULL),
      'Finnish_White_Guards\n_German_Empire', NULL),
      'Finnish_Red_Guards\n_Russian_SFSR', NULL),
(123,
      'Democratic_Republic_of_Georgia', NULL),
      'Democratic_Republic_of_Armenia', NULL),
(124,
      'Weimar_Republic', NULL),
(125,
(126, '*Communist_Forces*:\n\nBavarian_Soviet_Republic\nSpartacus
   _League\nGerman_Communist_movements', NULL),
(127, 'Poland', NULL),
(128, 'German_Empire', NULL),
      'Poland', NULL),
(129.
(130, 'West_Ukrainian_People'', Republic', NULL),
```

```
(131, 'Transcaucasian_Democratic_Federative_Republic\n\
   nDemocratic_Republic_of_Georgia', NULL),
      'Pro-Bolshevik_Ossetian_rebels', NULL),
      'White_movement\n__Kuban-Black_Sea_Soviet_Republic', NULL),
(133,
(134, 'Democratic_Republic_of_Georgia', NULL),
(135, 'Azerbaijan\_Democratic\_Republic \n\n\_Ottoman\_Empire\_(1918\_
   only)\n_Russian_SFSR_(from_April_1920)\nTurkish_
   Revolutionaries_(from_April_1920)', NULL),
(136, 'Democratic_Republic_of_Armenia\n\nRepublic_of_Mountainous_
   Armenia\nNagorno-Karabakh_rebels\n_British_Empire_(1918_only)\
   nCentrocaspian_Dictatorship_(1918_only)', NULL),
(137, 'Estonia\n\nWhite_Russia\n_Latvia\n_United_Kingdom\nIngria\
   nOber_Ost\nFinnish,_Swedish_and_Danish_volunteers', NULL),
(138, 'Russian_SFSR\n\nCommune_of_Estonia\n_Latvian_SSR', NULL),
(139, 'Latvia\n\n_Estonia\nPoland\n_United_Kingdom\nFrance', NULL
   ),
      'Russian_SFSR\n\n_Latvian_SSR', NULL),
(140,
      'Lithuania\n_Saxon_volunteers', NULL),
(142, 'Russian_Soviet_Federative_Socialist_Republic\nLithuanian-
   Belorussian Soviet Socialist Republic', NULL),
(143, 'Emirate_of_Riyadh', NULL),
      'Kingdom_of_Hejaz', NULL),
(144,
(145, 'French\_Indochina', NULL),
(146, 'Hmong_rebels', NULL);
-- Dumping data for table 'battle'
INSERT INTO 'battle' ('bid', 'wid', 'start_date', 'end_date', '
   location ', 'title ') VALUES
(1, 1, '1914-08-05', '1914-08-16', 'Liege, Belgium', 'Battle of L
   Liege'),
(2, 1, '1914-08-07', '1914-09-13', 'Lorraine, _the_Ardennes_and_
   Belgium', 'Battle_of_the_Frontiers'),
(3, 1, '1914-08-15', '1914-08-24', 'Cer_Mountain_and_surrounding_
   towns_and_villages_in_the_northwestern_portion_of_the_Kingdom_
   of_Serbia', 'Battle_of_Cer'),
(4\,,\ 1\,,\ '1914-08-26\,'\,,\ '1914-08-30\,'\,,\ 'Near\_Allenstein\,,\_East\_Prussia)
   _(today_Olsztyn,_Poland)', 'Battle_of_Tannenberg'),
```

- (5, 1, '1914-09-05', '1914-09-12', 'Marne_River_near_Paris, _ France', 'First_Battle_of_the_Marne'),
- (6, 1, '1915-02-03', NULL, 'Suez_Badick', 'Defense_of_the_Suez_Badick'),
- (7, 1, '1915-02-07', '1915-02-22', 'East_Prussia, Germany (
 present-day_Poland)', 'Second_Battle_of_the_Masurian_Lakes'),
- (8, 1, '1915-02-19', **NULL**, **NULL**, 'Dardanelles_Bombardment'),
- (9, 1, '1915-03-10', '1915-03-13', 'Artois_region,_France', 'Battle_of_Neuve_Chapelle'),
- (10, 1, '1915-04-12', '1915-04-14', 'Shaiba, Southern Iraq', 'Battle of Shaiba'),
- (11, 1, '1915-04-22', '1915-05-25', 'Ypres, Belgium', 'Second Battle of Ypres'),
- $(12\,,\ 1\,,\ '1915-04-25\,'\,,\ \textbf{NULL},\ 'Anzac _Cove'\,,\ 'Anzac _Cove _Landing')\;,$
- (13, 1, '1915-04-25', '1915-04-25', 'Cape_Helles, Gallipoli, Ottoman_Empire', 'Landing_at_Cape_Helles'),
- (14, 1, '1915-04-28', '1915-04-28', 'Helles, Gallipoli, Ottoman Empire', 'First Battle of Krithia'),
- (15, 1, '1915-05-01', **NULL**, 'Krithia on the Gallipoli peninsula', 'Eski Hissarlik'),
- (16, 1, '1915-05-06', '1915-05-08', 'Helles, Gallipoli, Ottoman Empire', 'Second Battle of Krithia'),
- (17, 1, '1915-05-15', '1915-05-25', 'South_of_Neuve_Chapelle,_ France', 'Battle_of_Festubert'),
- (18, 1, '1915-05-19', **NULL**, 'Anzac_Cove', 'Turkish_attack_at_ Anzac_Cove'),
- (19, 1, '1915-05-31', **NULL**, 'Amara', 'Capture of Amara'),
- (20, 1, '1915-06-04', **NULL**, 'Helles, Gallipoli, Ottoman Empire', 'Third Battle of Krithia'),
- $(21, 1, '1915-06-18', NULL, NULL, 'Attempt_to_Force_the_Narrows')$
- (22, 1, '1915-06-23', '1915-07-07', 'Soca_river,_north-west_ Slovenia_from_the_mountain_Krn_to_the_Gulf_of_Trieste', 'First_Battle_of_the_Isonzo'),
- (23, 1, '1915-06-27', **NULL**, **NULL**, 'Battle_of_Nasiriyeh'),
- (24, 1, '1915-06-28', '1915-07-05', 'Cape_Helles', 'Battle_of_Gully_Ravine'),
- (25, 1, '1915-07-12', **NULL**, **NULL**, 'Attack_on_Ache_Baba'),
- (26, 1, '1915-07-18', '1915-08-03', 'Socarriver, northwest Slovenia', 'Second_Battle_of_the_Isonzo'),
- (27, 1, '1915-08-06', **NULL**, 'Suvla Bay', 'Suvla Bay'),

- (28, 1, '1915-08-06', '1915-08-10', 'Gallipoli, Ottoman_Empire_(present-day_Turkey)', 'Battle_of_Lone_Pine'),
- (29, 1, '1915-08-06', '1915-08-21', 'Gallipoli_peninsula,_Ottoman_Empire', 'Battle_of_Sari_Bair'),
- (30, 1, '1915-08-07', **NULL**, 'Anzac, Gallipoli, Ottoman Empire', 'Battle of the Nek'),
- (31, 1, '1915-07-17', '1915-09-17', 'Galicia and Poland', 'Great Retreat'),
- (32, 1, '1915-08-21', '1915-08-29', 'Gallipoli, Ottoman_Empire', 'Battle_of_Hill_60'),
- (33, 1, '1915-08-21', **NULL**, 'Suvla, Gallipoli, Ottoman Empire', 'Battle of Scimitar Hill'),
- (34, 1, '1915-09-25', '1915-10-14', 'Loos, France', 'Battle of Loos'),
- $(35, 1, '1915-09-28', NULL, 'Kut, _Iraq', 'Kut-al-Amara'),$
- $(36, 1, '1915-09-28', NULL, NULL, 'Battle_of_Es_Sinn')$,
- (37, 1, '1915–10–18', '1915–11–03', 'Soca_river , _western_Slovenia ', 'Third_Battle_of_the_Isonzo'),
- (38, 1, '1915-11-10', '1915-12-02', 'Soca_river,_western_Slovenia', 'Fourth_Battle_of_the_Isonzo'),
- (39, 1, '1915-11-22', '1915-11-25', 'Ctesiphon, present-day Iraq', 'Battle of Ctesiphon'),
- (40, 1, '1915-12-07', '1916-04-29', 'Kut-al-Amara, Mesopotamia (modern Iraq)', 'Siege of Kut'),
- (41, 1, '1915-12-18', NULL, NULL, 'Evacuation_of_Gallipoli'),
- (42, 1, '1916-01-06', '1916-01-08', 'Mesopotamia_(present-day_Iraq)', 'Battle_of_Sheikh_Sa''ad'),
- (43, 1, '1916-01-13', **NULL**, 'Hanna_defile,_3.5_miles_(5.6_km)_ east_of_Sheikh_Sa''ad,_Mesopotamia,_present-day_Iraq', 'Battle_of_Wadi'),
- (44, 1, '1916-01-21', **NULL**, 'Hanna_defile,_present-day_Iraq', 'First_Battle_of_Hanna'),
- (46, 1, '1916-03-08', **NULL**, 'South_of_Kut,_present-day_Iraq', 'Battle_of_Dujaila'),
- (47, 1, '1916-03-09', '1916-03-15', 'Soca_river,_western_Slovenia', 'Fifth_Battle_of_the_Isonzo'),
- (48, 1, '1916-03-18', '1916-04-18', 'Lake_Narach, present-day_Belarus', 'Lake_Naroch_Offensive'),

- (49, 1, '1916-05-15', '1916-06-10', 'Asiago_plateau,_Veneto,_ Italy', 'Battle_of_Asiago'),
- (50, 1, '1916-05-15', **NULL**, **NULL**, 'Trentino_Offensive'),
- (51, 1, '1916-05-31', '1916-06-01', 'North_Sea,_near_Denmark', 'Battle_of_Jutland'),
- (52, 1, '1916-06-04', **NULL**, **NULL**, 'Battle_of_Lutsk'),
- (53, 1, '1916-06-04', **NULL**, **NULL**, 'Battle_of_Khanaqin'),
- (54, 1, '1916-07-01', '1916-11-18', 'Somme_River, _north-central _ Somme_and_south-eastern_Pas-de-Calais_Departements, _France', 'Battle_of_the_Somme'),
- (55, 1, '1916-07-14', '1916-07-17', 'Somme, Picardy, France', 'Battle of Bazentin Ridge'),
- (57, 1, '1916-07-23', '1916-09-03', 'Pozieres, Somme, France', 'Battle of Pozieres'),
- (58, 1, '1916-08-03', '1916-08-05', 'East_of_the_Suez_Canal_and_north_of_Ismailia\r\nSinai_peninsula,_Egypt', 'Battle_of_Romani'),
- (59, 1, '1916-08-06', '1916-08-17', 'Gorizia_-_Doberdo_del_Lago,_ Italy;_Opatje_selo_&_north-western_Kras,_Slovenia', 'Sixth_ Battle_of_the_Isonzo'),
- (60, 1, '1916-09-03', '1916-09-06', 'Guillemont, France', 'Battle of Guillemont'),
- (61, 1, '1916-09-14', '1916-09-18', 'Soca_River_Valley,_Slovenia', 'Seventh_Battle_of_the_Isonzo'),
- (62, 1, '1916-09-15', '1916-09-22', 'Flers_and_Courcelette', France', 'Battle_of_Flers-Courcelette'),
- (63, 1, '1916-10-10', '1916-10-12', 'Soca_River_Valley,_Slovenia', 'Eighth_Battle_of_the_Isonzo'),
- (64, 1, '1916-10-31', '1916-11-04', 'Soca_valley,_Slovenia', 'Ninth_Battle_of_the_Isonzo'),
- (65, 1, '1916-12-14', **NULL**, **NULL**, 'Battle_of_Maghaba'),
- (66, 1, '1916-12-13', '1917-02-23', 'Kut, _Mesopotamia_(present-day_Iraq)', 'Second_Battle_of_Kut'),
- (67, 1, '1917-01-09', **NULL**, **NULL**, 'Battle_of_Khadairi_Bend'),
- (68, 1, '1917-02-26', **NULL**, **NULL**, 'Battle_of_Nahr-alKalek'),
- (69, 1, '1917-03-11', **NULL**, **NULL**, 'Capture_of_Baghdat'),
- (70, 1, '1917-03-13', '1917-04-23', 'North_of_Baghdad,_present-day_Iraq', 'Samarrah_Offensive'),
- (71, 1, '1917-03-19', **NULL**, **NULL**, 'Seizure of Falluja'),

- (72, 1, '1917-03-25', **NULL**, **NULL**, 'Battle_of_Jebel_Amlin'),
- (73, 1, '1917-03-26', NULL, 'Gaza, southern Palestine', 'First ... Battle_of_Gaza'),
- (74, 1, '1917-04-09', '1917-05-16', 'Near_Arras, France', 'Battle _of_Arras'),
- (75, 1, '1917-04-11', NULL, NULL, 'First_Battle_of_Bullecourt'),
- (76, 1, '1917-05-03', '1917-05-11', **NULL**, 'Second_Battle_of_ Bullecourt'),
- (77, 1, '1917-05-10', '1917-06-08', 'Soca_valley,_Slovenia', ' Tenth_Battle_of_the_Isonzo'),
- (78, 1, '1917-05-14', **NULL**, **NULL**, 'Battle_of_Otranto_Straits'),
- $(79, 1, '1917-06-07', '1917-06-14', 'Flanders, _Belgium', 'Battle_$ of Messines'),
- (80, 1, '1917-07-31', '1917-11-10', 'Passendale, Belgium', ' Battle_of_Passchendaele\r\nThird_Battle_of_Ypres'),
- (81, 1, '1917-08-18', '1917-09-12', 'Soca, _near_Monfalcone, _Italy $; _Banjsice _Plateau \;, _Slovenia \;', \quad 'Eleventh _Battle _of _the _Isonzo \;'$),
- (82, 1, '1917-09-28', '1917-09-29', 'Ramadi, west of Baghdad, L 'Battle_of_Ramadi'),
- present-day_Iraq', 'Battle_of_Ramadi'),
 (83, 1, '1917-10-24', '1917-11-12', 'Kobarid,_Austria-Hungary\r\n (present_day_Slovenia)', 'Battle_of_Caporetto_(Twelfth_Battle_ of_the_Isonzo)'),
- (84, 1, '1917-11-01', '1917-11-02', 'Gaza, southern Palestine', ' Third_Battle_of_Gaza'),
- (85, 1, '1917-10-31', NULL, 'Beersheba, Ottoman Syria', 'Battle Syria', of_Beersheba'),
- (86, 1, '1917-11-05', **NULL**, **NULL**, 'Capture_of_Tikrit'),
- (87, 1, '1917-11-13', **NULL**, 'Junction_Station,_Palestine', ' Battle_of_Mughar_Ridge'),
- (88, 1, '1917-11-20', '1917-12-07', 'Cambrai, France', 'Battle of _Cambrai'),
- (89, 1, '1917-12-08', **NULL**, **NULL**, 'Fall_of_Jerusalem'),
- (90, 1, '1918-03-21', '1918-04-05', 'Northern_France', 'Operation _Michael'),
- (91, 1, '1918-04-07', '1918-04-29', 'French-Belgian_Flanders', ' Battle_of_the_Lys'),
- (92, 1, '1918-04-23', **NULL**, **NULL**, 'Raid_on_Zeebrugge'),
- (93, 1, '1918-05-27', '1918-06-06', 'Aisne_River_near_Paris,_ France', 'Third_Battle_of_the_Aisne'),
- (94, 1, '1918-05-28', **NULL**, 'Cantigny', 'Battle_of_Cantigny'),

- (95, 1, '1918-06-01', '1918-06-26', 'Belleau_Wood_near_Paris, _ France', 'Battle_of_Belleau_Wood'),
- (96, 1, '1918-07-18', **NULL**, 'Chateau-Thierry, _Aisne, _France', 'Battle_of_Chateau-Thierry'),
- (97, 1, '1918-06-15', '1918-06-23', 'Piave, LItaly', 'BattleLofL the Piave River'),
- (98, 1, '1918-06-18', **NULL**, 'near_Bermuda,_Atlantic_Ocean', 'Action_of_18_June_1918'),
- (99, 1, '1918-07-04', **NULL**, 'Le_Hamel, _Somme, _France', 'Battle_of _Hamel'),
- (100, 1, '1918-07-14', **NULL**, 'Palestine', 'Battle_of_Abu_Tellul')
- (101, 1, '1918-07-15', '1918-08-06', 'Marne_River_near_Paris, _ France', 'Second_Battle_of_the_Marne'),
- (102, 1, '1918-07-18', '1918-07-22', 'Northern_France', 'German_Spring_Offensive'),
- (103, 1, '1918-07-21', **NULL**, 'off_Orleans, _Massachusetts, _United_ States, _Atlantic_Ocean', 'Attack_on_Orleans'),
- (104, 1, '1918-08-08', '1918-08-12', 'East_of_Amiens,_Picardy,_France', 'Battle_of_Amiens_(Start_of_the_Hundred_Days_Offensive)'),
- (105, 1, '1918–06–27', **NULL**, 'Nogales, _Arizona, _United _States \r\ nNogales, _Sonora, _Mexico', 'Battle _of _Ambos_Nogales'),
- (107, 1, '1918-09-12', **NULL**, 'Havrincourt, France', 'Battle of Havrincourt (Part of Hundred Days Offensive)'),
- (108, 1, '1918-09-12', '1918-09-15', 'Saint-Mihiel_salient, France', 'Battle_of_Saint-Mihiel'),
- (109, 1, '1918-09-18', **NULL**, 'Epehy, France', 'Battle of Epehy'),
- (110, 1, '1918-09-19', '1918-09-25', 'Tel_Megiddo_and_ surroundings,_Ottoman_Syria', 'Battle_of_Megiddo'),
- (111, 1, '1918-09-26', '1918-10-11', 'Argonne_Forest', France', 'Meuse-Argonne_Offensive'),
- (112, 1, '1918-09-27', '1918-10-01', 'Canal_du_Nord', 'Battle_of_ Canal_du_Nord'),
- (113, 1, '1918-09-29', '1918-10-10', 'Hindenburg_Line,_France', 'Battle_of_St_Quentin_Canal'),
- (114, 1, '1918–10–08', '1918–10–10', 'Cambrai, France', 'Battle of Cambrai'),

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(115, 1, '1918-10-24', '1918-11-03', 'Vittorio, Kingdom of Italy'
    'Battle_of_Vittorio_Veneto'),
(116, 1, '1918-10-23', '1918-10-30', 'North_of_Baghdad,_present-
   day_Iraq', 'Battle_of_Sharqat'),
(117, 1, '1918-11-04', NULL, 'River_Sambre, France', 'Second_
   Battle_of_the_Sambre');
- Dumping data for table 'conflict'
INSERT INTO 'conflict' ('id', 'title', 'start_date', 'end_date')
   VALUES
    'World_War_I', 1914, 1918),
    'War_of_the_Golden_Stool', 0000, 0000),
(3, 'Somaliland Campaign', 0000, 1920),
(4, 'Anglo-Aro_War', 1901, 1902),
(5,
    'Bailundo_Revolt_of_1902', 1902, 1903),
(6, 'Venezuelan_crisis_of_1902-03', 1902, 1903),
    'Ilinden-Preobrazhenie Uprising', 1903, 1903),
(8, 'British_expedition_to_Tibet', 1903, 1904),
(9, 'Saudi-Rashidi War', 1903, 1907),
(10, '1904_Sasun_uprising', 1904, 1904),
     'Herero_War', 1904, 1907),
     'Russo-Japanese War', 1904, 1905),
(12,
     'Macedonian_Struggle', 1904, 1908),
     'Insurrection (1905)', 1905, 1905),
     'Revolution \_ of \_1905', 1905, 1907),
(15,
     'Maji_Maji_Rebellion', 1905, 1908),
     'Dutch_intervention_in_Bali_(1906)', 1906, 1906),
     'Bambatha_Rebellion', 1906, 1906),
     'Theriso_revolt', 1906, 1908),
(19,
     '1907_Romanian_Peasants', Revolt', 1907, 1907),
(20,
     'Honduran-Nicaraguan War', 1907, 1907),
(21,
     'Dutch_intervention_in_Bali_(1908)', 1908, 1908),
(22,
     'Dutch-Venezuelan crisis of 1908', 1908, 1908),
(23,
     'Second_Melillan_campaign', 1909, 1910),
     'Ouaddai_War', 1909, 1911),
     \hbox{'Mexican\_Revolution', } 1910\,,\ 1920)\;,
(27, 'Border_War_(1910-19)*Part_of_the_Mexican_Revolution*',
   1910, 1919),
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(28, 'Sokehs_Rebellion', 1910, 1911),
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- (29, 'Albanian_Revolt_of_1910', 1910, 1910),
- $(31, 'French_conquest_of_Morocco', 1911, 1912),$
- (32, 'Italo-Turkish_War', 1911, 1912),
- (33, 'Xinhai Revolution n*1911 Revolution*', 1911, 1912)
- (34, 'First_Balkan_War', 1912, 1913),
- (35, 'Albanian Revolt of 1912', 1912, 1912),
- (36, 'Contestado War', 1912, 1916),
- (37, 'United_States_occupation_of_Nicaragua\n*Part_of_the_Banana_Wars*', 1912, 1933),
- (38, 'Negro_Rebellion\n*Part_of_the_Banana_Wars*', 1912, 1912),
- (39, 'Second_Balkan_War', 1913, 1913),
- (40, 'Tikvai_Uprising*Part_of_the_Second_Balkan_War*', 1913, 1913),
- (41, 'Ohrid-Debar Uprising', 1913, 1913),
- (42, 'Zaian War', 1914, 1921),
- (43, 'United_States_occupation_of_Veracruz\n*Part_of_the_Banana_Wars*', 1914, 1914),
- $(44, 'Maritz_Rebellion', 1914, 1915),$
- (45, 'Chilembwe_uprising', 1915, 1915),
- (46, 'Bussa_rebellion', 1915, 1915),
- (47, 'United_States_occupation_of_Haiti\n*Part_of_the_Banana_Wars *', 1915, 1934),
- $(48, `Senussi_Campaign \n*Part_of_World_War_I*', 1915, 1917),$
- (49, 'National_Protection_War\n*Anti-Monarchy_War*', 1915, 1916),
- (50, 'Kaocen_Revolt', 1916, 1917),
- (51, 'Easter_Rising', 1916, 1916),
- (52, 'United_States_occupation_of_the_Dominican_Republic_ (1916-24)*Part_of_the_Banana_Wars*', 1916, 1924),
- (53, 'Arab_Revolt\n*Part_of_World_War_I*', 1916, 1918),
- $(54, \, \text{'February_Revolution'}, \, 1917, \, 1917)$,
- $(55, \, \text{'Thai_Nguyan_uprising'}, \, 1917, \, 1917)$,
- (56, 'Green_Corn_Rebellion', 1917, 1917),
- (57, 'October Revolution', 1917, 1917),
- (58, 'Russian_Civil_War', 1917, 1922),
- (59, 'Soviet-Turkish_War_(1917-1918)\n*Part_of_Russian_Civil_War*', 1917, 1918),
- (60, 'Ukrainian_War_of_Independence\n*Part_of_World_War_I_and_Russian_Civil_War*', 1917, 1921),
- (61, 'Finnish Civil War', 1918, 1918),

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'Georgian-Armenian War', 1918, 1918),
     'German_Revolution_of_1918-19', 1918, 1919),
(64, 'Greater_Poland_Uprising_(1918-19)', 1918, 1919),
(65, 'Polish-Ukrainian_War*Part_of_the_Ukrainian_War_of_
   Independence * ', 1918, 1919),
(66, 'Georgian-Ossetian_conflict_(1918-20)*Part_of_the_Russian_
   Civil_War*', 1918, 1920),
(67, 'Sochi_conflict\n*Part_of_the_Russian_Civil_War*', 1918,
   1919),
(68, 'Armenian-Azerbaijani War*Part of the Russian Civil War*',
   1918, 1920),
(69, 'Estonian_War_of_Independence\n*Part_of_the_Russian_Civil_
   War*', 1918, 1920),
(70, 'Latvian_War_of_Independence\n*Part_of_the_Russian_Civil_War
   *', 1918, 1920),
(71, 'Lithuanian-Soviet_War*Part_of_the_Lithuanian_Wars_of_
   Independence * ', 1918, 1919),
(72, 'Al-Khurma_dispute\n*Part_of_the_Unification_of_Saudi_Arabia
   *', 1918, 1919),
(73, 'War_of_the_Insane', 1918, 1921);
-- Dumping data for table 'participant'
INSERT INTO 'participant' ('pid', 'aid', 'name') VALUES
(1, 1,
       'United_Kingdom'),
(2, 1, 'France'),
(3, 1,
       'Australia'),
(4, 1,
       'Canada'),
       'India'),
(5, 1,
(6, 1,
       'Newfoundland'),
       'New_Zealand'),
(7, 1,
(8, 1,
       'South_Africa'),
(9, 1, 'Russia'),
(10, 1, 'Italy'),
(11, 1, 'United_States'),
(12, 1,
        'Japan'),
(13, 1,
        'Romania'),
(14, 1,
        'Serbia'),
(15, 1, 'Belgium'),
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'Greece'),
(16, 1,
(17, 1,
        'Portugal')
        'Montenegro'),
(18, 1,
(19, 1,
        'Siam'),
(20, 1,
        'Brazil'),
        'Germany'),
(21, 2,
(22, 2,
        'Austria-Hungary'),
(23, 2,
        'Ottoman_Empire'),
(24, 2,
        'Bulgaria'),
(25, 2,
        'Jabal_Shammar'),
(30, 2,
        'Prussia'),
        'Turkey'),
(31, 2,
(32, 2, 'Mexico');
-- Dumping data for table 'participates_in_battle'
INSERT INTO 'participates_in_battle' ('battle_id', '
   participant_id ', 'force_size ', 'num_casualties', 'status')
   VALUES
(1, 15, 36000, 13000, 'lose'),
(1, 21, 59800, 5300, 'win'),
(1, 30, NULL, NULL, 'win'),
(2, 1, 70000, 4500, 'lose'),
(2, 2, 117000, 29597, 'lose'),
(2, 15, 1250000, 329000, 'lose'),
(2, 21, 1300000, 305594, 'win'),
(3, 14, 180000, 4000, 'win'),
(3, 22, 200000, 8000, 'lose'),
(4, 9, 230000, 78000, 'lose'),
(4, 21, 150000, 12500, 'win'),
(5, 1, 142800, 35067, 'win'),
(5, 2, 928200, 227933, 'win'),
(5, 21, 1485000, 256000, 'lose'),
(7, 9, 220000, 200000, 'lose'),
(7, 21, 100000, 16200, 'win'),
(9, 1, 60000, 7000, 'win'),
(9, 5, NULL, 4200, 'win'),
(9, 21, 30000, 10000, 'lose'),
(10, 1, 6156, 1570, 'win'),
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(10, 5, NULL, NULL, 'win'),
(10, 23, 18000, 2435, 'lose'),
(11, 1, 90000, 50000, 'lose'),
(11, 2, 30000, 20000, 'lose'),
                     'lose'),
(11, 3, NULL, NULL,
(11, 4, NULL, NULL,
                     'lose'),
(11, 5, NULL, NULL,
                     'lose'),
(11, 6, NULL, NULL,
                     'lose'),
(11, 7, NULL, NULL,
                     'lose'),
(11, 8, NULL, NULL,
                     'lose'),
(11, 15, NULL, NULL,
                     'lose').
(11,
    21, 105000, 35000, 'win'),
(12, 3, NULL, NULL,
                     'win'),
                     'win'),
(12, 7, NULL, NULL,
(12, 31, NULL, NULL, 'lose'),
(13, 1, NULL, 6500, 'lose'),
(13, 2, NULL, NULL, 'lose'),
(13, 23, NULL, NULL,
                     'win'),
(14, 1, NULL, 2000, 'lose'),
(14, 2, NULL, 1001, 'lose'),
(14, 23, NULL, 2378,
                      'win'),
(15, 1, NULL, NULL,
                     'win'),
(15, 2, NULL, NULL,
                     'win'),
                     'lose'),
(15, 23, NULL, NULL,
(16, 1, NULL, NULL,
                     'lose'),
(16, 2, NULL, NULL,
                     'lose'),
(16, 3, NULL, NULL,
                     'lose'),
(16, 7, NULL, NULL,
                     'lose'),
(16, 23, NULL, NULL,
                      'win'),
(17, 1, NULL, 16648,
                      'win'),
(17, 4, NULL, NULL,
                     'win'),
(17, 5, NULL, NULL,
                     'win')
(17, 21, NULL, 5000,
                      'lose'),
(17, 30, NULL, NULL,
                      'lose'),
                     'other'),
(18, 3, NULL, NULL,
(18, 7, NULL, NULL,
                     'other'),
(18, 31, NULL, NULL, 'other'),
(20, 1, NULL, 4500, 'lose'),
(20, 2, NULL, 2000, 'lose'),
(20, 5, NULL, NULL, 'lose'),
(20, 23, 18600, 3000, 'win'),
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(22, 10, 225000, 14947, 'lose'),
(22, 22, 115000, 9950, 'win'),
(24, 1, 20000, 3800, 'win'),
(24, 23, 13000, 6000, 'lose'),
(26, 10, 250000, 41800, 'win'),
(26, 22, 78000, 46600, 'lose'),
(28, 3, NULL, 2277, 'win'),
(28, 23, NULL, 6000, 'lose'),
(29, 1, NULL, NULL, 'lose'),
(29, 3, NULL, NULL, 'lose'),
(29, 7, NULL, NULL, 'lose'),
(29, 23, NULL, 12000, 'win'),
(30, 3, 600, 372, 'lose'),
(30, 23, NULL, 8, 'win'),
(31, 9, 1200000, 500000, 'lose'),
(31, 21, 1136000, 200000, 'win'),
(31, 22, NULL, NULL, 'win'),
(32, 1, 4000, 1000, 'lose'),
(32, 3, NULL, NULL,
                    'lose'),
(32, 5, NULL, NULL,
                    'lose'),
(32, 7, NULL, NULL,
                    'lose'),
(32, 23, NULL, NULL,
                     'win'),
(33, 1, 14300, 5300, 'lose'),
(33, 23, NULL, 2600, 'win'),
(34, 1, 90000, 59247, 'other'),
(34, 5, NULL, NULL, 'other'),
(34, 21, 45000, 26000, 'other'),
(37, 10, NULL, 67100, 'lose'),
(37, 22, NULL, 40400, 'win'),
(38, 10, NULL, 49500, 'lose'),
(38, 22, NULL, 32100, 'win'),
(39, 1, 11000, 4600, 'lose'),
(39, 5, NULL, NULL, 'lose'),
(39, 23, 18000, 9500, 'win')
(40, 1, 31000, 30000, 'lose'),
(40, 5, NULL, NULL, 'lose'),
(40, 23, 36000, 10000, 'win'),
(42, 1, 13330, 4262, 'win'),
(42, 5, NULL, NULL, 'win'),
(42, 23, 9000, 1200, 'lose'),
(43, 1, 19000, 1600, 'lose'),
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(43, 5, NULL, NULL, 'lose'),
(43, 23, 22500, 527, 'win'),
(44, 1, 10000, 2741, 'lose'),
(44, 5, NULL, NULL, 'lose'),
(44, 23, 30000, 503, 'win'),
(45, 2, 1140000, 542000, 'win'),
(45, 21, 1250000, 434000, 'lose'),
(46, 1, 20159, 3500, 'lose'),
(46, 23, 10000, 1290, 'win'),
(47, 10, NULL, 1882, 'other'),
(47, 22, NULL, 1985, 'other').
(48, 9, 480000, 122000, 'lose'),
(48, 21, 50000, 20000, 'win'),
(49, 10, NULL, 140000, 'win'),
(49, 22, NULL, 100000, 'lose'),
(51, 1, NULL, 6094,
                    'win'),
(51, 3, NULL, NULL,
                     'win'),
(51, 4, NULL, NULL,
                    'win')
(51, 21, NULL, 2551, 'lose'),
(54, 1, 765000, 623907, 'other'),
(54, 2, 720000, NULL, 'other'),
(54, 3, NULL, NULL,
                     'other'),
(54, 4, NULL, NULL,
                     'other'),
(54, 5, NULL, NULL,
                     'other'),
(54, 6, NULL, NULL,
                     'other'),
(54, 7, NULL, NULL,
                     'other'),
(54, 8, NULL, NULL,
                     'other'),
(54, 21, NULL, NULL, 'other'),
(55, 1, 75000, 9194, 'win'),
(55, 5, NULL, NULL,
                    'win'),
(55, 8, NULL, NULL,
                     'win'),
                     'lose'),
(55, 21, NULL, 2300,
(56, 1, NULL, NULL,
                     'win'),
(56, 8, NULL, NULL,
                     'win').
(56, 21, NULL, NULL,
                      'lose'),
(57, 1, NULL, NULL,
                     'win'),
(57, 3, NULL, NULL,
                     'win'),
(57, 21, NULL, NULL,
                     'lose'),
(58, 1, 14000, 1130,
                     'win'),
                    'win'),
(58, 3, NULL, NULL,
(58, 7, NULL, NULL,
                    'win'),
```

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'lose'),
(58, 21, NULL, NULL,
(58, 22, NULL, NULL, 'lose'),
(58, 23, 16000, 9200, 'lose'),
(59, 10, 330000, 51000, 'win')
(59, 22, 135000, 41835, 'lose'),
(60, 1, NULL, NULL,
                    'win'),
(60, 2, NULL, NULL,
                    'win'),
(60, 21, NULL, NULL, 'lose'),
(61, 10, NULL, 17000, 'other'),
(61, 22, NULL, 15000, 'other'),
(62, 1, NULL, NULL,
                     'win'),
(62, 4, NULL, NULL,
                     'win'),
(62, 5, NULL, NULL,
                     'win'),
                     'win'),
(62, 7, NULL, NULL,
(62, 21, NULL, NULL, 'lose'),
(63, 10, 300000, 25000, 'other'),
(63, 22, 210000, 25000, 'other'),
(64, 10, NULL, 39000, 'win'),
(64, 22, NULL, 33000, 'lose'),
(66, 1, 50000, 1000, \text{ 'win'}),
(66, 5, NULL, NULL, 'win'),
(66, 22, 17000, 12000, 'lose'),
(70, 1, 45000, 18000, 'win'),
(70, 5, NULL, NULL, 'win'),
(70, 23, 25000, NULL, 'lose'),
(73, 1, NULL, 3967, 'lose'),
(73, 21, NULL, 28, 'win'),
(73, 22, NULL, 28, 'win'),
(73, 23, NULL, 300, 'win'),
(74, 1, 345000, 158000, 'win'),
(74, 3, NULL, NULL,
                     'win'),
(74, 4, NULL, NULL,
                     'win'),
(74, 6, NULL, NULL,
                     'win'),
(74, 7, NULL, NULL,
                    'win'),
(74, 10, 400000, 150000, 'win'),
(74, 21, 255000, 130000, 'lose'),
(74, 22, 200000, 75000, 'lose'),
(74, 30, NULL, NULL, 'lose'),
(79, 1, 216000, 24562, 'win'),
(79, 3, NULL, NULL, 'win'),
(79, 4, NULL, NULL, 'win'),
```

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(79, 7, NULL, NULL, 'win'),
(79, 21, 126000, 42200, 'lose'),
(79, 30, NULL, NULL, 'lose'),
(80, 1, 750000, NULL, 'other'),
(80, 2, 90000, NULL, 'other'),
                     'other'),
(80, 3, NULL, NULL,
(80, 4, NULL, NULL,
                     'other'),
                     'other'),
(80, 5, NULL, NULL,
(80, 6, NULL, NULL,
                     'other'),
(80, 7, NULL, NULL,
                     'other'),
(80, 8, NULL, NULL,
                     'other'),
(80, 15, NULL, NULL, 'other'),
(80, 21, 1245000, 217000, 'other'),
(81, 10, NULL, 148000, 'other'),
(81, 21, NULL, NULL, 'other'),
(81, 22, NULL, 105000, 'other'),
(82, 1, NULL, 1000, 'win'),
(82, 5, NULL, NULL,
                    'win')
(82, 23, 3500, 3500, 'lose'),
(83, 10, 400000, 350000, 'lose'),
(83, 21, 350000, 70000, 'win'),
(83, 22, NULL, NULL,
                     'win'),
(84, 1, 10000, 2696, 'win'),
(84, 2, NULL, NULL,
                     'win'),
(84, 3, NULL, NULL,
                     'win'),
(84, 5, NULL, NULL,
                     'win'),
(84, 7, NULL, NULL,
                     'win'),
(84, 10, NULL, NULL,
                      'win'),
(84, 21, NULL, NULL,
                      'lose'),
(84, 23, 4500, 1000,
                      'lose'),
(85, 1, 15000, 171,
                     'win'),
(85, 3, NULL, NULL,
                     'win'),
(85, 7, NULL, NULL,
                     'win'),
(85, 21, NULL, NULL,
                      'lose'),
(85, 23, 4400, 1000,
                      'lose'),
(87, 1, NULL, 1188,
                     'win'),
(87, 3, NULL, NULL,
                     'win'),
(87, 5, NULL, NULL,
                     'win'),
(87, 7, NULL, NULL,
                     'win'),
(87, 21, NULL, NULL, 'lose'),
(87, 23, NULL, 10000, 'lose'),
```

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(88, 1, NULL, 44000, 'other'),
(88, 6, NULL, NULL, 'other'),
(88, 11, NULL, NULL, 'other'),
(88, 21, NULL, 45000, 'other'),
(88, 30, NULL, NULL, 'other'),
(90, 1, NULL, 177739, 'other'),
(90, 2, NULL, 77000, 'other'),
(90, 3, NULL, NULL,
                    'other'),
(90, 7, NULL, NULL,
                    'other'),
(90, 11, NULL, 77, 'other'),
(90, 21, NULL, 239800, 'other'),
(90, 30, NULL, NULL, 'other'),
(91, 1, NULL, 120000, 'lose'),
(91, 2, NULL, NULL,
                     'lose'),
(91, 3, NULL, NULL,
                     'lose'),
(91, 4, NULL, NULL,
                     'lose'),
(91, 6, NULL, NULL,
                     'lose'),
(91, 11, NULL, NULL,
                      'lose'),
(91, 15, NULL, NULL,
                      'lose'),
(91, 17, NULL, NULL,
                     'lose'),
(91, 21, NULL, 120000, 'win'),
(93, 1, NULL, NULL, 'other'),
(93, 2, NULL, 127000, 'other'),
(93, 11, NULL, NULL, 'other'),
(93, 21, NULL, 130000, 'other'),
(94, 2, NULL, NULL,
                    'win'),
(94, 11, 4000, 1603, 'win'),
(94, 21, NULL, 250, 'lose'),
                     'win'),
(95, 1, NULL, NULL,
(95, 2, NULL, NULL,
                     'win'),
(95, 11, NULL, 1811, 'win'),
(95, 21, NULL, 1600,
                      'lose'),
(96, 2, NULL, NULL,
                     'win'),
(96, 11, NULL, NULL,
                      'win'),
(96, 15, NULL, NULL,
                      'win'),
(96, 21, NULL, NULL,
                     'lose'),
(97, 10, 870000, 43000, 'win')
(97, 22, 855000, 135000, 'lose'),
(98, 1, NULL, NULL, 'lose'),
(98, 11, NULL, 22, 'lose'),
(98, 21, NULL, NULL, 'win'),
```

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'win'),
(99, 1, NULL, NULL,
(99, 3, 7000, 1400, 'win'),
(99, 11, NULL, NULL,
                     'win'),
(99, 21, 5600, 2000,
                     'lose'),
(100, 5, NULL, NULL,
                     'win'),
(100, 11, NULL, 189, 'win'),
(100, 21, NULL, 1000, 'lose'),
(100, 23, NULL, NULL, 'lose'),
(101, 1, 60000, 16552, 'win'),
(101, 2, 660000, 951665, 'win'),
(101, 10, 30000, 9000, 'win')
(101, 11, 120000, 12000, 'win')
(101, 21, 780000, 139000, 'lose'),
(102, 1, NULL, NULL, 'win'),
(102, 2, 345000, 125000, 'win'),
(102, 11, NULL, NULL, 'win'),
(102, 21, 234000, 168000, 'lose'),
(103, 11, NULL, 0, 'lose'),
(103, 21, NULL, 0, 'win'),
(104, 1, 285000, 22200, 'win'),
(104, 2, 180000, NULL, 'win'),
(104, 3, NULL, NULL, 'win'),
(104, 4, NULL, NULL, 'win'),
(104, 11, 15000, NULL, 'win'),
(104, 21, 210000, 30000, 'lose'),
(105, 11, 800, 6, 'win'),
(105, 21, NULL, 2, 'lose'),
(105, 32, NULL, 130, 'lose'),
(106, 3, NULL, NULL, 'win'),
(106, 21, NULL, NULL, 'lose'),
(107, 1, 45000, NULL, 'win'),
(107, 7, NULL, NULL, 'win')
(107, 21, 60000, NULL, 'lose'),
(108, 2, 110000, NULL, 'win'),
(108, 11, 550000, 7000, 'win'),
(108, 21, 50000, 20000, 'lose'),
(109, 1, 12000, 1260, 'win'),
(109, 2, NULL, NULL, 'win'),
(109, 3, NULL, NULL, 'win'),
(109, 21, 60000, 11750, 'lose'),
(110, 1, 69000, 782, 'win'),
```

```
'win'),
(110, 2, NULL, NULL,
(110, 3, NULL, NULL,
                      'win'),
(110, 5, NULL, NULL,
                      'win'),
(110, 7, NULL, NULL,
                      'win'),
(110, 8, NULL, NULL,
                      'win'),
(110, 21, NULL, NULL, 'lose'),
(110, 23, 35000, 29000, 'lose'),
(111, 2, NULL, 70000, 'win'),
(111, 11, 1200000, 26277, 'win'),
(111, 21, 450000, 120000, 'lose'),
(112, 1, 195000, 30000, 'win'),
(112, 7, NULL, NULL, 'win'),
(112, 21, NULL, 36500, 'lose'),
(113, 1, 180000, NULL, 'win'),
(113, 3, 30000, NULL, 'win'),
(113, 21, 195000, NULL, 'lose'),
(114, 1, 315000, 12000, 'win'),
                      'win'),
(114, 4, 45000, NULL,
(114, 7, 15000, NULL, 'win'),
(114, 21, 180000, 10000, 'lose'),
(115, 1, 45000, 1830, 'win'),
(115, 2, 30000, 588, 'win'),
(115, 10, 765000, 33080, 'win'),
(115, 11, NULL, NULL, 'win'),
(115, 22, 915000, 35000, 'lose'),
(116, 1, 30000, 1800, 'win'),
(116, 5, NULL, NULL, 'win'),
(117, 1, NULL, NULL, 'win'),
(117, 2, NULL, NULL,
                     'win'),
(117, 11, NULL, NULL, 'win'),
(117, 21, NULL, NULL, 'lose');
-- Dumping data for table 'participates_in_conflict'
INSERT INTO 'participates_in_conflict ' ('conflict_id',
   alliance_id', 'enter_date', 'exit_date', 'status', 'location')
    VALUES
(1, 1, 1914, 1918, 'win', NULL),
(1, 2, 1914, 1918, 'lose', NULL),
```

```
(2, 3, 0000, 0000,
                    'win', NULL),
(2, 4, 0000, 0000,
                    'lose', NULL),
(3, 5, 0000, 1920,
                    'win', NULL),
(3, 6, 0000, 1920,
                    'lose', NULL),
    7, 1901, 1902,
                    'win', NULL),
(4, 8, 1901, 1902,
                    'lose', NULL),
(5, 9, 1902, 1903, 'win', NULL),
(5, 10, 1902, 1903, 'lose', NULL),
(6, 11, 1902, 1903,
                     'win', NULL),
(6, 12, 1902, 1903,
                     'lose', NULL),
(7, 13, 1903, 1903,
                     'win', NULL),
(7, 14,
       1903, 1903,
                     'lose', NULL),
        1903, 1904,
                     'win', NULL),
(8, 15,
(8, 16, 1903, 1904,
                     'lose', NULL),
(9, 17, 1903, 1907,
                     'win', NULL),
(9, 18, 1903, 1907,
                     'lose', NULL),
(10, 19, 1904, 1904,
                      'win', NULL),
(10, 20, 1904, 1904,
                      'lose', NULL)
(11, 21, 1904, 1907,
                      'win', NULL),
(11, 22, 1904, 1907,
                      'lose', NULL),
(12, 23, 1904, 1905,
                      'win', NULL),
(12, 24, 1904, 1905,
                      'lose', NULL),
(13, 25, 1904, 1908,
                      'win', NULL),
(13, 26, 1904, 1908,
                      'lose', NULL),
(14, 27, 1905, 1905,
                      'win', NULL),
(14, 28, 1905, 1905,
                      'lose', NULL),
(15, 29, 1905, 1907,
                      'win', NULL),
(15, 30, 1905, 1907,
                      'lose', NULL),
(16, 31, 1905, 1908,
                      'win', NULL),
(16, 32, 1905, 1908,
                      'lose', NULL),
(17, 33, 1906, 1906,
                      'win', NULL),
(17, 34, 1906, 1906,
                      'lose', NULL)
(18, 35, 1906, 1906,
                      'win', NULL),
                      'lose', NULL),
(18, 36, 1906, 1906,
(19, 37, 1906, 1908,
                      'win', NULL),
(19, 38, 1906, 1908,
                      'lose', NULL),
(20, 39, 1907, 1907,
                      'win', NULL),
(20, 40, 1907, 1907,
                      'lose', NULL),
(21, 41, 1907, 1907,
                      'win', NULL),
(21, 42, 1907, 1907,
                      'lose', NULL),
(22, 43, 1908, 1908, 'win', NULL),
```

```
(22, 44, 1908, 1908,
                      'lose', NULL),
(23, 45, 1908, 1908,
                      ' win ', NULL),
(23, 46, 1908, 1908,
                      'lose', NULL),
(24, 47, 1909, 1910,
                       'win', NULL),
(24, 48, 1909, 1910,
                       'lose', NULL),
(25, 49, 1909, 1911,
                       'win', NULL),
(25,
     50, 1909, 1911,
                       'lose', NULL)
(26, 51, 1910, 1920,
                      'win', NULL),
(26, 52, 1910, 1920,
                      'lose', NULL),
(27, 53, 1910, 1919,
                      ' win ', NULL),
(27, 54, 1910, 1919,
                      'lose', NULL)
                       'win', NULL),
(28, 55, 1910, 1911,
                      'lose', NULL),
(28, 56, 1910, 1911,
(29, 57, 1910, 1910,
                       'win', NULL),
(29, 58, 1910, 1910,
                      'lose', NULL),
(30, 59, 1911, 1911,
                       'win', NULL),
                      'lose', NULL),
(30, 60, 1911, 1911,
(31, 61, 1911, 1912,
                       'win', NULL),
                       'lose', NULL),
(31, 62, 1911, 1912,
(32, 63, 1911, 1912,
                       'win', NULL),
(32, 64, 1911, 1912,
                       'lose', NULL)
(33, 65, 1911, 1912,
                       'win', NULL),
(33, 66, 1911, 1912,
                       'lose', NULL),
(34, 67, 1912, 1913,
                       'win', NULL),
(34, 68, 1912, 1913,
                       'lose', NULL)
(35, 69, 1912, 1912,
                       'win', NULL),
(35, 70, 1912, 1912,
                      'lose', NULL),
                      ' win ', NULL),
(36, 71, 1912, 1916,
(36, 72, 1912, 1916,
                      'lose', NULL),
(37, 73, 1912, 1933,
                       'win', NULL),
                      'lose', NULL),
(37, 74, 1912, 1933,
(38, 75, 1912, 1912,
                       'win', NULL),
(38, 76, 1912, 1912,
                       'lose', NULL),
(39, 77, 1913, 1913,
                       'win', NULL),
                       'lose', NULL),
(39, 78, 1913, 1913,
(40, 79, 1913, 1913,
                      'win', NULL),
(40, 80, 1913, 1913,
                      'lose', NULL),
(41, 81, 1913, 1913,
                      'win', NULL),
(41, 82, 1913, 1913,
                      'lose', NULL)
(42, 83, 1914, 1921,
                      'win', NULL),
(42, 84, 1914, 1921,
                      'lose', NULL).
```

```
(43, 85, 1914, 1914,
                      'win', NULL),
(43, 86, 1914, 1914,
                      'lose', NULL),
                      ' win ', NULL),
(44, 87, 1914, 1915,
(44, 88, 1914, 1915,
                      'lose', NULL)
(45, 89, 1915, 1915,
                      'win', NULL),
(45, 90, 1915, 1915,
                      'lose', NULL),
(46, 91, 1915, 1915,
                      ' win ', NULL),
(46, 92, 1915, 1915,
                      'lose', NULL),
(47, 93, 1915, 1934,
                      'win', NULL),
                      'lose', NULL),
(47, 94, 1915, 1934,
(48, 95, 1915, 1917,
                      'win', NULL),
(48, 96, 1915, 1917,
                      'lose', NULL),
(49, 97, 1915, 1916,
                      'win', NULL),
(49, 98, 1915, 1916,
                      'lose', NULL),
(50, 99, 1916, 1917,
                      'win', NULL),
(50, 100, 1916, 1917,
                       'lose', NULL),
(51, 101, 1916, 1916,
                       'win', NULL),
(51, 102, 1916, 1916,
                       'lose', NULL)
                       'win', NULL),
(52, 103, 1916, 1924,
(52, 104, 1916, 1924,
                       'lose', NULL),
                       ' win ', NULL),
(53, 105, 1916, 1918,
(53, 106, 1916, 1918,
                       'lose', NULL),
(54, 107, 1917, 1917,
                       'win', NULL),
(54, 108, 1917, 1917,
                       'lose', NULL),
(55, 109, 1917, 1917,
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(55, 110, 1917, 1917,
                       'lose', NULL),
(56, 111, 1917, 1917,
                       'win', NULL),
(56, 112, 1917, 1917,
                       'lose', NULL),
(57, 113, 1917, 1917,
                       'win', NULL)
(57, 114, 1917, 1917,
                       'lose', NULL),
                       ' win ', NULL),
(58, 115, 1917, 1922,
(58, 116, 1917, 1922,
                       'lose', NULL),
(59, 117, 1917, 1918,
                       'win', NULL),
(59, 118, 1917, 1918,
                       'lose', NULL),
(60, 119, 1917, 1921,
                       'win', NULL),
(60, 120, 1917, 1921,
                       'lose', NULL),
(61, 121, 1918, 1918,
                       'win', NULL),
(61, 122, 1918, 1918,
                       'lose', NULL),
(62, 123, 1918, 1918,
                       'win', NULL)
(62, 124, 1918, 1918, 'lose', NULL),
(63, 125, 1918, 1919, 'win', NULL).
```

```
(63, 126, 1918, 1919, 'lose', NULL),
(64, 127, 1918, 1919, 'win', NULL),
(64, 128, 1918, 1919, 'lose', NULL),
(65, 129, 1918, 1919,
                      'win', NULL),
(65, 130, 1918, 1919, 'lose', NULL),
(66, 131, 1918, 1920,
                      'win', NULL),
(66, 132, 1918, 1920, 'lose', NULL),
(67, 133, 1918, 1919, 'win', NULL),
(67, 134, 1918, 1919, 'lose', NULL),
(68, 135, 1918, 1920, 'win', NULL),
(68, 136, 1918, 1920,
                      'lose', NULL),
(69, 137, 1918, 1920, 'win', NULL),
(69, 138, 1918, 1920, 'lose', NULL),
(70, 139, 1918, 1920, 'win', NULL),
(70, 140, 1918, 1920, 'lose', NULL),
(71, 141, 1918, 1919, 'win', NULL),
(71, 142, 1918, 1919, 'lose', NULL),
(72, 143, 1918, 1919,
                      'win', NULL),
(72, 144, 1918, 1919, 'lose', NULL),
(73, 145, 1918, 1921,
                      'win', NULL),
(73, 146, 1918, 1921, 'lose', NULL);
-- Dumping data for table 'war'
INSERT INTO 'war' ('id') VALUES
(1);
-- Dumping data for table 'war_is_a_conflict'
INSERT INTO 'war_is_a_conflict' ('conflict_id', 'war_id') VALUES
(1, 1);
/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;
```