

Advanced Databases
Project: Club Management Application
Report

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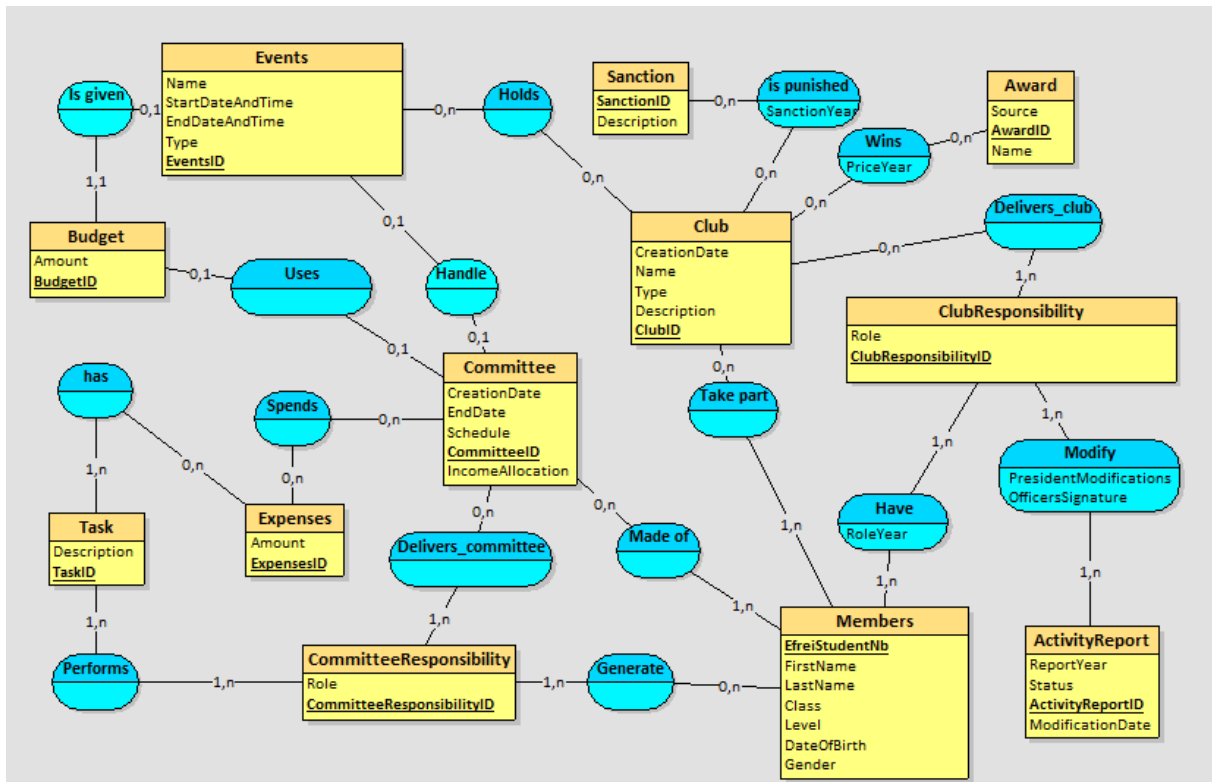
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1. Creation of the database

1.

Using Looping, we were able to generate the following E/R scheme:



At first, we created the entity Club, with attributes Name, CreationDate, Type, Description, and a key named ClubID. This entity is associated to five other entities.

Firstly, to Award, which is defined with a key named AwardID, a Name, and a Source. Award is associated to Club with association Wins, with two (0,n) cardinalities, since there can be no club, or several, winning nil or several awards. To Wins, we add an attribute "PriceYear", giving the year when the award was given.

In a similar way, Club is associated to Sanction, defined by a key SanctionID, and a description. For the same reasons, the cardinalities are the same as for award side. The association, Is punished, also has a year, to record the sanction's year.

Then Club is linked to entity Members defined with a key EfreiStudentID, and attributes FirstName, LastName, Class, Level, DateOfBirth and Gender. The association between Club and Members is called Take part, with cardinalities (0,n) since there can be nil to several clubs, and (1,n) because there can be several members to a club, but at least 1 otherwise the club doesn't exist.

Members and Club are both associated to ClubResponsibility, an entity defining roles in the club. This entity is defined with key ClubResponsibilityID, and attribute Role. The associations and their cardinalities are the following: Club and ClubResponsibility are linked with association Delivers_club, with cardinalities (0,n) and (1,n) because there can be no club as well as several clubs, but if a club

exist, there is at least one member, with at least one responsibility; Members and ClubResponsibility are linked with association Have, with cardinalities (1,n) because if a club exist, there is at least one member, with at least one responsibility given to a member. Association Have has attribute RoleYear, giving a year to a membership and responsibility, to keep history of members' responsibilities. Finally, ClubResponsibility is associated to entity ActivityReport with association Modify, defined by a PresidentModification or an OfficersSignature. The ActivityReport is annual and mandatory, so between Modify and ActivityReport the cardinality is (1, n). ActivityReport is defined with attributes ReportYear, Status, ModificationDate, and key ActivityReportID.

Now we come back to Club, to explain its link with entity Events, which is defined with a key named EventsID, a Name, a StartDateAndTime, an EndDateAndTime, and a Type. Events is associated to Club with association Holds, with two (0,n) cardinals, since there can be no club, or several, organizing nil or several events.

An event can have a committee, so we created entity Committee, with a CreationDate, and EndDate, Schedule, IncomeAllocation, and key CommitteeID. Since, both event and committee are optional, and there is one single committee for one single event, the association is named Handle, and as two cardinalities (0,1). Committee is also linked to Members since a committee is composed of club members. Therefore they share an association called Made of, of cardinality (0,n) and (1,n) as there can be none or several committees, but one committee is made of at least one member.

Events and Committee are both associated to an entity named Budget, of attribute Amount, and key BudgetID. This budget is attributed to an event, and handled by the event's committee, but is optional. Therefore, the association between Events and Budget is named Is given, of cardinalities (0,1) and (1,1), because there can be one budget for one event max, but events are optional. The association between Committee and Budget is named Uses. For the same reasons as between Events and Budget, the cardinalities are (0,1), because both Budget and Committee are optional, but it's only Budget per Committee and one Committee per Budget.

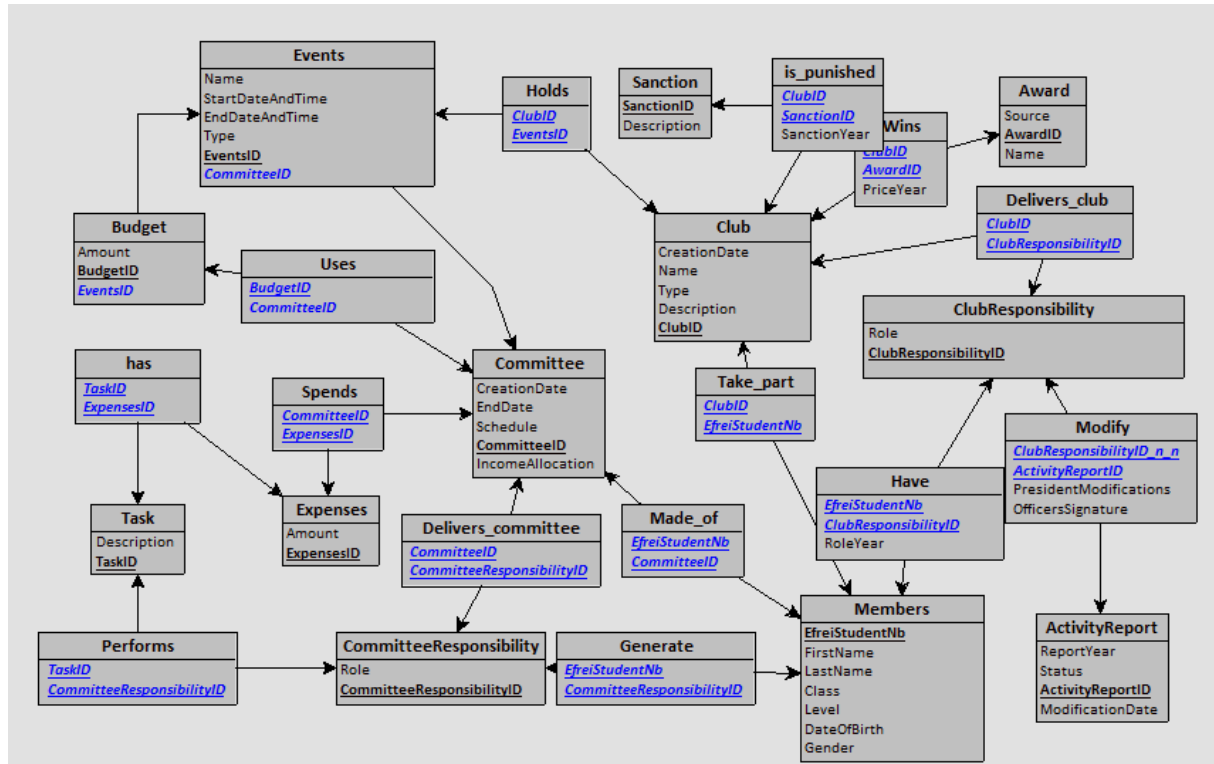
An entity called Task, of attributes Description and TaskID (key), with an association called has, of cardinality (0,n) and (1,n) to entity Expenses, because there is at least one task, but the budget allowed for each task can be nil. Task is associated with association Performs to entity CommitteeResponsibility. The cardinalities are both (1,n) since one or several members can performs one or several tasks. We can't have a nil value because if committee members have responsibilities, it means they have tasks to perform. CommitteeResponsibility is defined by attributes Role, and key CommitteeResponsibilityID. Now let's look at association between Members and CommitteeResponsibility. It is associated by association Generate, since being committee member generates responsibility by default. Therefore, the cardinality is (0,n) between Members and Generate, as there can be none or several members, and the cardinality is (1,n) between Generate and CommitteeResponsibility because if there is a committee member, there is at least one responsibility. As for Club and ClubResponsibility, CommitteeResponsibility and Committee are associated with Delivers_committee, with cardinalities (0,n) and (1,n) since there can be none or many committees, but if a committee exists, at least one responsibility is generated.

Finally, Committee is associated to Expenses entity with association Spends. Expenses has attributes Amount and key ExpensesID. Because regarding the IncomeAllocation and the Budget, Committee can make several Expenses. So the cardinalities are (0,n), since there can be none to several committees, and none to several expenses for each committee.

To obtain the relational scheme, we take the E/R scheme and go through the following method: we delete cardinalities and associations between entities. Associations with specific

attributes become entity such as Modify or Generate. We described data as much detailed as possible without looking at their implementation in the database. In blue, we implemented new data, the foreign keys, corresponding to IDs of entities in the MCD, to delete cardinals.

So, we generated the following relational equivalent to our E/R scheme:



2.

We want to check if our diagram respects the three first normal forms. Let's remind them.

First one:

- A relation is in 1st Normal Form (1NF) if and only if all its attributes are atomic (not compound and mono-valued)

Second one:

1. it is in 1NF
2. any attribute not belonging to the key depends only on the whole key

Third one:

1. it is in 2NF
2. any attribute not belonging to a key does not depend on a non-key attribute (no functional dependency between non-key attributes)

Looking at the entities in the E/R scheme, we can see that all attributes are atomic, they can't get several values, therefore the 1st Normal Form is verified. Then, looking at the relational scheme, we verify the 2nd and 3rd Normal Form, since no attribute that doesn't belong to the key depends only on the whole key, and non-key dependent attribute aren't interdependent.

3.

We end up with the following SQL code to implement and create the database:

```
DROP DATABASE IF EXISTS clubs_efrei;
```

```
CREATE DATABASE clubs_efrei;
```

```
USE clubs_efrei;
```

```
drop table if exists CLUB ;
```

```
drop table if exists MEMBERS ;
```

```
drop table if exists CLUBRESPONSIBILITY ;
```

```
drop table if exists COMMITTEE ;
```

```
drop table if exists TASK ;
```

```
drop table if exists COMMITTEERESPONSIBILITY ;
```

```
drop table if exists ACTIVITYREPORT ;
```

```
drop table if exists AWARD ;
```

```
drop table if exists EXPENSES ;
```

```
drop table if exists SANCTION ;
```

```
drop table if exists EVENTS ;
```

```
drop table if exists BUDGET ;
```

```
drop table if exists HAVE ;
```

```
drop table if exists DELIVERS_CLUB ;
```

```
drop table if exists HOLDS ;
```

```
drop table if exists MADE_OF ;
```

```
drop table if exists USES ;
```

```
drop table if exists HAS ;
```

```
drop table if exists GENERATE ;
```

```
drop table if exists PERFORMS ;
```

```
drop table if exists TAKE_PART ;
```

```
drop table if exists WINS ;
```

```
drop table if exists MODIFY ;
drop table if exists SPENDS ;
drop table if exists DELIVERS_COMMITTEE ;
drop table if exists IS_PUNISHED ;
```

```
CREATE TABLE Club(
    ClubID VARCHAR(50),
    CreationDate DATE,
    Name VARCHAR(50),
    Type VARCHAR(50),
    Description VARCHAR(50),
    PRIMARY KEY(ClubID)
)engine = InnoDB;
```

```
CREATE TABLE Members(
    EfreiStudentNb INT,
    FirstName VARCHAR(50),
    LastName VARCHAR(50),
    Class VARCHAR(50),
    Level VARCHAR(50),
    DateOfBirth DATE,
    Gender VARCHAR(50),
    PRIMARY KEY(EfreiStudentNb)
)engine = InnoDB;
```

```
CREATE TABLE ClubResponsibility(
    ClubResponsibilityID VARCHAR(50),
    Role VARCHAR(50),
    PRIMARY KEY(ClubResponsibilityID)
)engine = InnoDB;
```

```
CREATE TABLE Committee(
    CommitteeID VARCHAR(50),
```

```
CreationDate DATETIME,  
EndDate DATETIME,  
Schedule DATE,  
IncomeAllocation DECIMAL(7,2),  
PRIMARY KEY(CommitteeID)  
)engine = InnoDB;
```

```
CREATE TABLE Task(  
TaskID VARCHAR(50),  
Description VARCHAR(50),  
PRIMARY KEY(TaskID)  
)engine = InnoDB;
```

```
CREATE TABLE CommitteeResponsibility(  
CommitteeResponsibilityID VARCHAR(50),  
Role VARCHAR(50),  
PRIMARY KEY(CommitteeResponsibilityID)  
)engine = InnoDB;
```

```
CREATE TABLE ActivityReport(  
ActivityReportID VARCHAR(50),  
ReportYear DATE,  
Status VARCHAR(50),  
ModificationDate DATETIME,  
PRIMARY KEY(ActivityReportID)  
)engine = InnoDB;
```

```
CREATE TABLE Award(  
AwardID VARCHAR(50),  
Source VARCHAR(50),  
Name VARCHAR(50),  
PRIMARY KEY(AwardID)  
)engine = InnoDB;
```



```
CREATE TABLE Expenses(  
    ExpensesID VARCHAR(50),  
    Amount DECIMAL(7,2),  
    PRIMARY KEY(ExpensesID)  
)engine = InnoDB;
```

```
CREATE TABLE Sanction(  
    SanctionID VARCHAR(50),  
    Description VARCHAR(50),  
    PRIMARY KEY(SanctionID)  
)engine = InnoDB;
```

```
CREATE TABLE Events(  
    EventsID VARCHAR(50),  
    Name VARCHAR(50),  
    StartDateAndTime DATETIME,  
    EndDateAndTime DATETIME,  
    Type VARCHAR(50),  
    CommitteeID VARCHAR(50),  
    PRIMARY KEY(EventsID),  
    UNIQUE(CommitteeID),  
    FOREIGN KEY(CommitteeID) REFERENCES Committee(CommitteeID)  
)engine = InnoDB;
```

```
CREATE TABLE Budget(  
    BudgetID VARCHAR(50),  
    Amount DECIMAL(7,2) NOT NULL,  
    EventsID VARCHAR(50) NOT NULL,  
    PRIMARY KEY(BudgetID),  
    UNIQUE(EventsID),  
    FOREIGN KEY(EventsID) REFERENCES Events(EventsID)  
)engine = InnoDB;
```

```

CREATE TABLE Have(
    EfreiStudentNb INT,
    ClubResponsibilityID VARCHAR(50),
    RoleYear DATE NOT NULL,
    PRIMARY KEY(EfreiStudentNb, ClubResponsibilityID),
    FOREIGN KEY(EfreiStudentNb) REFERENCES Members(EfreiStudentNb),
    FOREIGN KEY(ClubResponsibilityID) REFERENCES ClubResponsibility(ClubResponsibilityID)
)engine = InnoDB;

```

```

CREATE TABLE Delivers_club(
    ClubID VARCHAR(50),
    ClubResponsibilityID VARCHAR(50),
    PRIMARY KEY(ClubID, ClubResponsibilityID),
    FOREIGN KEY(ClubID) REFERENCES Club(ClubID),
    FOREIGN KEY(ClubResponsibilityID) REFERENCES ClubResponsibility(ClubResponsibilityID)
)engine = InnoDB;

```

```

CREATE TABLE Holds(
    ClubID VARCHAR(50),
    EventsID VARCHAR(50),
    PRIMARY KEY(ClubID, EventsID),
    FOREIGN KEY(ClubID) REFERENCES Club(ClubID),
    FOREIGN KEY(EventsID) REFERENCES Events(EventsID)
)engine = InnoDB;

```

```

CREATE TABLE Made_of(
    EfreiStudentNb INT,
    CommitteeID VARCHAR(50),
    PRIMARY KEY(EfreiStudentNb, CommitteeID),
    FOREIGN KEY(EfreiStudentNb) REFERENCES Members(EfreiStudentNb),
    FOREIGN KEY(CommitteeID) REFERENCES Committee(CommitteeID)
)engine = InnoDB;

```

```

CREATE TABLE Uses(
    BudgetID VARCHAR(50),
    CommitteeID VARCHAR(50) NOT NULL,
    PRIMARY KEY(BudgetID),
    UNIQUE(CommitteeID),
    FOREIGN KEY(BudgetID) REFERENCES Budget(BudgetID),
    FOREIGN KEY(CommitteeID) REFERENCES Committee(CommitteeID)
)engine = InnoDB;

```

```

CREATE TABLE has(
    TaskID VARCHAR(50),
    ExpensesID VARCHAR(50),
    PRIMARY KEY(TaskID, ExpensesID),
    FOREIGN KEY(TaskID) REFERENCES Task(TaskID),
    FOREIGN KEY(ExpensesID) REFERENCES Expenses(ExpensesID)
)engine = InnoDB;

```

```

CREATE TABLE Generate(
    EfreiStudentNb INT,
    CommitteeResponsibilityID VARCHAR(50),
    PRIMARY KEY(EfreiStudentNb, CommitteeResponsibilityID),
    FOREIGN KEY(EfreiStudentNb) REFERENCES Members(EfreiStudentNb),
    FOREIGN KEY(CommitteeResponsibilityID) REFERENCES
CommitteeResponsibility(CommitteeResponsibilityID)
)engine = InnoDB;

```

```

CREATE TABLE Performs(
    TaskID VARCHAR(50),
    CommitteeResponsibilityID VARCHAR(50),
    PRIMARY KEY(TaskID, CommitteeResponsibilityID),
    FOREIGN KEY(TaskID) REFERENCES Task(TaskID),

```

```

FOREIGN KEY(CommitteeResponsibilityID)
CommitteeResponsibility(CommitteeResponsibilityID)
REFERENCES
)engine = InnoDB;

```

```

CREATE TABLE Take_part(
    ClubID VARCHAR(50),
    EfreiStudentNb INT,
    PRIMARY KEY(ClubID, EfreiStudentNb),
    FOREIGN KEY(ClubID) REFERENCES Club(ClubID),
    FOREIGN KEY(EfreiStudentNb) REFERENCES Members(EfreiStudentNb)
)engine = InnoDB;

```

```

CREATE TABLE Wins(
    ClubID VARCHAR(50),
    AwardID VARCHAR(50),
    PriceYear DATE NOT NULL,
    PRIMARY KEY(ClubID, AwardID),
    FOREIGN KEY(ClubID) REFERENCES Club(ClubID),
    FOREIGN KEY(AwardID) REFERENCES Award(AwardID)
)engine = InnoDB;

```

```

CREATE TABLE Modify(
    ClubResponsibilityID_n_n VARCHAR(50),
    ActivityReportID VARCHAR(50),
    PresidentModifications VARCHAR(50),
    OfficersSignature VARCHAR(50),
    PRIMARY KEY(ClubResponsibilityID_n_n, ActivityReportID),
    FOREIGN KEY(ClubResponsibilityID_n_n) REFERENCES ClubResponsibility(ClubResponsibilityID),
    FOREIGN KEY(ActivityReportID) REFERENCES ActivityReport(ActivityReportID)
)engine = InnoDB;

```

```

CREATE TABLE Spends(
    CommitteelD VARCHAR(50),

```

```

ExpensesID VARCHAR(50),
PRIMARY KEY(CommitteeID, ExpensesID),
FOREIGN KEY(CommitteeID) REFERENCES Committee(CommitteeID),
FOREIGN KEY(ExpensesID) REFERENCES Expenses(ExpensesID)
)engine = InnoDB;

```

```

CREATE TABLE Delivers_committee(
    CommitteeID VARCHAR(50),
    CommitteeResponsibilityID VARCHAR(50),
    PRIMARY KEY(CommitteeID, CommitteeResponsibilityID),
    FOREIGN KEY(CommitteeID) REFERENCES Committee(CommitteeID),
    FOREIGN KEY(CommitteeResponsibilityID) REFERENCES
CommitteeResponsibility(CommitteeResponsibilityID)
)engine = InnoDB;

```

```

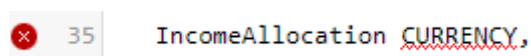
CREATE TABLE is_punished(
    ClubID VARCHAR(50),
    SanctionID VARCHAR(50),
    SanctionYear DATE NOT NULL,
    PRIMARY KEY(ClubID, SanctionID),
    FOREIGN KEY(ClubID) REFERENCES Club(ClubID),
    FOREIGN KEY(SanctionID) REFERENCES Sanction(SanctionID)
)engine = InnoDB;

```

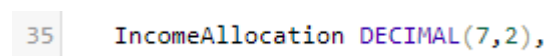
4.

We copied the given SQL instruction injected it into MySQL Workbench. Doing so, we realized that datatype “CURRENCY” given by Looping isn’t accepted by MySQL Workbench. Therefore, we changed every “CURRENCY” by “DECIMAL(7,2)”, meaning that the datatype is a decimal number of maximum 7 figures, with 2 figures after the unit. Hence the maximum money value is 99999.99.

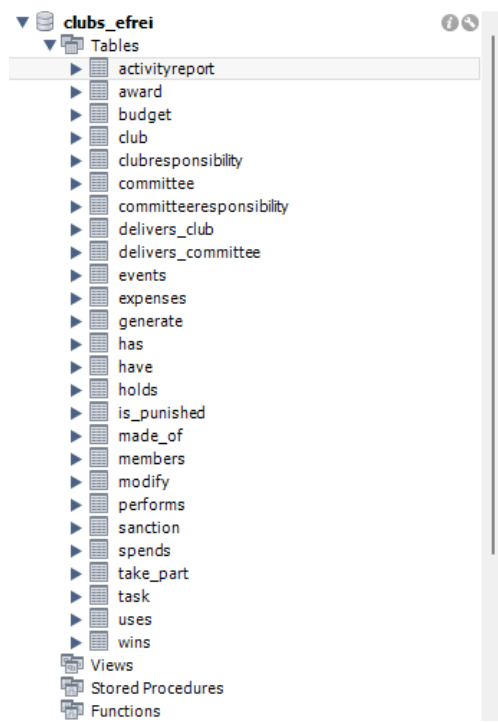
Before:



After:



The SQL text being modified, we now have a database called “clubs_efrei”, with 26 tables as planned, for each element of the relational diagram. Here is a screenshot of the MySQL Workbench interface with all tables in the database:



2.Test Data

Disclaimer: This is the first version of our database. For some questions in parts 3 and 4, these injections weren't consistent enough. Therefore, for some questions we have added new values to the tables. The "SQL scripts.sql" contains the last version (updated) of our database, with the last injections. It means some of our queries in parts 3 and 4 won't give the same answer if we use them with the last version of our database. Most of our questions were answered using the previous versions, we updated the table only for the three questions where it was needed.

This is the first version of our database:

We want at least 10 consistent records for each table, therefore table by table, we are going to implement at least 10 imaginary records.

SQL first injection, to fill "club":

```
INSERT INTO `club` (`ClubID`, `CreationDate`, `Name`, `Type`, `Description`) VALUES ('1', '2012-08-24', 'BDS', 'sports', 'Association for sports practice and competitions'), ('2', '2015-05-27', 'SEPEFREI', 'entrepreneurial', 'Efrei's junior company '), ('3', '2011-03-17', 'Live Music', 'cultural', 'Association for live music practice and concerts'), ('4', '2011-09-04', 'Video Games Efrei', 'sports', 'Association for e-sports practice and competitions'), ('5', '2013-08-25', 'ICE Efrei', 'technical', 'Association for robot building and tech testing ')
```

Giving:

<div>← T →</div>			ClubID	CreationDate	Name	Type	Description
<input type="checkbox"/>	<div><div>✎ Éditer</div><div>📄 Copier</div><div>🗑 Supprimer</div></div>	1	2012-08-24	BDS	sports	Association for sports practice and competitions	
<input type="checkbox"/>	<div><div>✎ Éditer</div><div>📄 Copier</div><div>🗑 Supprimer</div></div>	2	2015-05-27	SEPEFREI	entrepreneurial	Efrei's junior company	
<input type="checkbox"/>	<div><div>✎ Éditer</div><div>📄 Copier</div><div>🗑 Supprimer</div></div>	3	2011-03-17	Live Music	cultural	Association for live music practice and concerts	
<input type="checkbox"/>	<div><div>✎ Éditer</div><div>📄 Copier</div><div>🗑 Supprimer</div></div>	4	2011-09-04	Video Games Efrei	sports	Association for e-sports practice and competitions	
<input type="checkbox"/>	<div><div>✎ Éditer</div><div>📄 Copier</div><div>🗑 Supprimer</div></div>	5	2013-08-25	ICE Efrei	technical	Association for robot building and tech testing	

SQL first injection, to fill "sanction":

```
INSERT INTO `sanction` (`SanctionID`, `Description`) VALUES ('1', 'Misbehavior in events'), ('2', 'Financial issue '), ('3', 'Copyrights issue')
```

Giving:

<div><div><div><div></div><div></div><div></div></div><div></div><div></div></div></div>						SanctionID	Description	
<input type="checkbox"/>		Éditer		Copier		Supprimer	1	Misbehavior in events
<input type="checkbox"/>		Éditer		Copier		Supprimer	2	Financial issue
<input type="checkbox"/>		Éditer		Copier		Supprimer	3	Copyrights issue

SQL first injection, to fill "is_punished":

```
INSERT INTO `is_punished` (`ClubID`, `SanctionID`, `SanctionYear`) VALUES ('1', '1', '2018-07-31'), ('2', '2', '2021-07-31')
```

Giving:

	ClubID	SanctionID	SanctionYear
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	1	2018-07-31
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	2	2021-07-31

SQL injection to fill “committee”:

```
INSERT INTO `committee` (`CommitteeID`, `CreationDate`, `EndDate`, `Schedule`, `IncomeAllocation`) VALUES ('1', '2021-12-08 00:00:00', '2022-01-15 00:00:00', '2022-01-08', '4000,00'), ('2', '2021-09-23 00:00:00', '2021-10-30 00:00:00', '2021-10-23', NULL), ('3', '2022-02-12 00:00:00', '2022-03-19 00:00:00', '2022-03-12', '8000,00'), ('4', '2022-03-01 00:00:00', '2022-04-08 00:00:00', '2022-04-01', '12000,00'), ('5', '2021-08-23 00:00:00', '2021-09-30 00:00:00', '2021-09-23', NULL), ('6', '2021-12-14 00:00:00', '2022-01-21 00:00:00', '2021-01-14', NULL)
```

Giving:

	CommitteeID	CreationDate	EndDate	Schedule	IncomeAllocation
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	2021-12-08 00:00:00	2022-01-15 00:00:00	2022-01-08	4000.00
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	2021-09-23 00:00:00	2021-10-30 00:00:00	2021-10-23	NULL
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	2022-02-12 00:00:00	2022-03-19 00:00:00	2022-03-12	8000.00
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	2022-03-01 00:00:00	2022-04-08 00:00:00	2022-04-01	12000.00
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	2021-08-23 00:00:00	2021-09-30 00:00:00	2021-09-23	NULL
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	6	2021-12-14 00:00:00	2022-01-21 00:00:00	2021-01-14	NULL

SQL injection to fill “award”:

```
INSERT INTO `award` (`AwardID`, `Source`, `Name`) VALUES ('1', 'EFREI Administration', 'Most influence '), ('2', 'EFREI Students', 'Students choice Award ')
```

Giving:

	AwardID	Source	Name
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	EFREI Administration	Most influence
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	EFREI Students	Students choice Award

SQL first injection to fill “members”:

```
INSERT INTO `members` (`EfreiStudentNb`, `FirstName`, `LastName`, `Class`, `Level`, `DateOfBirth`, `Gender`) VALUES ('20170001', 'Chappell', 'Rouze', 'INT', 'M2', '1999-04-13', 'F'), ('20170002', 'Faustin', 'Trépanier', 'B', 'M1', '1998-09-27', 'M'), ('20170003', 'Gradasso', 'Pouchard', 'A', 'M2', '1999-07-14', 'M'), ('20170004', 'Voleta', 'Lamour', 'INT', 'M2', '1999-04-27', 'F'), ('20170005', 'Raoul', 'Busson', 'A', 'M1', '1998-03-07', 'M'), ('20170006', 'Luc', 'Barjavel', 'B', 'M2', '1999-12-15', 'M'), ('20170007', 'Joseph', 'Caouette', 'INT', 'M2', '1999-02-09', 'M'), ('20170008', 'Pascal', 'Roy', 'INT', 'M2', '1999-01-
```



```
20', 'M'), ('20170009', 'Barry', 'Echeverri', 'A', 'M2', '1999-06-10', 'M'), ('20170010', 'Ansel', 'Perillard', 'INT', 'M2', '1999-09-22', 'M'), ('20170011', 'Aymon', 'Petit', 'B', 'M2', '1999-07-21', 'M'), ('20170012', 'Christiane', 'Boulé', 'B', 'M2', '1999-03-16', 'F'), ('20170013', 'Alphonse', 'Primeau', 'A', 'M2', '1999-02-17', 'M'), ('20170014', 'Huetten', 'Bonneville', 'B', 'M2', '1999-05-19', 'F'), ('20170015', 'Valérie', 'Racicot', 'A', 'M2', '1999-07-07', 'F')
```

SQL second injection to fill “members”:

```
INSERT INTO `members` (`EfreiStudentNb`, `FirstName`, `LastName`, `Class`, `Level`, `DateOfBirth`, `Gender`) VALUES ('20180001', 'Francis', 'Neufville', 'INT', 'M1', '2000-06-21', 'M'), ('20180002', 'Jules', 'Caisse', 'A', 'M1', '2000-02-14', 'M'), ('20180003', 'Joy', 'Marcheterre', 'INT', 'M1', '2000-10-12', 'F'), ('20180004', 'Melisande', 'Masson', 'B', 'L3', '1999-09-17', 'F'), ('20180005', 'Hélène', 'Salois', 'B', 'M1', '2000-12-20', 'F'), ('20180006', 'Desire', 'Fluet', 'INT', 'M1', '2000-03-14', 'F'), ('20180007', 'Moore', 'Mailloux', 'INT', 'M1', '2000-03-09', 'M'), ('20180008', 'Frédéric', 'Dodier', 'INT', 'M1', '2000-10-19', 'M'), ('20180009', 'Alain', 'David', 'A', 'M1', '2000-10-12', 'M'), ('20180010', 'Varden', 'Bordeleau', 'B', 'L3', '2000-11-07', 'M'), ('20180011', 'Laurent', 'Chassé', 'B', 'M1', '2000-08-02', 'M'), ('20180012', 'Saber', 'Massé', 'A', 'M1', '2000-04-18', 'M'), ('20180013', 'Tabor', 'Arnoux', 'A', 'M1', '2000-01-14', 'M'), ('20180014', 'Gilles', 'Talon', 'B', 'M1', '2000-09-14', 'M'), ('20180015', 'Corinne', 'Gougeon', 'A', 'M1', '2000-10-04', 'F')
```

SQL third injection to fill “members”:

```
INSERT INTO `members` (`EfreiStudentNb`, `FirstName`, `LastName`, `Class`, `Level`, `DateOfBirth`, `Gender`) VALUES ('20190001', 'Ancelina', 'Ruel', 'INT', 'L3', '2001-04-24', 'F'), ('20190002', 'Cendrillon', 'Margand', 'INT', 'L3', '2001-06-15', 'F'), ('20190003', 'Aloin', 'Fongemie', 'B', 'L3', '2001-02-13', 'M'), ('20190004', 'Inès', 'Longpré', 'B', 'L3', '2001-01-09', 'F'), ('20190005', 'Porter', 'Barrette', 'B', 'L3', '2001-08-18', 'M'), ('20190006', 'Gustave', 'Lacasse', 'INT', 'L2', '2001-06-15', 'M'), ('20190007', 'Xarles', 'Arpin', 'INT', 'L3', '2001-12-13', 'M'), ('20190008', 'Grégoire', 'Quiron', 'B', 'L3', '2001-01-15', 'M'), ('20190009', 'Jean', 'Lizotte', 'B', 'L3', '2001-05-25', 'M'), ('20190010', 'Varden', 'Ruest', 'INT', 'L3', '2001-01-15', 'M'), ('20190011', 'Hugues', 'Lamontagne', 'A', 'L2', '2001-07-13', 'M'), ('20190012', 'Jules', 'Champagne', 'A', 'L3', '2001-10-17', 'M'), ('20190013', 'Fitz', 'Houle', 'A', 'L3', '2001-10-24', 'M'), ('20190014', 'Benjamin', 'Bernard', 'A', 'L3', '2001-02-13', 'M'), ('20190015', 'Percy', 'Gendron', 'A', 'L3', '2001-08-15', 'M')
```

SQL fourth injection to fill “members”:

```
INSERT INTO `members` (`EfreiStudentNb`, `FirstName`, `LastName`, `Class`, `Level`, `DateOfBirth`, `Gender`) VALUES ('20200001', 'Stéphane', 'Grimard', 'INT', 'L2', '2002-04-18', 'M'), ('20200002', 'Sargent', 'Berger', 'A', 'L2', '2002-07-11', 'M'), ('20200003', 'Véronique', 'Marquis', 'B', 'L2', '2002-01-08', 'F'), ('20200004', 'Baptiste', 'Marseau', 'A', 'L2', '2002-07-17', 'M'), ('20200005', 'Yvon', 'Crête', 'B', 'L2', '2002-09-19', 'M'), ('20200006', 'Gustave', 'Gilbert', 'A', 'L2', '2002-06-
```

```

28', 'M'), ('20200007', 'Antoine', 'Léveillé', 'INT', 'L1', '2002-11-
19', 'M'), ('20200008', 'Marthe', 'Champagne', 'B', 'L2', '2002-12-
12', 'F'), ('20200009', 'René', 'Routhier', 'B', 'L2', '2002-10-
09', 'M'), ('20200010', 'Claude', 'Souplet', 'B', 'L1', '2002-04-
22', 'M'), ('20200011', 'Sophie', 'Perillard', 'INT', 'L2', '2002-08-
14', 'F'), ('20200012', 'Gilbert', 'Boivin', 'INT', 'L2', '2002-11-
26', 'M'), ('20200013', 'Bayard', 'Laderoute', 'A', 'L2', '2002-03-
11', 'M'), ('20200014', 'Constance', 'Huppé', 'B', 'L2', '2002-01-
15', 'F'), ('20200015', 'Marshall', 'Goulet', 'A', 'L2', '2002-05-18', 'M')

```

SQL fifth injection to fill “members”:

```

INSERT INTO `members` (`EfreiStudentNb`, `FirstName`, `LastName`, `Class`,
`Level`, `DateOfBirth`, `Gender`) VALUES ('20210001', 'Yvette', 'Demers', '
B', 'L1', '2003-04-
11', 'F'), ('20210002', 'Henri', 'Melanson', 'B', 'L1', '2003-02-
11', 'M'), ('20210003', 'Adélaïde', 'Tardif', 'A', 'L1', '2003-01-
14', 'F'), ('20210004', 'Franck', 'Bonenfant', 'B', 'L1', '2003-07-
11', 'M'), ('20210005', 'Alexandre', 'Fortier', 'A', 'L1', '2003-10-
31', 'M'), ('20210006', 'Caroline', 'Primeau', 'A', 'L1', '2003-12-
12', 'F'), ('20210007', 'Dexter', 'LeBatelier', 'INT', 'L1', '2003-04-
24', 'M'), ('20210008', 'Honoré', 'Dodier', 'INT', 'L1', '2003-06-
19', 'M'), ('20210009', 'Ansel', 'Vertefeuille', 'B', 'L1', '2003-07-
15', 'M'), ('20210010', 'Ferrau', 'LaCaille', 'INT', 'L1', '2003-08-
08', 'M'), ('20210011', 'Alphonse', 'Devoe', 'A', 'L1', '2003-02-
17', 'M'), ('20210012', 'Albertine', 'LaGrande', 'INT', 'L1', '2003-08-
21', 'F'), ('20210013', 'Germain', 'L\Heureux', 'B', 'L1', '2003-01-
20', 'M'), ('20210014', 'Brice', 'Melanson', 'A', 'L1', '2003-07-
24', 'M'), ('20210015', 'Gaetane', 'Lalonde', 'INT', 'L1', '2003-09-
11', 'F')

```

Giving:

← T →						EfreiStudentNb	FirstName	LastName	Class	Level	DateOfBirth	Gender	
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170001	Chappell	Rouze	INT	M2	1999-04-13	F
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170002	Faustin	Trépanier	B	M1	1998-09-27	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170003	Gradasso	Pouchard	A	M2	1999-07-14	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170004	Voleta	Lamour	INT	M2	1999-04-27	F
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170005	Raoul	Busson	A	M1	1998-03-07	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170006	Luc	Barjavel	B	M2	1999-12-15	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170007	Joseph	Caouette	INT	M2	1999-02-09	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170008	Pascal	Roy	INT	M2	1999-01-20	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170009	Barry	Echeverri	A	M2	1999-06-10	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170010	Ansel	Perillard	INT	M2	1999-09-22	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170011	Aymon	Petit	B	M2	1999-07-21	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170012	Christiane	Boulé	B	M2	1999-03-16	F
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170013	Alphonse	Primeau	A	M2	1999-02-17	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170014	Huette	Bonneville	B	M2	1999-05-19	F
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170015	Valérie	Racicot	A	M2	1999-07-07	F
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180001	Francis	Neufville	INT	M1	2000-06-21	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180002	Jules	Caisse	A	M1	2000-02-14	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180003	Joy	Marcheterre	INT	M1	2000-10-12	F
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180004	Melisande	Masson	B	L3	1999-09-17	F
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180005	Hélène	Salois	B	M1	2000-12-20	F
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180006	Desire	Fluet	INT	M1	2000-03-14	F
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180007	Moore	Mailloux	INT	M1	2000-03-09	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180008	Frédéric	Dodier	INT	M1	2000-10-19	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180009	Alain	David	A	M1	2000-10-12	M
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180010	Varden	Bordeleau	B	L3	2000-11-07	M

<input type="checkbox"/>					20180011	Laurent	Chassé	B	M1	2000-08-02	M
<input type="checkbox"/>					20180012	Saber	Massé	A	M1	2000-04-18	M
<input type="checkbox"/>					20180013	Tabor	Arnoux	A	M1	2000-01-14	M
<input type="checkbox"/>					20180014	Gilles	Talon	B	M1	2000-09-14	M
<input type="checkbox"/>					20180015	Corinne	Gougeon	A	M1	2000-10-04	F
<input type="checkbox"/>					20190001	Ancelina	Ruel	INT	L3	2001-04-24	F
<input type="checkbox"/>					20190002	Cendrillon	Margand	INT	L3	2001-06-15	F
<input type="checkbox"/>					20190003	Aloin	Fongemie	B	L3	2001-02-13	M
<input type="checkbox"/>					20190004	Inès	Longpré	B	L3	2001-01-09	F
<input type="checkbox"/>					20190005	Porter	Barrette	B	L3	2001-08-18	M
<input type="checkbox"/>					20190006	Gustave	Lacasse	INT	L2	2001-06-15	M
<input type="checkbox"/>					20190007	Xarles	Arpin	INT	L3	2001-12-13	M
<input type="checkbox"/>					20190008	Grégoire	Quiron	B	L3	2001-01-15	M
<input type="checkbox"/>					20190009	Jean	Lizotte	B	L3	2001-05-25	M
<input type="checkbox"/>					20190010	Varden	Ruest	INT	L3	2001-01-15	M
<input type="checkbox"/>					20190011	Hugues	Lamontagne	A	L2	2001-07-13	M
<input type="checkbox"/>					20190012	Jules	Champagne	A	L3	2001-10-17	M
<input type="checkbox"/>					20190013	Fitz	Houle	A	L3	2001-10-24	M
<input type="checkbox"/>					20190014	Benjamin	Bernard	A	L3	2001-02-13	M
<input type="checkbox"/>					20190015	Percy	Gendron	A	L3	2001-08-15	M
<input type="checkbox"/>					20200001	Stéphane	Grimard	INT	L2	2002-04-18	M
<input type="checkbox"/>					20200002	Sargent	Berger	A	L2	2002-07-11	M
<input type="checkbox"/>					20200003	Véronique	Marquis	B	L2	2002-01-08	F
<input type="checkbox"/>					20200004	Baptiste	Marseau	A	L2	2002-07-17	M
<input type="checkbox"/>					20200005	Yvon	Crête	B	L2	2002-09-19	M

<input type="checkbox"/>					20200006	Gustave	Gilbert	A	L2	2002-06-28	M
<input type="checkbox"/>					20200007	Antoine	Léveillé	INT	L1	2002-11-19	M
<input type="checkbox"/>					20200008	Marthe	Champagne	B	L2	2002-12-12	F
<input type="checkbox"/>					20200009	René	Routhier	B	L2	2002-10-09	M
<input type="checkbox"/>					20200010	Claude	Souplet	B	L1	2002-04-22	M
<input type="checkbox"/>					20200011	Sophie	Perillard	INT	L2	2002-08-14	F
<input type="checkbox"/>					20200012	Gilbert	Boivin	INT	L2	2002-11-26	M
<input type="checkbox"/>					20200013	Bayard	Laderoute	A	L2	2002-03-11	M
<input type="checkbox"/>					20200014	Constance	Huppé	B	L2	2002-01-15	F
<input type="checkbox"/>					20200015	Marshall	Goulet	A	L2	2002-05-18	M
<input type="checkbox"/>					20210001	Yvette	Demers	B	L1	2003-04-11	F
<input type="checkbox"/>					20210002	Henri	Melanson	B	L1	2003-02-11	M
<input type="checkbox"/>					20210003	Adélaïde	Tardif	A	L1	2003-01-14	F
<input type="checkbox"/>					20210004	Franck	Bonenfant	B	L1	2003-07-11	M
<input type="checkbox"/>					20210005	Alexandre	Fortier	A	L1	2003-10-31	M
<input type="checkbox"/>					20210006	Caroline	Primeau	A	L1	2003-12-12	F
<input type="checkbox"/>					20210007	Dexter	LeBatelier	INT	L1	2003-04-24	M
<input type="checkbox"/>					20210008	Honoré	Dodier	INT	L1	2003-06-19	M
<input type="checkbox"/>					20210009	Ansel	Vertefeuille	B	L1	2003-07-15	M
<input type="checkbox"/>					20210010	Ferrau	LaCaille	INT	L1	2003-08-08	M
<input type="checkbox"/>					20210011	Alphonse	Devoe	A	L1	2003-02-17	M
<input type="checkbox"/>					20210012	Albertine	LaGrande	INT	L1	2003-08-21	F
<input type="checkbox"/>					20210013	Germain	L'Heureux	B	L1	2003-01-20	M
<input type="checkbox"/>					20210014	Brice	Melanson	A	L1	2003-07-24	M
<input type="checkbox"/>					20210015	Gaetane	Lalonde	INT	L1	2003-09-11	F

SQL injection to fill “clubresponsibility”:

```
INSERT INTO `clubresponsibility` (`ClubResponsibilityID`, `Role`) VALUES ('1', 'President'), ('2', 'Vice-president'), ('3', 'Secretary'), ('4', 'Treasurer')
```

Giving:

	ClubResponsibilityID	Role
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	President
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	Vice-president
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	Secretary
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	Treasurer

SQL first injection to fill “activityreport”:

```
INSERT INTO `activityreport` (`ActivityReportID`, `ReportYear`, `Status`, `ModificationDate`) VALUES ('BDS2021', '2021-09-01', 'missing', NULL), ('SEP2021', '2021-09-01', 'created', '2021-11-11 18:30:02'), ('LIVE2021', '2021-09-01', 'created', '2022-02-10 11:30:48'), ('GAMING2021', '2021-09-01', 'created', '2021-10-16 23:27:22'), ('ICE2021', '2021-09-01', 'created', '2021-09-22 15:58:02'), ('BDS2020', '2020-09-01', 'submitted', '2021-08-23 21:03:02'), ('SEP2020', '2020-09-01', 'submitted', '2021-08-30 02:17:56'), ('LIVE2020', '2020-09-01', 'submitted', '2021-07-31 22:30:02'), ('GAMING2020', '2020-09-01', 'signed', '2021-06-10 17:42:18'), ('ICE2020', '2020-09-01', 'submitted', '2021-07-31 23:03:20'), ('BDS2019', '2019-09-01', 'submitted', '2020-07-27 18:30:02'), ('SEP2019', '2019-09-01', 'submitted', '2020-07-31 11:22:45'), ('LIVE2019', '2019-09-01', 'submitted', '2020-07-25 23:58:40'), ('GAMING2019', '2019-09-01', 'submitted', '2020-07-30 19:47:26'), ('ICE2019', '2019-09-01', 'submitted', '2022-07-31 11:56:48')
```

Giving:

	ActivityReportID	ReportYear	Status	ModificationDate
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	BDS2019	2019-09-01	submitted	2020-07-27 18:30:02
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	BDS2020	2020-09-01	submitted	2021-08-23 21:03:02
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	BDS2021	2021-09-01	missing	NULL
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	GAMING2019	2019-09-01	submitted	2020-07-30 19:47:26
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	GAMING2020	2020-09-01	signed	2021-06-10 17:42:18
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	GAMING2021	2021-09-01	created	2021-10-16 23:27:22
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	ICE2019	2019-09-01	submitted	2022-07-31 11:56:48
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	ICE2020	2020-09-01	submitted	2021-07-31 23:03:20
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	ICE2021	2021-09-01	created	2021-09-22 15:58:02
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	LIVE2019	2019-09-01	submitted	2020-07-25 23:58:40
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	LIVE2020	2020-09-01	submitted	2021-07-31 22:30:02
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	LIVE2021	2021-09-01	created	2022-02-10 11:30:48
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	SEP2019	2019-09-01	submitted	2020-07-31 11:22:45
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	SEP2020	2020-09-01	submitted	2021-08-30 02:17:56
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	SEP2021	2021-09-01	created	2021-11-11 18:30:02

SQL injection to fill “expenses”:

```
INSERT INTO `expenses` (`ExpensesID`, `Amount`) VALUES ('1', '50,00'), ('2', '1652,00'), ('3', '10000,00'), ('4', '600,00'), ('5', '285,00'), ('6', '49,99'), ('7', '75,00'), ('8', '999,99'), ('9', '65,99'), ('10', '9,99')
```

Giving:

					ExpensesID	Amount
<input type="checkbox"/>		Éditer		Copier		Supprimer
					1	50.00
					10	9.00
					2	1652.00
					3	10000.00
					4	600.00
					5	285.00
					6	49.00
					7	75.00
					8	999.00
					9	65.00

SQL injection to fill “committeeresponsibility”:

```
INSERT INTO `committeeresponsibility` (`CommitteeResponsibilityID`, `Role`) VALUES ('1', 'President'), ('2', 'Vice-president'), ('3', 'Sponsorship'), ('4', 'Treasurer')
```

Giving:

					CommitteeResponsibilityID	Role
<input type="checkbox"/>		Éditer		Copier		Supprimer
					1	President
					2	Vice-president
					3	Sponsorship
					4	Treasurer

SQL injection to fill “task”:

```
INSERT INTO `task` (`TaskID`, `Description`) VALUES ('1', 'manages the event'), ('2', 'helps and replaces if needed the president '), ('3', 'handles event and committee communication'), ('4', 'manages event\'s budget'), ('5', 'finds money for the event'), ('6', 'organizes the event'), ('7', 'finds a place for the event')
```

Giving:

			TaskID	Description
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	1 manages the event
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	2 helps and replaces if needed the president
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	3 handles event and committee communication
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	4 manages event's budget
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	5 finds money for the event
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	6 organizes the event
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	7 finds a place for the event

SQL injection to fill “events”:

```
INSERT INTO `events` (`EventsID`, `Name`, `StartDateAndTime`, `EndDateAndTime`, `Type`, `CommitteeID`) VALUES ('1', 'Junior Companies Gala Night', '2022-01-08 19:30:00', '2022-01-09 03:00:00', 'party', '1'), ('2', 'E-Sports Tournament', '2021-10-23 12:30:00', '2021-10-23 18:00:00', 'workshop', '2'), ('3', 'Music Party 1', '2022-03-12 23:00:00', '2022-03-13 06:00:00', 'party', '3'), ('4', 'Music Party 2', '2022-04-01 21:30:00', '2022-04-02 01:00:00', 'party', '4'), ('5', 'BDS Meeting 1', '2021-09-23 14:30:00', '2021-09-23 19:30:00', 'training', '5'), ('6', 'BDS Meeting 2', '2022-01-14 15:00:00', '2022-01-14 20:00:00', 'training', '6')
```


































Giving:

			EventsID	Name	StartDateAndTime	EndDateAndTime	Type	CommitteeID
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	1	Junior Companies Gala Night	2022-01-08 19:30:00	2022-01-09 03:00:00	party 1
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	2	E-Sports Tournament	2021-10-23 12:30:00	2021-10-23 18:00:00	workshop 2
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	3	Music Party 1	2022-03-12 23:00:00	2022-03-13 06:00:00	party 3
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	4	Music Party 2	2022-04-01 21:30:00	2022-04-02 01:00:00	party 4
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	5	BDS Meeting 1	2021-09-23 14:30:00	2021-09-23 19:30:00	training 5
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	6	BDS Meeting 2	2022-01-14 15:00:00	2022-01-14 20:00:00	training 6

SQL injection to fill “performs”:

```
INSERT INTO `performs` (`TaskID`, `CommitteeResponsibilityID`) VALUES ('1', '1'), ('1', '2'), ('2', '2'), ('3', '1'), ('3', '2'), ('4', '4'), ('5', '3'), ('6', '1'), ('6', '2'), ('7', '1'), ('7', '2')
```

Giving:

						TaskID	CommitteeResponsibilityID	
<input type="checkbox"/>		Éditer		Copier		Supprimer	1	1
<input type="checkbox"/>		Éditer		Copier		Supprimer	1	2
<input type="checkbox"/>		Éditer		Copier		Supprimer	2	2
<input type="checkbox"/>		Éditer		Copier		Supprimer	3	1
<input type="checkbox"/>		Éditer		Copier		Supprimer	3	2
<input type="checkbox"/>		Éditer		Copier		Supprimer	4	4
<input type="checkbox"/>		Éditer		Copier		Supprimer	5	3
<input type="checkbox"/>		Éditer		Copier		Supprimer	6	1
<input type="checkbox"/>		Éditer		Copier		Supprimer	6	2
<input type="checkbox"/>		Éditer		Copier		Supprimer	7	1
<input type="checkbox"/>		Éditer		Copier		Supprimer	7	2

SQL injection to fill “generate”:

```
INSERT INTO `generate` (`EfreiStudentNb`, `CommitteeResponsibilityID`) VALUES ('20170001', '1'), ('20170015', '2'), ('20180002', '3'), ('20190005', '4'), ('20170009', '1'), ('20180008', '2'), ('20180015', '3'), ('20190013', '4'), ('20200005', '1'), ('20200011', '2'), ('20200013', '3'), ('20210010', '4'), ('20170002', '1'), ('20190003', '2'), ('20190004', '3'), ('20190011', '4'), ('20200007', '1'), ('20210002', '2'), ('20210007', '3'), ('20210008', '4'), ('20200006', '1'), ('20210003', '2'), ('20200015', '3'), ('20200007', '4')
```

Giving:

←T→						EfreiStudentNb	CommitteeResponsibilityID
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170001 1
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170002 1
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170009 1
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170015 2
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180002 3
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180008 2
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180015 3
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190003 2
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190004 3
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190005 4
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190011 4
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190013 4
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200005 1
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200006 1
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200007 1
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200007 4
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200011 2
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200013 3
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200015 3
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210002 2
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210003 2
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210007 3
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210008 4
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210010 4

SQL injection to fill “made_of”:

```
INSERT INTO `made_of` (`EfreiStudentNb`, `CommitteeID`) VALUES ('20170015', '1'), ('20190005', '1'), ('20180002', '1'), ('20170001', '1'), ('20180008', '2'), ('20180015', '2'), ('20190013', '2'), ('20170009', '2'), ('20200005', '3'), ('20200011', '3'), ('20210010', '3'), ('20200013', '3'), ('20190004', '4'), ('20190011', '4'), ('20170002', '4'), ('20190003', '4'), ('20200007', '5'), ('20210002', '5'), ('20210007', '5'), ('20210008', '5'), ('20200006', '6'), ('20200015', '6'), ('20210003', '6'), ('20200007', '6')
```

Giving:









































































<div><div><div><div></div><div></div><div></div></div><div></div><div></div></div></div>						EfreiStudentNb	CommitteelD	
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170001	1
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170002	4
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170009	2
<input type="checkbox"/>		Éditer		Copier		Supprimer	20170015	1
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180002	1
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180008	2
<input type="checkbox"/>		Éditer		Copier		Supprimer	20180015	2
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190003	4
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190004	4
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190005	1
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190011	4
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190013	2
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200005	3
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200006	6
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200007	5
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200007	6
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200011	3
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200013	3
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200015	6
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210002	5
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210003	6
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210007	5
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210008	5
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210010	3

SQL injection to fill “delivers_committee”:

```
INSERT INTO `delivers_committee` (`CommitteeID`, `CommitteeResponsibilityID`) VALUES ('1', '1'), ('1', '2'), ('1', '3'), ('1', '4'), ('2', '1'), ('2', '2'), ('2', '3'), ('2', '4'), ('3', '1'), ('3', '2'), ('3', '3'), ('3', '4')
```

''), ('4', '1'), ('4', '2'), ('4', '3'), ('4', '4'), ('5', '1'), ('5', '2'), ('5', '3'), ('5', '4'), ('6', '1'), ('6', '2'), ('6', '3'), ('6', '4'))

Giving:

←T→		CommitteeID	CommitteeResponsibilityID
<input type="checkbox"/>	 Éditer  Copier  Supprimer	1	1
<input type="checkbox"/>	 Éditer  Copier  Supprimer	1	2
<input type="checkbox"/>	 Éditer  Copier  Supprimer	1	3
<input type="checkbox"/>	 Éditer  Copier  Supprimer	1	4
<input type="checkbox"/>	 Éditer  Copier  Supprimer	2	1
<input type="checkbox"/>	 Éditer  Copier  Supprimer	2	2
<input type="checkbox"/>	 Éditer  Copier  Supprimer	2	3
<input type="checkbox"/>	 Éditer  Copier  Supprimer	2	4
<input type="checkbox"/>	 Éditer  Copier  Supprimer	3	1
<input type="checkbox"/>	 Éditer  Copier  Supprimer	3	2
<input type="checkbox"/>	 Éditer  Copier  Supprimer	3	3
<input type="checkbox"/>	 Éditer  Copier  Supprimer	3	4
<input type="checkbox"/>	 Éditer  Copier  Supprimer	4	1
<input type="checkbox"/>	 Éditer  Copier  Supprimer	4	2
<input type="checkbox"/>	 Éditer  Copier  Supprimer	4	3
<input type="checkbox"/>	 Éditer  Copier  Supprimer	4	4
<input type="checkbox"/>	 Éditer  Copier  Supprimer	5	1
<input type="checkbox"/>	 Éditer  Copier  Supprimer	5	2
<input type="checkbox"/>	 Éditer  Copier  Supprimer	5	3
<input type="checkbox"/>	 Éditer  Copier  Supprimer	5	4
<input type="checkbox"/>	 Éditer  Copier  Supprimer	6	1
<input type="checkbox"/>	 Éditer  Copier  Supprimer	6	2
<input type="checkbox"/>	 Éditer  Copier  Supprimer	6	3
<input type="checkbox"/>	 Éditer  Copier  Supprimer	6	4

SQL injection to fill “holds”:

```
INSERT INTO `holds` (`ClubID`, `EventsID`) VALUES ('2', '1'), ('4', '2'), ('3', '3'), ('3', '4'), ('1', '5'), ('1', '6')
```

Giving:

← T →					ClubID	EventsID		
<input type="checkbox"/>		Éditer		Copier		Supprimer	1	5
<input type="checkbox"/>		Éditer		Copier		Supprimer	1	6
<input type="checkbox"/>		Éditer		Copier		Supprimer	2	1
<input type="checkbox"/>		Éditer		Copier		Supprimer	3	3
<input type="checkbox"/>		Éditer		Copier		Supprimer	3	4
<input type="checkbox"/>		Éditer		Copier		Supprimer	4	2

SQL injection to fill “wins”:

```
INSERT INTO `wins` (`ClubID`, `AwardID`, `PriceYear`) VALUES ('3', '1', '2017-06-30'), ('4', '2', '2017-06-30'), ('2', '1', '2018-06-29'), ('2', '2', '2018-06-29'), ('5', '1', '2019-06-28'), ('1', '2', '2019-06-28'), ('4', '1', '2020-06-26'), ('5', '2', '2020-06-26'), ('1', '1', '2021-06-25'), ('3', '2', '2021-06-25')
```

Giving:

← T →						ClubID	AwardID	PriceYear	
<input type="checkbox"/>		Éditer		Copier		Supprimer	1	1	2021-06-25
<input type="checkbox"/>		Éditer		Copier		Supprimer	1	2	2019-06-28
<input type="checkbox"/>		Éditer		Copier		Supprimer	2	1	2018-06-29
<input type="checkbox"/>		Éditer		Copier		Supprimer	2	2	2018-06-29
<input type="checkbox"/>		Éditer		Copier		Supprimer	3	1	2017-06-30
<input type="checkbox"/>		Éditer		Copier		Supprimer	3	2	2021-06-25
<input type="checkbox"/>		Éditer		Copier		Supprimer	4	1	2020-06-26
<input type="checkbox"/>		Éditer		Copier		Supprimer	4	2	2017-06-30
<input type="checkbox"/>		Éditer		Copier		Supprimer	5	1	2019-06-28
<input type="checkbox"/>		Éditer		Copier		Supprimer	5	2	2020-06-26

SQL injection to fill “spends”:

```
INSERT INTO `spends` (`CommitteeID`, `ExpensesID`) VALUES ('1', '1'), ('4', '2'), ('4', '3'), ('1', '4'), ('3', '5'), ('3', '6'), ('1', '7'), ('3', '8'), ('3', '9'), ('4', '10')
```

Giving:

		CommitteeID	ExpensesID
<input type="checkbox"/>	Éditer Copier Supprimer	1	1
<input type="checkbox"/>	Éditer Copier Supprimer	1	4
<input type="checkbox"/>	Éditer Copier Supprimer	1	7
<input type="checkbox"/>	Éditer Copier Supprimer	3	5
<input type="checkbox"/>	Éditer Copier Supprimer	3	6
<input type="checkbox"/>	Éditer Copier Supprimer	3	8
<input type="checkbox"/>	Éditer Copier Supprimer	3	9
<input type="checkbox"/>	Éditer Copier Supprimer	4	10
<input type="checkbox"/>	Éditer Copier Supprimer	4	2
<input type="checkbox"/>	Éditer Copier Supprimer	4	3

SQL injection to fill “budget”:

```
INSERT INTO `budget` (`BudgetID`, `Amount`, `EventsID`) VALUES ('1', '10000,00', '1'), ('2', '0,00', '2'), ('3', '9000,00', '3'), ('4', '12000,00', '4'), ('5', '0,00', '5'), ('6', '0,00', '6')
```

Giving:

		BudgetID	Amount	EventsID
<input type="checkbox"/>	Éditer Copier Supprimer	1	10000.00	1
<input type="checkbox"/>	Éditer Copier Supprimer	2	0.00	2
<input type="checkbox"/>	Éditer Copier Supprimer	3	9000.00	3
<input type="checkbox"/>	Éditer Copier Supprimer	4	12000.00	4
<input type="checkbox"/>	Éditer Copier Supprimer	5	0.00	5
<input type="checkbox"/>	Éditer Copier Supprimer	6	0.00	6

SQL injection to fill “uses”:

```
INSERT INTO `uses` (`BudgetID`, `CommitteeID`) VALUES ('1', '1'), ('3', '3'), ('4', '4')
```

Giving:

		BudgetID	CommitteeID
<input type="checkbox"/>	Éditer Copier Supprimer	1	1
<input type="checkbox"/>	Éditer Copier Supprimer	3	3
<input type="checkbox"/>	Éditer Copier Supprimer	4	4

SQL first injection to fill “take_part”:

```
INSERT INTO `take_part` (`ClubID`, `EfreiStudentNb`) VALUES ('1', '20200007'), ('1', '20210002'), ('1', '20210007'), ('1', '20210005'), ('1', '2020000')
```

```
6'), ('1', '20200015'), ('1', '20210008'), ('1', '20210003'), ('1', '20190002'), ('1', '20210004')
```

SQL second injection to fill “take_part”:

```
INSERT INTO `take_part` (`ClubID`, `EfreiStudentNb`) VALUES ('2', '20170001'), ('2', '20180002'), ('2', '20210013'), ('2', '20180010'), ('2', '20170005'), ('2', '20190005'), ('2', '20210009'), ('2', '20200014'), ('2', '20210007'), ('2', '20210008')
```

SQL third injection to fill “take_part”:

```
INSERT INTO `take_part` (`ClubID`, `EfreiStudentNb`) VALUES ('3', '20200003'), ('3', '20190004'), ('3', '20200011'), ('3', '20200013'), ('3', '20210011'), ('3', '20210010'), ('3', '20190011'), ('3', '20190003'), ('3', '20170002'), ('3', '20200005')
```

SQL fourth injection to fill “take_part”:

```
INSERT INTO `take_part` (`ClubID`, `EfreiStudentNb`) VALUES ('4', '20180015'), ('4', '20190012'), ('4', '20170009'), ('4', '20190006'), ('4', '20180008'), ('4', '20210012'), ('4', '20190007'), ('4', '20180011'), ('4', '20180006'), ('4', '20190013')
```

SQL fifth injection to fill “take_part”:

```
INSERT INTO `take_part` (`ClubID`, `EfreiStudentNb`) VALUES ('5', '20180013'), ('5', '20180014'), ('5', '20170015'), ('5', '20180004'), ('5', '20180001'), ('5', '20180003'), ('5', '20170014'), ('5', '20190008'), ('5', '20170004'), ('5', '20210002')
```

Giving:

←T→	ClubID	EfreiStudentNb	←T→	ClubID	EfreiStudentNb
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	20190002	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	20200005
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	20200006	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	20200011
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	20200007	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	20200013
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	20200015	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	20210010
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	20210002	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	20210011
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	20210003	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	20170009
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	20210004	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	20180006
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	20210005	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	20180008
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	20210007	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	20180011
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	20210008	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	20180015
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	20170001	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	20190006
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	20170005	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	20190007
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	20180002	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	20190012
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	20180010	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	20190013
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	20190005	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	4	20210012
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	20200014	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	20170004
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	20210007	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	20170014
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	20210008	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	20170015
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	20210009	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	20180001
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	20210013	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	20180003
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	20170002	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	20180004
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	20190003	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	20180013
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	20190004	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	20180014
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	20190011	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	20190008
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	20200003	<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	20210002

SQL injection to fill “delivers_club”:

```
INSERT INTO `delivers_club` (`ClubID`, `ClubResponsibilityID`) VALUES ('1', '1'), ('1', '2'), ('1', '3'), ('1', '4'), ('2', '1'), ('2', '2'), ('2', '3'), ('2', '4'), ('3', '1'), ('3', '2'), ('3', '3'), ('3', '4'), ('4', '1'), ('4', '2'), ('4', '3'), ('4', '4'), ('5', '1'), ('5', '2'), ('5', '3'), ('5', '4')
```

Giving:

				ClubID	ClubResponsibilityID
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	1	1
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	1	2
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	1	3
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	1	4
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	2	1
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	2	2
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	2	3
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	2	4
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	3	1
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	3	2
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	3	3
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	3	4
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	4	1
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	4	2
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	4	3
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	4	4
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	5	1
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	5	2
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	5	3
<input type="checkbox"/>	 Éditer	 Copier	 Supprimer	5	4

SQL first injection to fill “have”:

```
INSERT INTO `have` (`EfreiStudentNb`, `ClubResponsibilityID`, `RoleYear`) VALUES ('20200006', '1', '2021-09-01'), ('20210004', '2', '2021-09-01'), ('20210002', '3', '2021-09-01'), ('20210008', '4', '2021-09-01'), ('20170001', '1', '2021-09-01'), ('20180002', '2', '2021-09-01'), ('20200014', '3', '2021-09-01'), ('20210009', '4', '2021-09-01'), ('20200003', '1', '2021-09-01'), ('20190004', '2', '2021-09-01'), ('20200013', '3', '2021-09-01'), ('20200011', '4', '2021-09-01'), ('20190006', '1', '2021-09-01'), ('20180011', '2', '2021-09-01')
```

```
01'), ('20190012', '3', '2021-09-01'), ('20180008', '4', '2021-09-01'), ('20170015', '1', '2021-09-01'), ('20180004', '2', '2021-09-01'), ('20200005', '3', '2021-09-01'), ('20170012', '4', '2021-09-01')
```

SQL second injection to fill “have”:










































































































```
INSERT INTO `have` (`EfreiStudentNb`, `ClubResponsibilityID`, `RoleYear`) VALUES ('20190002', '1', '2020-09-01'), ('20210002', '2', '2020-09-01'), ('20210004', '3', '2020-09-01'), ('20210007', '4', '2020-09-01'), ('20210008', '1', '2020-09-01'), ('20200014', '2', '2020-09-01'), ('20210007', '3', '2020-09-01'), ('20180010', '4', '2020-09-01'), ('20190004', '1', '2020-09-01'), ('20200003', '2', '2020-09-01'), ('20210010', '3', '2020-09-01'), ('20200005', '4', '2020-09-01'), ('20190015', '1', '2020-09-01'), ('20180006', '2', '2020-09-01'), ('20190013', '3', '2020-09-01'), ('20190006', '4', '2020-09-01'), ('20180001', '1', '2020-09-01'), ('20180013', '2', '2020-09-01'), ('20180001', '3', '2020-09-01'), ('20170014', '4', '2020-09-01')
```

SQL third injection to fill “have”:

```
INSERT INTO `have` (`EfreiStudentNb`, `ClubResponsibilityID`, `RoleYear`) VALUES ('20210003', '1', '2019-09-01'), ('20190002', '2', '2019-09-01'), ('20210005', '3', '2019-09-01'), ('20200007', '4', '2019-09-01'), ('20170005', '1', '2019-09-01'), ('20170001', '2', '2019-09-01'), ('20190010', '3', '2019-09-01'), ('20190005', '4', '2019-09-01'), ('20190011', '1', '2019-09-01'), ('20190003', '2', '2019-09-01'), ('20170002', '3', '2019-09-01'), ('20200013', '4', '2019-09-01'), ('20170009', '1', '2019-09-01'), ('20190013', '2', '2019-09-01'), ('20190006', '3', '2019-09-01'), ('20190012', '4', '2019-09-01'), ('20170014', '1', '2019-09-01'), ('20170015', '2', '2019-09-01'), ('20170004', '3', '2019-09-01'), ('20180004', '4', '2019-09-01')
```

Giving:

	EfreiStudentNb	ClubResponsibilityID	RoleYear
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20170001	1	2021-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20170001	2	2019-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20170002	3	2019-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20170004	3	2019-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20170005	1	2019-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20170009	1	2019-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20170012	4	2021-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20170014	1	2019-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20170014	4	2020-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20170015	1	2021-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20170015	2	2019-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20180001	1	2020-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20180001	3	2020-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20180002	2	2021-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20180004	2	2021-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20180004	4	2019-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20180006	2	2020-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20180008	4	2021-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20180010	4	2020-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20180011	2	2021-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20180013	2	2020-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20190002	1	2020-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20190002	2	2019-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20190003	2	2019-09-01
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	20190004	1	2020-09-01

←T→						EfreiStudentNb	ClubResponsibilityID	RoleYear	
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190004	2	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190005	4	2019-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190006	1	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190006	3	2019-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190006	4	2020-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190010	3	2019-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190011	1	2019-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190012	3	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190012	4	2019-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190013	2	2019-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190013	3	2020-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20190015	1	2020-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200003	1	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200003	2	2020-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200005	3	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200005	4	2020-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200006	1	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200007	4	2019-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200011	4	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200013	3	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200013	4	2019-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200014	2	2020-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20200014	3	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210002	2	2020-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210002	3	2021-09-01
←T→						EfreiStudentNb	ClubResponsibilityID	RoleYear	
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210003	1	2019-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210004	2	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210004	3	2020-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210005	3	2019-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210007	3	2020-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210007	4	2020-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210008	1	2020-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210008	4	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210009	4	2021-09-01
<input type="checkbox"/>		Éditer		Copier		Supprimer	20210010	3	2020-09-01

SQL injection to fill “has”:

```
INSERT INTO `has` (`TaskID`, `ExpensesID`) VALUES ('5', '1'), ('7', '2'), ('7', '3'), ('6', '4'), ('6', '5'), ('1', '6'), ('2', '7'), ('3', '8'), ('3', '9'), ('5', '10')
```

Giving:

	TaskID	ExpensesID
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	1	6
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	2	7
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	8
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	3	9
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	1
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	5	10
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	6	4
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	6	5
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	7	2
<input type="checkbox"/> Éditer <input type="checkbox"/> Copier <input type="checkbox"/> Supprimer	7	3

SQL first injection to fill “modify”:

```
INSERT INTO `modify` (`ClubResponsibilityID_n_n`, `ActivityReportID`, `PresidentModifications`, `OfficersSignature`) VALUES ('1', 'BDS2019', 'Y', 'N'), ('1', 'BDS2020', 'Y', 'N'), ('1', 'GAMING2019', 'Y', 'N'), ('1', 'GAMING2020', 'Y', 'N'), ('1', 'ICE2019', 'Y', 'N'), ('1', 'ICE2020', 'Y', 'N'), ('1', 'LIVE2019', 'Y', 'N'), ('1', 'LIVE2020', 'Y', 'N'), ('1', 'SEP2019', 'Y', 'N'), ('1', 'SEP2020', 'Y', 'N')
```

SQL second injection to fill “modify”:

```
INSERT INTO `modify` (`ClubResponsibilityID_n_n`, `ActivityReportID`, `PresidentModifications`, `OfficersSignature`) VALUES ('1', 'GAMING2021', 'N', 'N'), ('1', 'ICE2021', 'N', 'N'), ('1', 'LIVE2021', 'N', 'N'), ('1', 'SEP2021', 'N', 'N')
```

SQL third injection to fill “modify”:

```
INSERT INTO `modify` (`ClubResponsibilityID_n_n`, `ActivityReportID`, `PresidentModifications`, `OfficersSignature`) VALUES ('2', 'BDS2019', 'N', 'Y'), ('2', 'BDS2020', 'N', 'Y'), ('2', 'GAMING2019', 'N', 'Y'), ('2', 'GAMING2020', 'N', 'Y'), ('2', 'ICE2019', 'N', 'Y'), ('2', 'ICE2020', 'N', 'Y'), ('2', 'LIVE2019', 'N', 'Y'), ('2', 'LIVE2020', 'N', 'Y'), ('2', 'SEP2019', 'N', 'Y'), ('2', 'SEP2020', 'N', 'Y')
```

SQL fourth injection to fill “modify”:

```
INSERT INTO `modify` (`ClubResponsibilityID_n_n`, `ActivityReportID`, `PresidentModifications`, `OfficersSignature`) VALUES ('3', 'BDS2019', 'N', 'Y'), ('3', 'BDS2020', 'N', 'Y'), ('3', 'GAMING2019', 'N', 'Y'), ('3', 'GAMING2020', 'N', 'Y'), ('3', 'ICE2019', 'N', 'Y'), ('3', 'ICE2020', 'N', 'Y'), ('3', 'LIVE2019', 'N', 'Y'), ('3', 'LIVE2020', 'N', 'Y'), ('3', 'SEP2019', 'N', 'Y'), ('3', 'SEP2020', 'N', 'Y')
```

```
3', 'LIVE2019', 'N', 'Y'), ('3', 'LIVE2020', 'N', 'Y'), ('3', 'SEP2019', 'N', 'Y'), ('3', 'SEP2020', 'N', 'Y')
```

SQL fifth injection to fill “modify”:

```
INSERT INTO `modify` (`ClubResponsibilityID_n_n`, `ActivityReportID`, `PresidentModifications`, `OfficersSignature`) VALUES ('4', 'BDS2019', 'N', 'Y'), ('4', 'BDS2020', 'N', 'Y'), ('4', 'GAMING2019', 'N', 'Y'), ('4', 'GAMING2020', 'N', 'Y'), ('4', 'ICE2019', 'N', 'Y'), ('4', 'ICE2020', 'N', 'Y'), ('4', 'LIVE2019', 'N', 'Y'), ('4', 'LIVE2020', 'N', 'Y'), ('4', 'SEP2019', 'N', 'Y'), ('4', 'SEP2020', 'N', 'Y')
```

Giving:

ClubResponsibilityID_n_n	ActivityReportID	PresidentModifications	Officers Signature
1	BDS2019	Y	N
1	BDS2020	Y	N
1	GAMING2019	Y	N
1	GAMING2020	Y	N
1	GAMING2021	N	N
1	ICE2019	Y	N
1	ICE2020	Y	N
1	ICE2021	N	N
1	LIVE2019	Y	N
1	LIVE2020	Y	N
1	LIVE2021	N	N
1	SEP2019	Y	N
1	SEP2020	Y	N
1	SEP2021	N	N
2	BDS2019	N	Y
2	BDS2020	N	Y
2	GAMING2019	N	Y
2	GAMING2020	N	Y
2	ICE2019	N	Y
2	ICE2020	N	Y
2	LIVE2019	N	Y
2	LIVE2020	N	Y
2	SEP2019	N	Y
2	SEP2020	N	Y
3	BDS2019	N	Y
3	BDS2020	N	Y
3	GAMING2019	N	Y
3	GAMING2020	N	Y
3	ICE2019	N	Y
3	ICE2020	N	Y
3	LIVE2019	N	Y
3	LIVE2020	N	Y
3	SEP2019	N	Y
3	SEP2020	N	Y
4	BDS2019	N	Y
4	BDS2020	N	Y
4	GAMING2019	N	Y
4	GAMING2020	N	Y
4	ICE2019	N	Y
4	ICE2020	N	Y
4	LIVE2019	N	Y
4	LIVE2020	N	Y
4	SEP2019	N	Y
4	SEP2020	N	Y

3.The requests

For parts 3 and 4, when using “/” in the example table, it means we can expect several outputs.

1.

We want to display all clubs with their actual (hence since 2021) presidents, club descriptions, and president information. Considering our database, we should expect something like this:

Club name	Club type	Club description	President name	Other president infos (name, class, level, student number)
BDS	sports	Association for sports practice and competitions	Gustave Gilbert	...
SEPEFREI	entrepreneurial	Efrei's junior company	Chappell Rouze	...
Live Music	cultural	Association for live music practice and concerts	Véronique Marquis	...
Video Games Efrei	sports	Association for e-sports practice and competitions	Gustave Lacasse	...
ICE Efrei	technical	Association for robot building and tech testing	Valérie Racicot	...

The SQL code is the following one:

```

1 SELECT club.Name AS 'club name', club.Type AS 'club type', club.Description AS
   'club description', members.FirstName AS 'president first name'
   ,members.LastName AS 'president last name', members.Class AS 'president class',
   members.Level AS 'president level', members.EfreiStudentNb AS 'president
   student number' FROM members
2 -- TO JOIN MEMBERS TO CLUB
3 JOIN take_part ON members.EfreiStudentNb=take_part.EfreiStudentNb
4 JOIN club ON club.ClubID=take_part.ClubID
5 -- TO JOIN MEMBER TO CLUB RESPONSIBILITY
6 JOIN have ON have.EfreiStudentNb=members.EfreiStudentNb
7 JOIN clubresponsibility ON
   clubresponsibility.ClubResponsibilityID=have.ClubResponsibilityID
8 -- SET CONDITION TO SELECT ONLY ACTUAL PRESIDENTS
9 WHERE clubresponsibility.ClubResponsibilityID=1 AND have.RoleYear="2021-09-01"

```

Which gives:

club name	club type	club description	president first name	president last name	president class	president level	president student number
BDS	sports	Association for sports practice and competitions	Gustave	Gilbert	A	L2	20200006
SEPEFREI	entrepreneurial	Efrei's junior company	Chappell	Rouze	INT	M2	20170001
Live Music	cultural	Association for live music practice and concerts	Véronique	Marquis	B	L2	20200003
Video Games Efrei	sports	Association for e-sports practice and competitions	Gustave	Lacasse	INT	L2	20190006
ICE Efrei	technical	Association for robot building and tech testing	Valérie	Racicot	A	M2	20170015

We can see that we obtained what we expected.

2.

We want to display every event from last year (2021 since we're in 2022), with their committee, budget, and expenses. Considering our database, we should expect something like this:

Events name	Committee number	Budget	Expenses
E-Sports Tournament	2	0.00	0.00
BDS Meeting 1	5	0.00	0.00

The SQL code is the following one:

```
1 • SELECT
2     clubs_efrei.events.Name,
3     clubs_efrei.committee.CommitteeID,
4     CASE
5         WHEN clubs_efrei.expenses.ExpensesID IS NULL THEN '0' ELSE clubs_efrei.expenses.Amount
6     END
7     AS Expenses,
8     CASE
9         WHEN clubs_efrei.budget.BudgetID IS NULL THEN '0' ELSE clubs_efrei.budget.Amount
10    END
11    AS Budget
12 FROM clubs_efrei.events
13 -- TO JOIN EVENTS TO COMMITTEE
14 JOIN clubs_efrei.committee ON clubs_efrei.events.CommitteeID=clubs_efrei.committee.CommitteeID
15 -- TO JOIN COMMITTEE TO EXPENSES
16 LEFT JOIN clubs_efrei.spends ON clubs_efrei.committee.CommitteeID=clubs_efrei.spends.CommitteeID
17 LEFT JOIN clubs_efrei.expenses ON clubs_efrei.spends.ExpensesID=clubs_efrei.spends.ExpensesID
18 -- TO JOIN COMMITTEE TO BUDGET
19 LEFT JOIN clubs_efrei.uses ON clubs_efrei.committee.CommitteeID=clubs_efrei.uses.CommitteeID
20 LEFT JOIN clubs_efrei.budget ON clubs_efrei.budget.BudgetID=clubs_efrei.uses.BudgetID
21 -- TO SET THE CONDITION EVENT FROM LAST YEAR AND BUDGET+EXPENSES=0
22 WHERE clubs_efrei.events.StartDateAndTime LIKE '2021-%' AND clubs_efrei.spends.CommitteeID IS NULL AND clubs_efrei.expenses.ExpensesID IS NULL AND clubs_efrei.budget.BudgetID IS NULL
```

Which gives:

	Name	CommitteeID	Expenses	Budget
▶	E-Sports Tournament	2	0	0
	BDS Meeting 1	5	0	0

We can see that we obtained what we expected.

3.

We want to display the status of each club's activity report, for actual year. Considering our database, we should expect something like this:

Activity Report ID	Status
BDS2021	missing
GAMING2021	created
ICE2021	created
LIVE2021	created
SEP2021	created

The SQL code is the following one:

```

1 SELECT activityreport.ActivityReportID AS 'activity report name',
   activityreport.Status AS 'activity report status' FROM activityreport
2 -- SET CONDITION TO SELECT ONLY ACTUAL ACTIVITY REPORTS
3 WHERE activityreport.ReportYear="2021-09-01"

```

Which gives:

				activity report name	activity report status
<input type="checkbox"/>	Éditer	Copier	Supprimer	BDS2021	missing
<input type="checkbox"/>	Éditer	Copier	Supprimer	GAMING2021	created
<input type="checkbox"/>	Éditer	Copier	Supprimer	ICE2021	created
<input type="checkbox"/>	Éditer	Copier	Supprimer	LIVE2021	created
<input type="checkbox"/>	Éditer	Copier	Supprimer	SEP2021	created

We can see that we obtained what we expected.

4.

We want to display all club members that haven't signed this year's activity report, if the report is existing. Considering our database, we should expect something like this:

Chappell Rouze
Christiane Boulé
Valérie Racicot
Jules Caisse
Mélanie Masson
Frédéric Dodier
Laurent Chassé
Inès Longpré
Gustave Lacasse
Jules Champagne
Véronique Marquis
Yvon Crête
Gustave Gilbert
Sophie Perillard
Bayard Laderoute
Constance Huppé
Henri Melanson
Franck Bonenfant
Honoré Dodier
Ansel Vertefeuille

The SQL code is the following one:

```
1 • SELECT
2     clubs_efrei.members.FirstName,
3     clubs_efrei.members.LastName
4 FROM clubs_efrei.modify
5 -- TO JOIN MODIFY TO ACTIVITY REPORT
6 JOIN clubs_efrei.activityreport ON clubs_efrei.modify.ActivityReportID=clubs_efrei.activityreport.ActivityReportID
7 -- TO JOIN MODIFY TO CLUB RESPONSIBILITY
8 JOIN clubs_efrei.clubresponsibility
9 -- TO JOIN CLUB RESPONSIBILITY TO MEMBERS
10 JOIN clubs_efrei.have ON (clubs_efrei.clubresponsibility.ClubResponsibilityID=clubs_efrei.have.ClubResponsibilityID AND clubs_efrei.have.RoleYear=clubs_efrei.activityreport.ReportYear)
11 JOIN clubs_efrei.members ON clubs_efrei.members.EfreiStudentNb=clubs_efrei.have.EfreiStudentNb
12 -- SET CONDITION TO SELECT UNSIGNED REPORTS
13 WHERE clubs_efrei.have.RoleYear="2021-09-01" AND (clubs_efrei.activityreport.Status="created" OR clubs_efrei.activityreport.Status="missing" OR clubs_efrei.activityreport.Status="pending signature")
14 GROUP BY clubs_efrei.members.FirstName, clubs_efrei.members.LastName
```

Which gives:

	FirstName	LastName
▶	Chappell	Rouze
	Christiane	Boulé
	Valérie	Racicot
	Jules	Caisse
	Melisande	Masson
	Frédéric	Dodier
	Laurent	Chassé
	Inès	Longpré
	Gustave	Lacasse
	Jules	Champagne
	Véronique	Marquis
	Yvon	Crête
	Gustave	Gilbert
	Sophie	Perillard
	Bayard	Laderoute
	Constance	Huppé
	Henri	Melanson
	Franck	Bonenfant
	Honoré	Dodier
	Ansel	Vertefeuille

We can see that we obtained what we expected. Because the only unsigned activity reports are the one from 2021 (that are missing or created), and no one signed so all responsible members from all clubs from 2021 are displayed (4 roles x 5 club = 20 missing signature).

5.

We want to display all student enrolled in more than club, and display the clubs they are enrolled in, with the responsibility they have. Considering our database, we should expect something like this:

Student Last Name	Student First Name	Club	Position
Melanson	Henri	BDS	Vice-président/Secretary
Melanson	Henri	ICE Efrei	Vice-président/Secretary
Dexter	LeBatelier	BDS	Secretary/Treasurer
Dexter	LeBatelier	SEPEFREI	Secretary/Treasurer
Honoré	Dodier	BDS	President/Treasurer

Honoré	Dodier	SEPEFREI	President/Treasurer
--------	--------	----------	---------------------

We realized later that we didn't define which position is attributed to whom regarding each club (we defined members to clubs, members to club responsibility, and club responsibility to club, but not the three altogether, which is what we should have done, if the "member" role was possible – its nonexistence making impossible a triple association since every member would have to wear a responsibility).

The SQL code is the following one:

```

1 • SELECT
2     clubs_efrei.members.FirstName,
3     clubs_efrei.members.LastName,
4     clubs_efrei.members.EfreiStudentNb,
5     CASE
6         WHEN clubs_efrei.clubresponsibility.Role IS NULL THEN "member" ELSE clubs_efrei.clubresponsibility.Role
7     END
8     AS position,
9     clubs_efrei.club.Name
10    FROM clubs_efrei.members
11   INNER JOIN (
12       SELECT clubs_efrei.take_part.EfreiStudentNb AS cpt
13       FROM clubs_efrei.take_part
14       GROUP by clubs_efrei.take_part.EfreiStudentNb
15       HAVING COUNT(clubs_efrei.take_part.EfreiStudentNb)>1)nt
16   ON clubs_efrei.members.EfreiStudentNb=nt.cpt
17  JOIN clubs_efrei.have ON clubs_efrei.members.EfreiStudentNb=clubs_efrei.have.EfreiStudentNb
18  JOIN clubs_efrei.clubresponsibility ON clubs_efrei.have.ClubResponsibilityID=clubs_efrei.clubresponsibility.ClubResponsibilityID
19  JOIN clubs_efrei.take_part ON nt.cpt=clubs_efrei.take_part.EfreiStudentNb
20  JOIN clubs_efrei.club ON clubs_efrei.club.ClubID=clubs_efrei.take_part.ClubID
21  GROUP by clubs_efrei.members.FirstName, clubs_efrei.members.EfreiStudentNb, clubs_efrei.clubresponsibility.Role, clubs_efrei.club.Name

```

Which gives:

	FirstName	LastName	EfreiStudentNb	position	Name
▶	Henri	Melanson	20210002	Vice-president	BDS
	Henri	Melanson	20210002	Secretary	BDS
	Henri	Melanson	20210002	Vice-president	ICE Efrei
	Henri	Melanson	20210002	Secretary	ICE Efrei
	Dexter	LeBatelier	20210007	Secretary	BDS
	Dexter	LeBatelier	20210007	Treasurer	BDS
	Dexter	LeBatelier	20210007	Secretary	SEPEFREI
	Dexter	LeBatelier	20210007	Treasurer	SEPEFREI
	Honoré	Dodier	20210008	President	BDS
	Honoré	Dodier	20210008	Treasurer	BDS
	Honoré	Dodier	20210008	President	SEPEFREI
	Honoré	Dodier	20210008	Treasurer	SEPEFREI

We can see that we obtained what we expected, and since we didn't precise who have what responsibility toward which club, every iteration is displayed twice, with each possible position.

6.

We want to display the list of the ten most expensive tasks with prices and responsible. Considering our database, we should expect something like this:

Description	Price	Role
Finds a place for the events	10000.00	President
Finds a place for the events	10000.00	Vice-President
Finds a place for the events	1652.00	President
Finds a place for the events	1652.00	Vice-President
Handles event and committee communication	999.99	President
Handles event and committee communication	999.99	Vice-President
Organizes the event	600.00	President
Organizes the event	600.00	Vice-President
Organizes the event	285.00	President
Organizes the event	285.00	Vice-President

The SQL code is the following one:

```

1 • SELECT
2     clubs_efrei.task.Description,
3     CASE
4         WHEN clubs_efrei.expenses.Amount IS NULL THEN "0.00" ELSE clubs_efrei.expenses.Amount
5     END
6     AS Price,
7     clubs_efrei.committeeresponsibility.Role
8 FROM clubs_efrei.task
9 -- TO JOIN COMMITTEE RESPONSIBILITY
10 JOIN clubs_efrei.performs ON clubs_efrei.performs.TaskID=clubs_efrei.task.TaskID
11 JOIN clubs_efrei.committeeresponsibility ON clubs_efrei.committeeresponsibility.CommitteeResponsibilityID=clubs_efrei.performs.CommitteeResponsibilityID
12 -- TO JOIN EXPENSES
13 JOIN clubs_efrei.has ON clubs_efrei.has.TaskID=clubs_efrei.task.TaskID
14 JOIN clubs_efrei.expenses ON clubs_efrei.expenses.ExpensesID=clubs_efrei.has.ExpensesID
15 ORDER BY clubs_efrei.expenses.Amount DESC
16 LIMIT 10

```

Which gives:

	Description	Price	Role
►	finds a place for the event	10000.00	President
	finds a place for the event	10000.00	Vice-president
	finds a place for the event	1652.00	President
	finds a place for the event	1652.00	Vice-president
	handles event and committee communication	999.99	President
	handles event and committee communication	999.99	Vice-president
	organizes the event	600.00	President
	organizes the event	600.00	Vice-president
	organizes the event	285.00	President
	organizes the event	285.00	Vice-president

We can see that we obtained what we expected. It's normal if every price is displayed twice: these are actions both the president and vice-president are ought to do. Also, some task descriptions are displayed four time. It's because they are task that two committee do for their events, and task that are done by two members (therefore it appears 1x2x2 times).

NB: it wasn't specified that we had to precise the committee, so we didn't specify it.

7.

This question is the last from part 3 we answered. To obtain something, we modify our database, to have at least one event with at least 2 clubs concerned by it. Therefore, we entered the following SQL code to modify the database:

```
1 • INSERT INTO clubs_efrei.committee
2 VALUES
3 ('7', '2021-09-01 12:00:00', '2021-10-10 12:00:00', '2021-10-01', '15000.00')
4

1 • INSERT INTO clubs_efrei.events
2 VALUES
3 ('7', 'WEI', '2021-10-01 20:30:00', '2021-10-03 22:00:00', 'party', '7')

1 • INSERT INTO clubs_efrei.holds
2 VALUES
3 ('1', '7'), ('3', '7')

1 • INSERT INTO clubs_efrei.budget
2 VALUES ('7', '78000.00', '7')

1 • INSERT INTO clubs_efrei.users
2 VALUES ('7', '7')

1 • INSERT INTO clubs_efrei.expenses
2 VALUES ('11', '98000.00')

1 • INSERT INTO clubs_efrei.spends
2 VALUES ('7', '11')

1 • INSERT INTO clubs_efrei.made_of
2 VALUES
3 ('20210002', '7'),
4 ('20200015', '7'),
5 ('20210008', '7'),
6 ('20210005', '7')

1 • INSERT INTO clubs_efrei.generate
2 VALUES
3 ('20210002', '1'),
4 ('20200015', '2'),
5 ('20210008', '3'),
6 ('20210005', '4')

1 • INSERT INTO clubs_efrei.delivers_committee
2 VALUES
3 ('7', '1'),
4 ('7', '2'),
5 ('7', '3'),
6 ('7', '4')
```

Giving when we displayed:

	CommitteeID	CreationDate	EndDate	Schedule	IncomeAllocation
▶	1	2021-12-08 00:00:00	2022-01-15 00:00:00	2022-01-08	4000.00
	2	2021-09-23 00:00:00	2021-10-30 00:00:00	2021-10-23	NULL
	3	2022-02-12 00:00:00	2022-03-19 00:00:00	2022-03-12	8000.00
	4	2022-03-01 00:00:00	2022-04-08 00:00:00	2022-04-01	12000.00
	5	2021-08-23 00:00:00	2021-09-30 00:00:00	2021-09-23	NULL
	6	2021-12-14 00:00:00	2022-01-21 00:00:00	2021-01-14	NULL
	7	2021-09-01 12:00:00	2021-10-10 12:00:00	2021-10-01	15000.00
✱	NULL	NULL	NULL	NULL	NULL

	EventsID	Name	StartDateAndTime	EndDateAndTime	Type	CommitteeID
▶	1	Junior Companies Gala Night	2022-01-08 19:30:00	2022-01-09 03:00:00	party	1
	2	E-Sports Tournament	2021-10-23 12:30:00	2021-10-23 18:00:00	workshop	2
	3	Music Party 1	2022-03-12 23:00:00	2022-03-13 06:00:00	party	3
	4	Music Party 2	2022-04-01 21:30:00	2022-04-02 01:00:00	party	4
	5	BDS Meeting 1	2021-09-23 14:30:00	2021-09-23 19:30:00	training	5
	6	BDS Meeting 2	2022-01-14 15:00:00	2022-01-14 20:00:00	training	6
	7	WEI	2021-10-01 20:30:00	2021-10-03 22:00:00	party	7
✱	NULL	NULL	NULL	NULL	NULL	NULL

	ClubID	EventsID
▶	2	1
	4	2
	3	3
	3	4
	1	5
	1	6
	1	7
	3	7
✱	NULL	NULL

	BudgetID	Amount	EventsID
▶	1	10000.00	1
	2	0.00	2
	3	9000.00	3
	4	12000.00	4
	5	0.00	5
	6	0.00	6
	7	78000.00	7
✱	NULL	NULL	NULL

	BudgetID	CommitteeID
▶	1	1
	3	3
	4	4
	7	7
✱	NULL	NULL

	ExpensesID	Amount
▶	1	50.00
	10	9.99
	11	98000.00
	2	1652.00
	3	10000.00
	4	600.00
	5	285.00
	6	49.99
	7	75.00
	8	999.99
	9	65.99
✱	NULL	NULL

	CommitteeID	ExpensesID
▶	1	1
	4	10
	7	11
	4	2
	4	3
	1	4
	3	5
	3	6
	1	7
	3	8
	3	9
✱	NULL	NULL

	EfreiStudentNb	CommitteeID
▶	20170001	1
	20170015	1
	20180002	1
	20190005	1
	20170009	2
	20180008	2
	20180015	2
	20190013	2
	20200005	3
	20200011	3
	20200013	3
	20210010	3
	20170002	4
	20190003	4
	20190004	4
	20190011	4
	20200007	5
	20210002	5
	20210007	5
	20210008	5
	20200006	6
	20200007	6
	20200015	6
	20210003	6
	20200015	7
	20210002	7
	20210005	7
	20210008	7
•	NULL	NULL

	EfreiStudentNb	CommitteeResponsibilityID
▶	20170001	1
	20170002	1
	20170009	1
	20200005	1
	20200006	1
	20200007	1
	20210002	1
	20170015	2
	20180008	2
	20190003	2
	20200011	2
	20200015	2
	20210002	2
	20210003	2
	20180002	3
	20180015	3
	20190004	3
	20200013	3
	20200015	3
	20210007	3
	20210008	3
	20190005	4
	20190011	4
	20190013	4
	20200007	4
	20210005	4
	20210008	4
	20210010	4
•	NULL	NULL

	CommitteeID	CommitteeResponsibilityID
▶	1	1
	2	1
	3	1
	4	1
	5	1
	6	1
	7	1
	1	2
	2	2
	3	2
	4	2
	5	2
	6	2
	7	2
	1	3
	2	3
	3	3
	4	3
	5	3
	6	3
	7	3
	1	4
	2	4
	3	4
	4	4
	5	4
	6	4
	7	4
•	NULL	NULL

We want to display all events common to more than one club, with their committee members and roles. We can see that our only event which is common to more than 1 club is the WEI, organized by BDS and Live Music.

Based on how we defined WEI committee we have:

20210002 => Henri Melanson, President

20200015 => Marshall Goulet, Vice-President

20210008 => Honoré Dodier, Sponsorship

20210005 => Alexandre Fortier, Treasurer

Considering our database, we should expect something like this:

Event	Committee member	Role
WEI	Henri Melanson	President
WEI	Marshall Goulet	Vice-President
WEI	Alexandre Fortier	Treasurer
WEI	Honoré Dodier	Sponsorship

The SQL code is the following one:

```

1 • SELECT
2     newtable.Name,
3     clubs_efrei.members.FirstName,
4     clubs_efrei.members.LastName,
5     clubs_efrei.committeeresponsibility.Role
6 FROM clubs_efrei.members
7 -- TO JOIN MEMBERS TO COMMITTEE THEN COMMITTEE RESPO
8 JOIN clubs_efrei.made_of ON clubs_efrei.made_of.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb
9 JOIN clubs_efrei.generate ON clubs_efrei.generate.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb
10 JOIN (
11     SELECT
12         clubs_efrei.events.Name,
13         clubs_efrei.committee.CommitteeID AS committee
14     FROM clubs_efrei.events
15     -- TO JOIN EVENT TO HOLDS
16     JOIN clubs_efrei.holds ON clubs_efrei.holds.EventsID=clubs_efrei.events.EventsID
17     -- TO JOIN EVENT TO COMMITTEE
18     JOIN clubs_efrei.committee ON clubs_efrei.committee.CommitteeID=clubs_efrei.events.CommitteeID
19     -- TO SET CONDITION : EVENT ORGANIZED BY MORE THAN 1 CLUB
20     GROUP BY clubs_efrei.events.Name
21     HAVING COUNT(clubs_efrei.events.Name)>1
22 )newtable
23 ON newtable.committee=clubs_efrei.made_of.CommitteeID
24 JOIN clubs_efrei.committeeresponsibility ON clubs_efrei.generate.CommitteeResponsibilityID=clubs_efrei.committeeresponsibility.CommitteeResponsibilityID
25 GROUP BY clubs_efrei.members.FirstName,clubs_efrei.members.LastName

```

Which gives:

	Name	FirstName	LastName	Role
►	WEI	Marshall	Goulet	Vice-president
	WEI	Henri	Melanson	President
	WEI	Alexandre	Fortier	Treasurer
	WEI	Honoré	Dodier	Sponsorship

We can see that we obtained what we expected.

8.

We want to display clubs with the award they received, and the source of the award. Considering our database, we should expect something like this:

Award name	Club	Source
Most influence	BDS	EFREI Administration
Students' choice Award	BDS	EFREI Students
Most influence	SEPEFREI	EFREI Administration
Students' choice Award	SEPEFREI	EFREI Students
Most influence	Live Music	EFREI Administration
Students' choice Award	Live Music	EFREI Students
Most influence	Video Games Efrei	EFREI Administration
Students' choice Award	Video Games Efrei	EFREI Students
Most influence	ICE Efrei	EFREI Administration
Students' choice Award	ICE Efrei	EFREI Students

The SQL code is the following one:

```

1
2 • SELECT clubs_efrei.award.Name AS 'Award name', clubs_efrei.club.Name AS 'club', clubs_efrei.award.Source AS 'Source'
3 FROM clubs_efrei.award
4 -- TO JOIN AWARD TO CLUB
5 JOIN clubs_efrei.wins ON clubs_efrei.wins.AwardID=clubs_efrei.award.AwardID
6 JOIN clubs_efrei.club ON clubs_efrei.club.ClubID=clubs_efrei.wins.ClubID

```

Which gives:

	Award name	club	Source
►	Students choice Award	BDS	EFREI Students
	Most influence	BDS	EFREI Administration
	Students choice Award	SEPEFREI	EFREI Students
	Most influence	SEPEFREI	EFREI Administration
	Students choice Award	Live Music	EFREI Students
	Most influence	Live Music	EFREI Administration
	Students choice Award	Video Games Efrei	EFREI Students
	Most influence	Video Games Efrei	EFREI Administration
	Students choice Award	ICE Efrei	EFREI Students
	Most influence	ICE Efrei	EFREI Administration

We can see that we obtained what we expected.

4.The views

1.

We want to create a view “top_clubs” displaying the names of clubs that always respected their budgets for events (with expenses lower than budget + income allocation). Considering our database, we know that only SEPEFREI, Live, and BDS had budget and expenses, and BDS and Live both spent more than they have during event “WEI”. Therefore, we should expect something like this:

Club Name
SEPEFREI

The SQL code is the following one:

```
1 • CREATE VIEW top_clubs AS
2 SELECT
3     clubs_efrei.club.Name
4 FROM clubs_efrei.club
5 -- TO JOIN CLUB TO EVENT
6 JOIN clubs_efrei.holds ON clubs_efrei.holds.ClubID=clubs_efrei.club.ClubID
7 JOIN clubs_efrei.events ON clubs_efrei.events.EventsID=clubs_efrei.holds.EventsID
8 -- TO ERASE CLUBS THAT ARE OFF BUDGET
9 JOIN (SELECT
10     clubs_efrei.club.Name AS club,
11     clubs_efrei.events.Name AS event,
12     (clubs_efrei.budget.Amount + clubs_efrei.committee.IncomeAllocation) AS budget_and_income,
13     SUM(clubs_efrei.expenses.Amount) AS expenses_sum
14 FROM clubs_efrei.club
15 -- TO JOIN CLUB TO EVENTS
16 JOIN clubs_efrei.holds ON clubs_efrei.holds.ClubID=clubs_efrei.club.ClubID
17 JOIN clubs_efrei.events ON clubs_efrei.events.EventsID=clubs_efrei.holds.EventsID
18 -- TO JOIN EVENTS TO BUDGET
19 JOIN clubs_efrei.budget ON clubs_efrei.budget.EventsID=clubs_efrei.events.EventsID
20 -- TO JOIN BUDGET TO COMMITTEE
21 JOIN clubs_efrei.uses ON clubs_efrei.uses.BudgetID=clubs_efrei.budget.BudgetID
22 JOIN clubs_efrei.committee ON clubs_efrei.committee.CommitteeID=clubs_efrei.uses.CommitteeID
23 -- TO JOIN COMMITTEE TO EXPENSES
24 JOIN clubs_efrei.spends ON clubs_efrei.spends.CommitteeID=clubs_efrei.committee.CommitteeID
25 JOIN clubs_efrei.expenses ON clubs_efrei.expenses.ExpensesID=clubs_efrei.spends.ExpensesID
26 -- TO SET THE CONDITION EXPENSES LOWER THAN BUDGET
27 GROUP BY clubs_efrei.club.Name, clubs_efrei.events.Name)table2
28 ON table2.club=clubs_efrei.club.Name
29
30
```

```

31 WHERE clubs_efrei.club.Name NOT IN
32 (SELECT
33     clubs_efrei.club.Name
34 FROM clubs_efrei.club
35 -- TO JOIN CLUB TO EVENT
36 JOIN clubs_efrei.holds ON clubs_efrei.holds.ClubID=clubs_efrei.club.ClubID
37 JOIN clubs_efrei.events ON clubs_efrei.events.EventsID=clubs_efrei.holds.EventsID
38 -- TO ERASE CLUBS THAT ARE OFF BUDGET
39 JOIN (SELECT
40     clubs_efrei.club.Name AS club,
41     clubs_efrei.events.Name AS event,
42     (clubs_efrei.budget.Amount + clubs_efrei.committee.IncomeAllocation) AS budget_and_income,
43     SUM(clubs_efrei.expenses.Amount) AS expenses_sum
44 FROM clubs_efrei.club
45 -- TO JOIN CLUB TO EVENTS
46 JOIN clubs_efrei.holds ON clubs_efrei.holds.ClubID=clubs_efrei.club.ClubID
47 JOIN clubs_efrei.events ON clubs_efrei.events.EventsID=clubs_efrei.holds.EventsID
48 -- TO JOIN EVENTS TO BUDGET
49 JOIN clubs_efrei.budget ON clubs_efrei.budget.EventsID=clubs_efrei.events.EventsID
50 -- TO JOIN BUDGET TO COMMITTEE
51 JOIN clubs_efrei.uses ON clubs_efrei.uses.BudgetID=clubs_efrei.budget.BudgetID
52 JOIN clubs_efrei.committee ON clubs_efrei.committee.CommitteeID=clubs_efrei.uses.CommitteeID
53 -- TO JOIN COMMITTEE TO EXPENSES
54 JOIN clubs_efrei.spends ON clubs_efrei.spends.CommitteeID=clubs_efrei.committee.CommitteeID
55 JOIN clubs_efrei.expenses ON clubs_efrei.expenses.ExpensesID=clubs_efrei.spends.ExpensesID
56 -- TO SET THE CONDITION EXPENSES LOWER THAN BUDGET
57 GROUP BY clubs_efrei.club.Name, clubs_efrei.events.Name
58 HAVING budget_and_income<expenses_sum)table2
59 ON table2.club=clubs_efrei.club.Name)

```

Then:

```

1 • SELECT
2     *
3 FROM top_clubs

```

Which gives:

Name
SEPEFREI

We get what we expected.

2.

We want to create a view “top_presidents” displaying the names of the presidents who completed their report in the shortest time possible. To compare this, we will get the fastest president between all clubs to complete the activity report over the three role years we have in our database. By selecting all presidents before 2021 (since the reports in 2021 haven’t been submitted and signed

yet), we realized that in our database, Video Games Efrei didn't have a president in 2020, and BDS had two presidents in 2020. All our presidents by club before 2021:

```

2 • SELECT
3     clubs_efrei.club.Name,
4     clubs_efrei.members.FirstName,
5     clubs_efrei.members.LastName,
6     clubs_efrei.clubresponsibility.Role,
7     clubs_efrei.have.RoleYear,
8     clubs_efrei.activityreport.*
9 FROM clubs_efrei.members
10 -- TO JOIN MEMBER TO CLUB
11 JOIN clubs_efrei.take_part ON clubs_efrei.members.EfreiStudentNb=clubs_efrei.take_part.EfreiStudentNb
12 JOIN clubs_efrei.club ON clubs_efrei.take_part.ClubID=clubs_efrei.club.ClubID
13 -- TO JOIN MEMBER TO CLUB RESP
14 JOIN clubs_efrei.have ON clubs_efrei.members.EfreiStudentNb=clubs_efrei.have.EfreiStudentNb
15 JOIN clubs_efrei.clubresponsibility ON clubs_efrei.have.ClubResponsibilityID=clubs_efrei.clubresponsibility.ClubResponsibilityID
16 -- TO JOIN CLUB RESP TO ACTIVITY REPORT
17 JOIN clubs_efrei.modify ON clubs_efrei.modify.ClubResponsibilityID_n=clubs_efrei.clubresponsibility.ClubResponsibilityID
18 JOIN clubs_efrei.activityreport ON clubs_efrei.activityreport.ActivityReportID=clubs_efrei.modify.ActivityReportID
19 -- TO SET CONDITION : CLUB RESP = PRESIDENT ; REPORT SUBMITTED
20 WHERE clubs_efrei.activityreport.Status="submitted"
21     AND clubs_efrei.clubresponsibility.Role="President"
22     AND @DATEDIFF(clubs_efrei.activityreport.ModificationDate , clubs_efrei.have.RoleYear)
23     AND DATEDIFF(clubs_efrei.activityreport.ModificationDate , clubs_efrei.have.RoleYear)<365
24     AND (SUBSTRING(clubs_efrei.club.Name, 1, 3) LIKE SUBSTRING(clubs_efrei.activityreport.ActivityReportID, 1, 3) OR (clubs_efrei.club.Name="Video Games Efrei" AND clubs_efrei.activityreport.ActivityReportID LIKE "GAMING%"))
25

```

	Name	FirstName	LastName	Role	RoleYear	ActivityReportID	ReportYear	Status	ModificationDate
►	BDS	Cendrillon	Margand	President	2020-09-01	BDS2020	2020-09-01	submitted	2021-08-23 21:03:02
	BDS	Honoré	Dodier	President	2020-09-01	BDS2020	2020-09-01	submitted	2021-08-23 21:03:02
	BDS	Adélaïde	Tardif	President	2019-09-01	BDS2019	2019-09-01	submitted	2020-07-27 18:30:02
	SEPEFREI	Honoré	Dodier	President	2020-09-01	SEP2020	2020-09-01	submitted	2021-08-30 02:17:56
	SEPEFREI	Raoul	Busson	President	2019-09-01	SEP2019	2019-09-01	submitted	2020-07-31 11:22:45
	Live Music	Inès	Longpré	President	2020-09-01	LIVE2020	2020-09-01	submitted	2021-07-31 22:30:02
	Live Music	Hugues	Lamontagne	President	2019-09-01	LIVE2019	2019-09-01	submitted	2020-07-25 23:58:40
	Video Games Efrei	Barry	Echeverri	President	2019-09-01	GAMING2019	2019-09-01	submitted	2020-07-30 19:47:26
	ICE Efrei	Francis	Neufville	President	2020-09-01	ICE2020	2020-09-01	submitted	2021-07-31 23:03:20
	ICE Efrei	Valérie	Racicot	President	2021-09-01	ICE2019	2019-09-01	submitted	2022-07-31 11:56:48

Considering our database, we should expect something like this:

Activity Report ID	President Name	Time to submit report in days
LIVE2019	Hugues Lamontagne	328
ICE2020 / LIVE2020	Francis Neufville / Inès Longpré	333 / 333

The SQL code is the following one:

```

1 • CREATE VIEW top_presidents AS
2 (SELECT
3     clubs_efrei.activityreport.ActivityReportID,
4     clubs_efrei.members.FirstName,
5     clubs_efrei.members.LastName,
6     DATEDIFF(clubs_efrei.activityreport.ModificationDate , clubs_efrei.have.RoleYear) AS Time_to_submit_report_in_days
7 FROM clubs_efrei.members
8 -- TO JOIN MEMBER TO CLUB
9 JOIN clubs_efrei.take_part ON clubs_efrei.members.EfreiStudentNb=clubs_efrei.take_part.EfreiStudentNb
10 JOIN clubs_efrei.club ON clubs_efrei.take_part.ClubID=clubs_efrei.club.ClubID
11 -- TO JOIN MEMBER TO CLUB RESP
12 JOIN clubs_efrei.have ON clubs_efrei.members.EfreiStudentNb=clubs_efrei.have.EfreiStudentNb
13 JOIN clubs_efrei.clubresponsibility ON clubs_efrei.have.ClubResponsibilityID=clubs_efrei.clubresponsibility.ClubResponsibilityID
14 -- TO JOIN CLUB RESP TO ACTIVITY REPORT
15 JOIN clubs_efrei.modify ON clubs_efrei.modify.ClubResponsibilityID_n=clubs_efrei.clubresponsibility.ClubResponsibilityID
16 JOIN clubs_efrei.activityreport ON clubs_efrei.activityreport.ActivityReportID=clubs_efrei.modify.ActivityReportID
17 -- TO SET CONDITION : CLUB RESP = PRESIDENT ; REPORT SUBMITTED
18 WHERE clubs_efrei.activityreport.ModificationDate LIKE '2021%'
19     AND clubs_efrei.activityreport.Status="submitted"
20     AND clubs_efrei.clubresponsibility.Role="President"
21     AND @DATEDIFF(clubs_efrei.activityreport.ModificationDate , clubs_efrei.have.RoleYear)
22     AND DATEDIFF(clubs_efrei.activityreport.ModificationDate , clubs_efrei.have.RoleYear)<365
23     AND (SUBSTRING(clubs_efrei.club.Name, 1, 3) LIKE SUBSTRING(clubs_efrei.activityreport.ActivityReportID, 1, 3) OR (clubs_efrei.club.Name="Video Games Efrei" AND clubs_efrei.activityreport.ActivityReportID LIKE "GAMING%"))
24 ORDER BY DATEDIFF(clubs_efrei.activityreport.ModificationDate , clubs_efrei.have.RoleYear)
25 LIMIT 1)
26

```



```

27 UNION
28
29 (SELECT
30     clubs_efrei.activityreport.ActivityReportID,
31     clubs_efrei.members.FirstName,
32     clubs_efrei.members.LastName,
33     DATEDIFF(clubs_efrei.activityreport.ModificationDate, clubs_efrei.have.RoleYear) AS Time_to_submit_report_in_days
34 FROM clubs_efrei.members
35 -- TO JOIN MEMBER TO CLUB
36 JOIN clubs_efrei.take_part ON clubs_efrei.members.EfreiStudentNb=clubs_efrei.take_part.EfreiStudentNb
37 JOIN clubs_efrei.club ON clubs_efrei.take_part.ClubID=clubs_efrei.club.ClubID
38 -- TO JOIN MEMBER TO CLUB RESP
39 JOIN clubs_efrei.have ON clubs_efrei.members.EfreiStudentNb=clubs_efrei.have.EfreiStudentNb
40 JOIN clubs_efrei.clubresponsibility ON clubs_efrei.have.ClubResponsibilityID=clubs_efrei.clubresponsibility.ClubResponsibilityID
41 -- TO JOIN CLUB RESP TO ACTIVITY REPORT
42 JOIN clubs_efrei.modify ON clubs_efrei.modify.ClubResponsibilityID_n=clubs_efrei.clubresponsibility.ClubResponsibilityID
43 JOIN clubs_efrei.activityreport ON clubs_efrei.activityreport.ActivityReportID=clubs_efrei.modify.ActivityReportID
44 -- TO SET CONDITION : CLUB RESP = PRESIDENT ; REPORT SUBMITTED
45 WHERE clubs_efrei.activityreport.ModificationDate LIKE '2020%'
46     AND clubs_efrei.activityreport.Status='submitted'
47     AND clubs_efrei.clubresponsibility.Role='President'
48     AND @<DATEDIFF(clubs_efrei.activityreport.ModificationDate, clubs_efrei.have.RoleYear)
49     AND DATEDIFF(clubs_efrei.activityreport.ModificationDate, clubs_efrei.have.RoleYear)<365
50     AND (SUBSTRING(clubs_efrei.club.Name, 1, 3) LIKE SUBSTRING(clubs_efrei.activityreport.ActivityReportID, 1, 3) OR (clubs_efrei.club.Name='Video Games Efrei' AND clubs_efrei.activityreport.ActivityReportID LIKE 'GAMING%'))
51 ORDER BY DATEDIFF(clubs_efrei.activityreport.ModificationDate, clubs_efrei.have.RoleYear)
52 LIMIT 1)

```

```

1 • SELECT
2     *
3 FROM top_presidents

```

Which gives:

	ActivityReportID	FirstName	LastName	Time_to_submit_report_in_days
►	LIVE2020	Inès	Longpré	333
	LIVE2019	Hugues	Lamontagne	328

We get what we expected.

3.

We want to create a view “Today” displaying the events starting today, sorted by time, and giving the clubs responsibilities. But in our database, we don’t have any event starting today, so first we create the following events and committees:

```

1 INSERT INTO clubs_efrei.committee
2 VALUES
3 ('8', '2022-03-29 12:00:00', '2022-04-22 21:00:00', '2022-04-17', NULL),
4 ('9', '2022-04-02 12:00:00', '2022-04-23 10:00:00', '2022-04-17', '450.00')

```

```

1 • INSERT INTO clubs_efrei.events
2 VALUES
3 ('8', 'BDS Meeting 3', '2022-04-17 19:30:00', '2022-04-17 23:30:00', 'training', '8'),
4 ('9', 'ICE display', '2022-04-17 12:30:00', '2022-04-21 18:00:00', 'workshop', '9')
5

```

```

1 • INSERT INTO clubs_efrei.holds
2 VALUES ('1', '8'), ('5', '9')

```

Giving:

	CommitteeID	CreationDate	EndDate	Schedule	IncomeAllocation
▶	1	2021-12-08 00:00:00	2022-01-15 00:00:00	2022-01-08	4000.00
	2	2021-09-23 00:00:00	2021-10-30 00:00:00	2021-10-23	NULL
	3	2022-02-12 00:00:00	2022-03-19 00:00:00	2022-03-12	8000.00
	4	2022-03-01 00:00:00	2022-04-08 00:00:00	2022-04-01	12000.00
	5	2021-08-23 00:00:00	2021-09-30 00:00:00	2021-09-23	NULL
	6	2021-12-14 00:00:00	2022-01-21 00:00:00	2021-01-14	NULL
	7	2021-09-01 12:00:00	2021-10-10 12:00:00	2021-10-01	15000.00
	8	2022-03-29 12:00:00	2022-04-22 21:00:00	2022-04-17	NULL
	9	2022-04-02 12:00:00	2022-04-23 10:00:00	2022-04-17	450.00
*	NULL	NULL	NULL	NULL	NULL

	EventsID	Name	StartDateAndTime	EndDateAndTime	Type	CommitteeID
▶	1	Junior Companies Gala Night	2022-01-08 19:30:00	2022-01-09 03:00:00	party	1
	2	E-Sports Tournament	2021-10-23 12:30:00	2021-10-23 18:00:00	workshop	2
	3	Music Party 1	2022-03-12 23:00:00	2022-03-13 06:00:00	party	3
	4	Music Party 2	2022-04-01 21:30:00	2022-04-02 01:00:00	party	4
	5	BDS Meeting 1	2021-09-23 14:30:00	2021-09-23 19:30:00	training	5
	6	BDS Meeting 2	2022-01-14 15:00:00	2022-01-14 20:00:00	training	6
	7	WEI	2021-10-01 20:30:00	2021-10-03 22:00:00	party	7
	8	BDS Meeting 3	2022-04-17 19:30:00	2022-04-17 23:30:00	training	8
	9	ICE display	2022-04-17 12:30:00	2022-04-21 18:00:00	workshop	9
*	NULL	NULL	NULL	NULL	NULL	NULL

	ClubID	EventsID
▶	2	1
	4	2
	3	3
	3	4
	1	5
	1	6
	1	7
	3	7
	1	8
	5	9
*	NULL	NULL

Therefore, we should expect something like this:

Event Name	Member	Responsibility	Starting Date And Time
ICE display	Valérie Racicot	President	2022-04-17 12:30:00
ICE display	Melisande Masson	Vice-president	2022-04-17 12:30:00
ICE display	Henri Melansson	Secretary	2022-04-17 12:30:00
BDS Meeting 3	Gustave Gilbert	President	2022-04-17 19:30:00
BDS Meeting 3	Henri Melansson	Secretary	2022-04-17 19:30:00
BDS Meeting 3	Franck Bonenfant	Vice-president	2022-04-17 19:30:00
BDS Meeting 3	Honoré Dodier	Treasurer	2022-04-17 19:30:00

The SQL code is the following one:

```

1 • CREATE VIEW Today AS
2 SELECT
3     clubs_efrei.events.Name,
4     clubs_efrei.members.FirstName,
5     clubs_efrei.members.LastName,
6     clubs_efrei.clubresponsibility.Role,
7     clubs_efrei.events.StartDateAndTime
8 FROM clubs_efrei.events
9 -- JOIN EVENTS TO CLUB
10 JOIN clubs_efrei.holds ON clubs_efrei.holds.EventsID=clubs_efrei.events.EventsID
11 JOIN clubs_efrei.club ON clubs_efrei.holds.ClubID=clubs_efrei.club.ClubID
12 -- JOIN CLUB TO MEMBER
13 JOIN clubs_efrei.take_part ON clubs_efrei.take_part.ClubID=clubs_efrei.club.ClubID
14 JOIN clubs_efrei.members ON clubs_efrei.members.EfreiStudentNb=clubs_efrei.take_part.EfreiStudentNb
15 -- JOIN MEMBER TO CLUB RESPO
16 JOIN clubs_efrei.have ON clubs_efrei.have.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb
17 JOIN clubs_efrei.clubresponsibility ON clubs_efrei.have.ClubResponsibilityID=clubs_efrei.clubresponsibility.ClubResponsibilityID
18 -- TO SET CONDITION : EVENT STARTING TODAY
19 WHERE CAST(clubs_efrei.events.StartDateAndTime AS DATE)=CURDATE() AND clubs_efrei.have.RoleYear LIKE "2021%"
20 ORDER BY clubs_efrei.events.StartDateAndTime

```

```

1 • SELECT
2     *
3 FROM today

```

Which gives:

	Name	FirstName	LastName	Role	StartDateAndTime
▶	ICE display	Valérie	Radicot	President	2022-04-17 12:30:00
	ICE display	Melisande	Masson	Vice-president	2022-04-17 12:30:00
	ICE display	Henri	Melanson	Secretary	2022-04-17 12:30:00
	BDS Meeting 3	Gustave	Gilbert	President	2022-04-17 19:30:00
	BDS Meeting 3	Henri	Melanson	Secretary	2022-04-17 19:30:00
	BDS Meeting 3	Franck	Bonenfant	Vice-president	2022-04-17 19:30:00
	BDS Meeting 3	Honoré	Dodier	Treasurer	2022-04-17 19:30:00

We get what we expected. Careful, the club(s) responsible(s) were asked, not the committee's responsible(s). Also, we discovered that ICE Efrei only has 3 club responsibility our database.

4.

We want to create a view "lazy" displaying the name of the last member of SEPEFREI club to sign a report. In our database, modification for signatures are given simultaneously for all members of a club. We chose SEPEFREI, and we want the last signed report. Therefore, we should expect to see the name of any member with responsibility from SEPEFREI in 2020 (since the report is submitted, so fully signed. Considering our database, we should expect something like this:

Name
Varden Bordeleau / Constance Huppé / Dexter LeBatellier / Honoré Dodier

The SQL code is the following one:

```

1 • CREATE VIEW lazy AS
2 SELECT
3     clubs_efrei.members.FirstName,
4     clubs_efrei.members.LastName
5 FROM clubs_efrei.modify
6 -- JOIN HAVE TO ACTIVITY REPORT AND TO CLUB RESPO
7 JOIN clubs_efrei.activityreport ON clubs_efrei.modify.ActivityReportID=clubs_efrei.activityreport.ActivityReportID
8 JOIN clubs_efrei.clubresponsibility ON clubs_efrei.clubresponsibility.ClubResponsibilityID=clubs_efrei.modify.ClubResponsibilityID_n_n
9 -- JOIN CLUB RESPO TO MEMBER
10 JOIN clubs_efrei.have ON clubs_efrei.have.ClubResponsibilityID=clubs_efrei.clubresponsibility.ClubResponsibilityID
11 JOIN clubs_efrei.members ON clubs_efrei.have.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb
12 -- JOIN MEMBER TO CLUB
13 JOIN clubs_efrei.take_part ON clubs_efrei.take_part.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb
14 JOIN clubs_efrei.club ON clubs_efrei.club.ClubID=clubs_efrei.take_part.ClubID
15 -- TO GET ALL PRESIDENT FROM LLIVE MUSIC, AND EVENTS SORTED BY THE PRESIDENT WHO ORGANIZED (DATEDIFF TO MAKE SURE THE EVENTS WAS IN THE YEAR OF THE MANDATE)
16 WHERE clubs_efrei.club.Name="SEPEFREI"
17     AND clubs_efrei.activityreport.ActivityReportID LIKE "SEP%"
18     AND (clubs_efrei.activityreport.Status="submitted" OR clubs_efrei.activityreport.Status="pending signatures" OR clubs_efrei.activityreport.Status="signed")
19     AND 0<DATEDIFF(clubs_efrei.activityreport.ModificationDate , clubs_efrei.have.RoleYear)
20     AND DATEDIFF(clubs_efrei.activityreport.ModificationDate , clubs_efrei.have.RoleYear)<365
21 GROUP BY clubs_efrei.members.FirstName, clubs_efrei.members.LastName
22 ORDER BY clubs_efrei.activityreport.ModificationDate DESC
23 LIMIT 1

```

```

1 • SELECT
2     *
3 FROM lazy

```

Which gives:

	FirstName	LastName
▶	Varden	Bordeleau

We get what we expected.

5.

We want to create a view “kill_joy” displaying the names of clubs with most penalties. Considering our database, we should expect something like this:

BDS / SEPEFREI

The SQL code is the following one:

```

1 • CREATE VIEW kill_joy AS
2 SELECT
3     clubs_efrei.club.Name
4 FROM clubs_efrei.club
5 JOIN clubs_efrei.is_punished ON clubs_efrei.is_punished.ClubID=clubs_efrei.club.ClubID
6 JOIN clubs_efrei.sanction ON clubs_efrei.sanction.SanctionID=clubs_efrei.is_punished.SanctionID
7 HAVING MAX(clubs_efrei.is_punished.ClubID)

```

```

1 • SELECT
2     *
3 FROM kill_joy

```

Which gives:

	Name
▶	BDS

We get what we expected. We could have BDS or SEPEFREI as they both have 1 sanction, and MAX() function only gets one value.

6.

We want to create a view “we_d_better_buy_it” displaying the most expensive rental type of tasks. At first, we didn’t have any task of that kind, therefore we must create at least two tasks of that kind, that we will link to events already created. Here is what we add:

```
1 • INSERT INTO clubs_efrei.task
2   VALUES ('8', 'sound system rental'), ('9', 'bus rental')

1 • INSERT INTO clubs_efrei.expenses
2   VALUES ('12', '780.00'), ('13', '16000.00')

1 • INSERT INTO clubs_efrei.spends
2   VALUES ('7', '13'), ('7', '12')

1 • INSERT INTO clubs_efrei.has
2   VALUES ('8', '12'), ('9', '13')
```

Giving:

TaskID	Description
1	manages the event
2	helps and replaces if needed the president
3	handles event and committee communication
4	manages event's budget
5	finds money for the event
6	organizes the event
7	finds a place for the event
8	sound system rental
9	bus rental
NULL	NULL

ExpensesID	Amount
1	50.00
10	9.99
11	98000.00
12	780.00
13	16000.00
2	1652.00
3	10000.00
4	600.00
5	285.00
6	49.99
7	75.00
8	999.99
9	65.99
NULL	NULL

CommitteeID	ExpensesID
1	1
4	10
7	11
7	12
7	13
4	2
4	3
1	4
3	5
3	6
1	7
3	8
3	9
NULL	NULL

TaskID	ExpensesID
5	1
5	10
8	12
9	13
7	2
7	3
6	4
6	5
1	6
2	7
3	8
3	9
NULL	NULL

Considering our database, we should expect something like this:

Most expensive rental task
Bus rental

The SQL code is the following one:

```

1 • CREATE VIEW we_d_better_buy_it AS
2 SELECT
3     clubs_efrei.task.Description
4 FROM clubs_efrei.task
5 -- JOIN TASK TO EXPENSES
6 JOIN clubs_efrei.has ON clubs_efrei.has.TaskID=clubs_efrei.task.TaskID
7 JOIN clubs_efrei.expenses ON clubs_efrei.expenses.ExpensesID=clubs_efrei.has.ExpensesID
8 WHERE clubs_efrei.task.Description LIKE '%rental'
9 ORDER BY clubs_efrei.expenses.Amount DESC
10 LIMIT 1

```

```

1 • SELECT
2     *
3 FROM we_d_better_buy_it

```

Which gives:

Description
bus rental

We get what we expected.

7.

We want to create a view “teachers_pet” displaying the names of clubs with most awards. Considering our database, we should expect something like this:

The SQL code is the following one:

```
1 • CREATE VIEW teachers_pet AS
2 SELECT
3     clubs_efrei.club.Name
4 FROM clubs_efrei.club
5 JOIN clubs_efrei.wins ON clubs_efrei.wins.ClubID=clubs_efrei.club.ClubID
6 JOIN clubs_efrei.award ON clubs_efrei.wins.AwardID=clubs_efrei.award.AwardID
7 WHERE clubs_efrei.award.AwardID=1
8 HAVING MAX(clubs_efrei.award.AwardID)
```

```
1 • SELECT
2     *
3 FROM teachers_pet
```

Which gives:

	Name
►	BDS

We get what we expected. We could have any club from Efrei as they all got the same number of awards from administration in our database. But we can expect only one club since we use MAX() function that delivers only one value.

8.

We want to create a view “perf” displaying the presidents of Live Music through the year, with the event they created, their income (via sponsorship), the award they won, the sanction they received, and the time they took to write their report. Considering our database, we should expect something like this:

First Name	Last Name	Events created	Income from sponsorship	Award won	Sanctions received	Time in days to write and sign the report
Inès	Longpré	Null	Students choice award	Null	Null	333
Hugues	Lamontagne	Null	Null	Null	Null	328
Véronique	Marquis	Music Party 1	Null	Null	Null	Null
Véronique	Marquis	Music Party 2	Null	Null	Null	Null
Véronique	Marquis	WEI	Null	Null	Null	Null

The SQL code is the following one, to create a first view table perf2:

```
CREATE VIEW perf2 AS
```

```
-- LIVE MUSIC PRESIDENTS TABLE -----
```

```

SELECT

    clubs_efrei.members.FirstName , -- name

    clubs_efrei.members.LastName, -- name

    table2.*,

    table3.*,

    table4.*,

    table5.*

FROM clubs_efrei.have

-- JOIN HAVE TO MEMBER AND TO CLUB RESPO

JOIN clubs_efrei.members ON clubs_efrei.have.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb

JOIN clubs_efrei.clubresponsibility ON
clubs_efrei.have.ClubResponsibilityID=clubs_efrei.clubresponsibility.ClubResponsibilityID

-- JOIN MEMBER TO CLUB

JOIN clubs_efrei.take_part ON
clubs_efrei.take_part.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb

JOIN clubs_efrei.club ON clubs_efrei.club.ClubID=clubs_efrei.take_part.ClubID


-- INCOME ALLOC AND EVENTS ORGANIZED TABLE -----
LEFT JOIN (

    SELECT

        clubs_efrei.members.FirstName AS fname2 , -- name

        clubs_efrei.events.Name AS Event, -- event

        clubs_efrei.committee.IncomeAllocation -- money raised from sponsors

    FROM clubs_efrei.have

    -- JOIN HAVE TO MEMBER AND TO CLUB RESPO

    JOIN clubs_efrei.members ON
clubs_efrei.have.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb

    JOIN clubs_efrei.clubresponsibility ON
clubs_efrei.have.ClubResponsibilityID=clubs_efrei.clubresponsibility.ClubResponsibilityID

    -- JOIN MEMBER TO CLUB

    JOIN clubs_efrei.take_part ON
clubs_efrei.take_part.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb

    JOIN clubs_efrei.club ON clubs_efrei.club.ClubID=clubs_efrei.take_part.ClubID

```



```

-- JOIN CLUB TO EVENT

JOIN clubs_efrei.holds ON clubs_efrei.holds.ClubID=clubs_efrei.club.ClubID

JOIN clubs_efrei.events ON clubs_efrei.holds.EventsID=clubs_efrei.events.EventsID

-- JOIN EVENT TO COMMITTEE (the president studied is the club's one, not committtee's one

JOIN clubs_efrei.committee ON
clubs_efrei.committee.CommitteeID=clubs_efrei.events.CommitteeID

-- TO GET ALL PRESIDENT FROM LLIVE MUSIC, AND EVENTS SORTED BY THE PRESIDENT WHO
ORGANIZED (DATEDIFF TO MAKE SURE THE EVENTS WAS IN THE YEAR OF THE MANDATE)

WHERE clubs_efrei.have.ClubResponsibilityID='1' AND clubs_efrei.club.Name='Live Music'
AND DATEDIFF(clubs_efrei.events.StartDateAndTime, clubs_efrei.have.RoleYear)<365 AND
0<DATEDIFF(clubs_efrei.events.StartDateAndTime, clubs_efrei.have.RoleYear)

)table2

ON table2.fname2 = clubs_efrei.members.FirstName

-- AWARD TABLE -----
LEFT JOIN (

SELECT

clubs_efrei.members.FirstName AS fname3, -- name

clubs_efrei.award.Name AS Award-- award

FROM clubs_efrei.have

-- JOIN HAVE TO MEMBER AND TO CLUB RESPO

JOIN clubs_efrei.members ON
clubs_efrei.have.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb

JOIN clubs_efrei.clubresponsibility ON
clubs_efrei.have.ClubResponsibilityID=clubs_efrei.clubresponsibility.ClubResponsibilityID

-- JOIN MEMBER TO CLUB

JOIN clubs_efrei.take_part ON
clubs_efrei.take_part.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb

JOIN clubs_efrei.club ON clubs_efrei.club.ClubID=clubs_efrei.take_part.ClubID

-- JOIN CLUB TO AWARD

JOIN clubs_efrei.wins ON clubs_efrei.wins.ClubID=clubs_efrei.club.ClubID

JOIN clubs_efrei.award ON clubs_efrei.award.AwardID=clubs_efrei.wins.AwardID

-- TO GET ALL PRESIDENT FROM LLIVE MUSIC, AND EVENTS SORTED BY THE PRESIDENT WHO
ORGANIZED (DATEDIFF TO MAKE SURE THE EVENTS WAS IN THE YEAR OF THE MANDATE)

```

```

WHERE clubs_efrei.have.ClubResponsibilityID='1' AND clubs_efrei.club.Name='Live Music'
AND DATEDIFF(clubs_efrei.wins.PriceYear, clubs_efrei.have.RoleYear)<365 AND
0<DATEDIFF(clubs_efrei.wins.PriceYear, clubs_efrei.have.RoleYear)

```

```

)table3

```

```

ON table3.fname3 = clubs_efrei.members.FirstName

```

```

-- SANCTION TABLE -----

```

```

LEFT JOIN (

```

```

    SELECT

```

```

        clubs_efrei.members.FirstName AS fname4, -- name

```

```

        clubs_efrei.sanction.Description AS Sanction -- sanction

```

```

    FROM clubs_efrei.have

```

```

    -- JOIN HAVE TO MEMBER AND TO CLUB RESPO

```

```

    JOIN clubs_efrei.members ON

```

```

clubs_efrei.have.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb

```

```

    JOIN clubs_efrei.clubresponsibility ON

```

```

clubs_efrei.have.ClubResponsibilityID=clubs_efrei.clubresponsibility.ClubResponsibilityID

```

```

    -- JOIN MEMBER TO CLUB

```

```

    JOIN clubs_efrei.take_part ON

```

```

clubs_efrei.take_part.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb

```

```

    JOIN clubs_efrei.club ON clubs_efrei.club.ClubID=clubs_efrei.take_part.ClubID

```

```

    -- JOIN CLUB TO SANCTION

```

```

    JOIN clubs_efrei.is_punished ON clubs_efrei.is_punished.ClubID=clubs_efrei.club.ClubID

```

```

    JOIN clubs_efrei.sanction ON

```

```

clubs_efrei.is_punished.SanctionID=clubs_efrei.sanction.SanctionID

```

```

    -- TO GET ALL PRESIDENT FROM LLIVE MUSIC, AND EVENTS SORTED BY THE PRESIDENT WHO
    ORGANIZED (DATEDIFF TO MAKE SURE THE EVENTS WAS IN THE YEAR OF THE MANDATE)

```

```

WHERE clubs_efrei.have.ClubResponsibilityID='1' AND clubs_efrei.club.Name='Live Music'
AND DATEDIFF(clubs_efrei.is_punished.SanctionYear , clubs_efrei.have.RoleYear)<365 AND
0<DATEDIFF(clubs_efrei.is_punished.SanctionYear, clubs_efrei.have.RoleYear)

```

```

)table4

```

```

ON table4.fname4 = clubs_efrei.members.FirstName

```

```

-- TIME TO WRITE THE REPORT TABLE -----

```

```

LEFT JOIN (
    SELECT
        clubs_efrei.members.FirstName AS fname5, -- name
        DATEDIFF(clubs_efrei.activityreport.ModificationDate , clubs_efrei.have.RoleYear) AS
Time_to_write_report_in_days -- time to write the report
    FROM clubs_efrei.have
    -- JOIN HAVE TO MEMBER AND TO CLUB RESPO
    JOIN clubs_efrei.members ON
clubs_efrei.have.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb
    JOIN clubs_efrei.clubresponsibility ON
clubs_efrei.have.ClubResponsibilityID=clubs_efrei.clubresponsibility.ClubResponsibilityID
    -- JOIN MEMBER TO CLUB
    JOIN clubs_efrei.take_part ON
clubs_efrei.take_part.EfreiStudentNb=clubs_efrei.members.EfreiStudentNb
    JOIN clubs_efrei.club ON clubs_efrei.club.ClubID=clubs_efrei.take_part.ClubID
    -- JOIN CLUB RESPO TO MODIFY
    JOIN clubs_efrei.modify ON
clubs_efrei.modify.ClubResponsibilityID_n_n=clubs_efrei.clubresponsibility.ClubResponsibilityID
    -- JOIN MODIFY TO ACTIVITY REPORT
    JOIN clubs_efrei.activityreport ON
clubs_efrei.modify.ActivityReportID=clubs_efrei.activityreport.ActivityReportID
    -- TO GET ALL PRESIDENT FROM LLIVE MUSIC, AND EVENTS SORTED BY THE PRESIDENT WHO
ORGANIZED (DATEDIFF TO MAKE SURE THE EVENTS WAS IN THE YEAR OF THE MANDATE)
    WHERE clubs_efrei.have.ClubResponsibilityID='1' AND clubs_efrei.club.Name='Live Music'
AND clubs_efrei.modify.ActivityReportID LIKE 'LIVE%' AND
clubs_efrei.modify.PresidentModifications="Y" AND
DATEDIFF(clubs_efrei.activityreport.ModificationDate , clubs_efrei.have.RoleYear)<365 AND
0<DATEDIFF(clubs_efrei.activityreport.ModificationDate , clubs_efrei.have.RoleYear)
)table5
    ON table5.fname5 = clubs_efrei.members.FirstName

-- TO GET ALL PRESIDENT FROM LLIVE MUSIC, AND EVENTS SORTED BY THE PRESIDENT WHO
ORGANIZED (DATEDIFF TO MAKE SURE THE EVENTS WAS IN THE YEAR OF THE MANDATE)
WHERE clubs_efrei.have.ClubResponsibilityID='1' AND clubs_efrei.club.Name='Live Music'

```

Then a second SQL query to create perf, with only the columns from perf we want to keep:

```
CREATE VIEW perf AS
```

```
SELECT
```

```
    clubs_efrei.perf2.FirstName,  
    clubs_efrei.perf2.LastName,  
    clubs_efrei.perf2.Event,  
    clubs_efrei.perf2.IncomeAllocation,  
    clubs_efrei.perf2.Award,  
    clubs_efrei.perf2.Sanction,  
    clubs_efrei.perf2.Time_to_write_report_in_days
```

```
FROM clubs_efrei.perf2
```

Then to display perf:

```
SELECT
```

```
    *
```

```
FROM clubs_efrei.perf
```

Which gives:

	FirstName	LastName	Event	IncomeAllocation	Award	Sanction	Time_to_write_report_in_days
►	Inès	Longpré	NULL	NULL	Students choice Award	NULL	333
	Hugues	Lamontagne	NULL	NULL	NULL	NULL	328
	Véronique	Marquis	Music Party 1	8000.00	NULL	NULL	NULL
	Véronique	Marquis	Music Party 2	12000.00	NULL	NULL	NULL
	Véronique	Marquis	WEI	15000.00	NULL	NULL	NULL

We get what we expected.