BDR – Cahier des charges – Gestionnaire de mods

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Introduction

Notre objectif est de créer une application permettant de gérer différentes listes de mods à installer pour différents jeux, prenant un chemin d’accès pour chaque jeu. L’application intégrera un système d’utilisateurs (qui pourraient éventuellement créer des mods), ils pourront donner des notes et/ou commentaires aux mods. Les mods ont pour la plupart des dépendances avec d’autres mods (= certains mods doivent obligatoirement être installés afin que d’autres mods puissent fonctionner) et les mods peuvent être regroupés dans des collections de mods qui peuvent être interchangées, modifiant ainsi les mods installés sur le moment pour un jeu (par exemple pour que l’utilisateur puisse changer de gameplay à la volée).

Conception

Description

Les jeux sont caractérisés par leur nom, la version du jeu, leur description (optionnelle), leur logo (optionnel), leur chemin d’accès vers le répertoire de mods du jeu, ainsi que par leur(s) genre(s) (i.e. : action, aventure, stratégie, etc.).

Les mods possèdent une liste de tags décrivant leur impact (i.e. : UI, gameplay, graphismes, etc.), le jeu auquel ils sont rattachés, une liste des versions du jeu avec lesquelles le mod est compatible et une liste des mods dont il dépend pour être fonctionnel. Les mods ont également des notes et commentaires de nos utilisateurs, un lien de téléchargement, une description (optionnelle), un logo (optionnel), une liste de screenshots (optionnelle) et un nombre de téléchargement via l’app.

Une collection de mods représente une liste de mod, elle a comme attributs le jeu qu’elle concerne, un nom et l’emplacement relatif (à l’environnement de l’application) du dossier dans lequel est stocké cette liste de mods, une description écrite par l’utilisateur (optionnelle), la version du jeu qui est compatible avec cette liste et un logo (optionnel, référençable par l’utilisateur).

Un modpack représente une liste de mods, le jeu concerné, un nom, la ou les versions du jeu disponibles pour ce modpack, une description (écrite par le créateur de mods, optionnel), un logo (optionnel) et une liste de screenshot (optionnel).

NB : une collection de mods diffère d’un modpack car elle représente une “instance” d’un environnement de jeu de l’utilisateur là où le modpack représente une liste proposée ou conseillé de mods qui semble intéressant d’associer (ainsi que la liste de compatibilité car certain mod pourrait ne pas exister dans toutes les versions proposées par d’autre). Ainsi une collection de mods peut contenir (ou non) un ou plusieurs modpacks (les modpacks se comportent donc comme des mods).

Un utilisateur a un nom, un mot de passe et un rôle (simple utilisateur, créateur de mods ou administrateur). Les créateurs de mods ont une liste de mods qu’ils ont créés et peuvent rajouter des mods. Les administrateurs peuvent rajouter et supprimer des mods de la banque de données.

Fonctionnalités

* Quitter l’app
* Connexion à la db et possibilité d’interaction
* Mise à jour de la base de données « automatique » (par exemple web-scraping)
* Connexion à un compte existant
* Création d’un compte
* Une fois connecté :
  + Visualisation d’une liste de jeux et pour chaque jeu une liste de mods et modpacks téléchargeable.
  + Visualisation d’un mod ou modpack spécifique
  + Visualisation de collections de l’utilisateur
  + Noter un mod ou un modpack
  + Commenter un mod ou un modpack
  + Télécharger un mod ou un modpack
  + Rechercher, filtrer, trier les différents éléments
  + IA permettant de proposer aux utilisateurs une liste personnalisé de mods (selon leurs préférences)
  + Pub pour financer l’app :)
  + Gestion des collections
    - Créer une nouvelle collection
    - Supprimer une collection existante
    - Ajouter un mod à la collection
    - Supprimer un mod de la collection
    - Voir les logs (historique des modifications) d’une collection spécifique
    - Modification de la collection (le chemin relatif, le logo ou la description)
    - Définir une collection comme active/inactive
  + Gérer son compte
    - Modifier son mot de passe
    - Se déconnecter
    - Supprimer le compte
  + Si admin
    - Visualiser et pouvoir modifier (créer, modifier ou supprimer) l’intégralité des données qu’elle contient (y compris les utilisateurs)
    - Voir les logs « généraux » de l’application
  + Si modder
    - Créer/modifier/supprimer un nouveau mod ou modpack
    - Visualiser ses mods et modpacks créés
    - Voir des informations supplémentaires (nombre de téléchargement des mods créés, affinité des joueurs avec ce moddeur, …)
    - Ne peut pas noter ou commenter ses propres mods ou modpack

NB : Au vu du nombre de fonctionnalités et de leur complexité, il est certain que toutes ne seront pas implémentées dans les temps. Nous ferons des choix lors de l’implémentation des fonctionnalités comme par exemple implémenter le téléchargement des mods dans un second temps, ne donnant que le lien de téléchargement uniquement dans un premier temps.

Implémentation

Priorité des fonctionnalités

|  |  |  |
| --- | --- | --- |
| Fonctionnalité | Priorité | Etat |
| Quitter l’app | 1 | Implémenté |
| Connexion et Interactibilité db | 1 | Implémenté |
| Mise à jour automatique de db | 8 | À implémenter |
| Connexion à un compte existant | 2 | Implémenté |
| Création d’un compte | 2 | Implémenté |
| UI | 1 | En cours |
| CSS UI | 4 | En cours |
| Visualisation d’une liste de jeux | 2 | Implémenté |
| Visualisation d’une liste de mods | 2 | Implémenté |
| Vis. d’un mod | 3 | En cours |
| Vis. d’un mod pack | 5 | À implémenter |
| Vis. de collection de l’utilisateur | 3 | En cours |
| Noter un mod/mod pack | 5 | Commencé |
| Commenter un mod | 4 | Implémenté |
| Télécharger un mod/mod pack | 4 | Commencé |
| Rechercher | 6 | À implémenter |
| Filtrer | 6 | À implémenter |
| Trier | 6 | À implémenter |
| IA | 8 | À implémenter |
| Pubs | 8 | À implémenter |
| Créer une nouvelle collection | 3 | Implémenté |
| Supprimer une collection | 3 | Implémenté |
| Ajouter un mod à la collection | 3 | Implémenté |
| Supprimer un mod de la collection | 3 | Implémenté |
| Voir les logs d’une collection (utilisation des vues/triggers) | 3 | Implémenté |
| Modifier une collection | 4 | À implémenter |
| Définir une collection comme active/inactive | 7 | À implémenter |
| Modifier son mot de passe | 3 | Implémenté |
| Se déconnecter | 2 | Implémenté |
| Supprimer l’utilisateur connecté | 2 | Implémenté |
| Visualiser la db (Admin seulement) | 5 | À implémenter |
| Modifier la db (Admin seulement) | 5 | À implémenter |
| Voir logs « généraux » (Admin seulement) | 4 | En cours |
| CRUD mod et modpack du modder (Modder seulement) | 5 | À implémenter |
| Voir des data style « BI » des mod/modpack | 7 | À implémenter |
| Ne peut pas noter/commenter ses propres mods | 4 | À implémenter |

NB : Certaines des fonctionnalités sont noté comme « En cours » signifiant qu’elles sont implémentées, mais que l’on peut encore ajouter de l’information et autres améliorations. L’état « Commencé » signifie qu’en l’état la fonctionnalité n’est pas encore totalement fonctionnelle.

En fonction des priorités, nous aimerions avoir fini les priorités 1 à 3 et dans le meilleur des cas les fonctionnalités de priorité 4 aussi.

Script du schéma de la db

-- CRÉATION DE LA DB, DESCRIPTION DE CELLE-CI ---------------------------------------------------------  
  
--  
-- Base de données : ‘mods‘  
--  
\c db\_app;  
  
  
-- DESCRIPTION DES TABLES -----------------------------------------------------------------------------  
  
--  
-- Structure de la table ‘game‘  
--  
DROP TABLE IF EXISTS game;  
CREATE TABLE IF NOT EXISTS game  
(  
 name varchar(255),  
 logo varchar(255),  
 description text,  
 modFolder text,  
 PRIMARY KEY (name)  
 );  
  
--  
-- Structure de la table ‘mod‘  
--  
DROP TABLE IF EXISTS mod;  
CREATE TABLE IF NOT EXISTS mod  
(  
 name varchar(255),  
 fk\_game varchar(255),  
 logo varchar(255),  
 description text,  
 downloadLink varchar(255) NOT NULL UNIQUE,  
 nbDownload bigint NOT NULL DEFAULT 0,  
 PRIMARY KEY (fk\_game, name)  
 );  
  
--  
-- Structure de la table ‘screenshot‘  
--  
DROP TABLE IF EXISTS screenshot;  
CREATE TABLE IF NOT EXISTS screenshot  
(  
 img\_path varchar(255),  
 fk\_mod\_name varchar(255) NOT NULL,  
 fk\_mod\_game\_name varchar(255) NOT NULL,  
 PRIMARY KEY (img\_path)  
 );  
  
--  
-- Structure de la table ‘\_user‘  
--  
DROP TABLE IF EXISTS \_user;  
CREATE TABLE IF NOT EXISTS \_user  
(  
 name varchar(255),  
 password text NOT NULL,  
 isAdmin boolean NOT NULL DEFAULT FALSE,  
 PRIMARY KEY (name)  
 );  
  
--  
-- Structure de la table ‘genre‘  
--  
DROP TABLE IF EXISTS genre;  
CREATE TABLE IF NOT EXISTS genre  
(  
 name varchar(255),  
 PRIMARY KEY (name)  
 );  
  
--  
-- Structure de la table ‘version‘  
--  
DROP TABLE IF EXISTS version;  
CREATE TABLE IF NOT EXISTS version  
(  
 name varchar(255),  
 PRIMARY KEY (name)  
 );  
  
--  
-- Structure de la table ‘impact‘  
--  
DROP TABLE IF EXISTS impact;  
CREATE TABLE IF NOT EXISTS impact  
(  
 name varchar(255),  
 PRIMARY KEY (name)  
 );  
  
--  
-- Structure de la table ‘note‘  
--  
DROP TABLE IF EXISTS note;  
CREATE TABLE IF NOT EXISTS note  
(  
 fk\_mod\_name varchar(255),  
 fk\_mod\_game\_name varchar(255),  
 fk\_user varchar(255),  
 value decimal(2, 1) NOT NULL CHECK (mod(value, 0.5) = 0 AND 0 <= value AND value <= 5),  
 PRIMARY KEY (fk\_mod\_name, fk\_mod\_game\_name, fk\_user)  
 );  
  
--  
-- Structure de la table ‘comment‘  
--  
DROP TABLE IF EXISTS comment;  
CREATE TABLE IF NOT EXISTS comment  
(  
 id SERIAL,  
 content text NOT NULL CHECK (content != « ),  
 nbLike bigint NOT NULL DEFAULT 0,  
 fk\_mod\_name varchar(255) NOT NULL,  
 fk\_mod\_game\_name varchar(255) NOT NULL,  
 fk\_user varchar(255),  
 PRIMARY KEY (id)  
 );  
  
--  
-- Structure de la table ‘mod\_collection‘  
--  
DROP TABLE IF EXISTS mod\_collection;  
CREATE TABLE IF NOT EXISTS mod\_collection  
(  
 name varchar(255),  
 fk\_user varchar(255),  
 relative\_path\_to\_folder text NOT NULL,  
 logo varchar(255),  
 description text,  
 fk\_game varchar(255),  
 PRIMARY KEY (name, fk\_user)  
 );  
  
--  
-- Structure de la table ‘mod\_pack‘  
--  
DROP TABLE IF EXISTS mod\_pack;  
CREATE TABLE IF NOT EXISTS mod\_pack  
(  
 name varchar(255),  
 fk\_game varchar(255),  
 logo varchar(255),  
 description text,  
 downloadLink varchar(255) NOT NULL UNIQUE,  
 nbDownload bigint NOT NULL DEFAULT 0,  
 PRIMARY KEY (fk\_game, name)  
 );  
  
--  
-- Structure de la table ‘moder‘  
--  
DROP TABLE IF EXISTS moder;  
CREATE TABLE IF NOT EXISTS moder  
(  
 pseudo varchar(255),  
 fk\_user varchar(255) UNIQUE DEFAULT NULL,  
 PRIMARY KEY (pseudo)  
 );  
  
--  
-- Structure de la table ‘mod\_collection\_logger‘  
--  
  
DROP TABLE IF EXISTS mod\_collection\_logger;  
CREATE TABLE IF NOT EXISTS mod\_collection\_logger  
(  
 version timestamp NOT NULL,  
 fk\_mod\_collection\_name varchar(255), -- noFk because collection could be deleted now  
 fk\_mod\_collection\_user\_name varchar(255), -- noFk because user could be deleted now  
 relative\_path\_to\_folder text,  
 logo varchar(255),  
 description text,  
 fk\_game varchar(255),  
 fkModList text, -- format « x;y;...;z » where fk mod name value  
 id SERIAL,  
 PRIMARY KEY (id)  
 );  
  
  
-- DESCRIPTION DES TR ----------------------------------------------------------------------------------  
  
--  
-- Structure de la table ‘genre\_game‘  
--  
DROP TABLE IF EXISTS genre\_game;  
CREATE TABLE IF NOT EXISTS genre\_game  
(  
 fk\_game varchar(255),  
 fk\_genre varchar(255),  
 PRIMARY KEY (fk\_game, fk\_genre)  
 );  
  
--  
-- Structure de la table ‘game\_version‘  
--  
DROP TABLE IF EXISTS game\_version;  
CREATE TABLE IF NOT EXISTS game\_version  
(  
 fk\_game varchar(255),  
 fk\_version varchar(255),  
 PRIMARY KEY (fk\_game, fk\_version)  
 );  
  
--  
-- Structure de la table ‘mod\_dependence‘  
--  
DROP TABLE IF EXISTS mod\_dependence;  
CREATE TABLE IF NOT EXISTS mod\_dependence  
(  
 fk\_mod\_name varchar(255),  
 fk\_mod\_game\_name varchar(255),  
 fk\_dependence\_name varchar(255),  
 fk\_dependence\_game\_name varchar(255),  
 PRIMARY KEY (fk\_mod\_name, fk\_mod\_game\_name, fk\_dependence\_name, fk\_dependence\_game\_name)  
 );  
  
--  
-- Structure de la table ‘mod\_version‘  
--  
DROP TABLE IF EXISTS mod\_version;  
CREATE TABLE IF NOT EXISTS mod\_version  
(  
 fk\_mod\_name varchar(255),  
 fk\_mod\_game\_name varchar(255),  
 fk\_version varchar(255),  
 PRIMARY KEY (fk\_mod\_name, fk\_mod\_game\_name, fk\_version)  
 );  
  
--  
-- Structure de la table ‘mod\_impact‘  
--  
DROP TABLE IF EXISTS mod\_impact;  
CREATE TABLE IF NOT EXISTS mod\_impact  
(  
 fk\_mod\_name varchar(255),  
 fk\_mod\_game\_name varchar(255),  
 fk\_impact varchar(255),  
 PRIMARY KEY (fk\_mod\_name, fk\_mod\_game\_name, fk\_impact)  
 );  
  
--  
-- Structure de la table ‘mod\_version‘  
--  
DROP TABLE IF EXISTS mod\_mod\_collection;  
CREATE TABLE IF NOT EXISTS mod\_mod\_collection  
(  
 fk\_mod\_name varchar(255),  
 fk\_mod\_game\_name varchar(255),  
 fk\_mod\_collection\_name varchar(255),  
 fk\_mod\_collection\_user\_name varchar(255),  
 PRIMARY KEY (fk\_mod\_name, fk\_mod\_game\_name, fk\_mod\_collection\_name, fk\_mod\_collection\_user\_name)  
 );  
  
--  
-- Structure de la table ‘mod\_mod\_pack‘  
--  
DROP TABLE IF EXISTS mod\_mod\_pack;  
CREATE TABLE IF NOT EXISTS mod\_mod\_pack  
(  
 fk\_mod\_name varchar(255),  
 fk\_mod\_game\_name varchar(255),  
 fk\_mod\_pack\_game\_name varchar(255),  
 fk\_mod\_pack\_name varchar(255),  
 PRIMARY KEY (fk\_mod\_game\_name, fk\_mod\_name, fk\_mod\_pack\_game\_name, fk\_mod\_pack\_name)  
 );  
--  
-- Structure de la table ‘mod\_moder‘  
--  
DROP TABLE IF EXISTS mod\_moder;  
CREATE TABLE IF NOT EXISTS mod\_moder  
(  
 fk\_moder varchar(255),  
 fk\_mod\_game\_name varchar(255),  
 fk\_mod\_name varchar(255),  
 PRIMARY KEY (fk\_moder, fk\_mod\_game\_name, fk\_mod\_name)  
 );  
  
--  
-- Structure de la table ‘mod\_pack\_moder‘  
--  
DROP TABLE IF EXISTS mod\_pack\_moder;  
CREATE TABLE IF NOT EXISTS mod\_pack\_moder  
(  
 fk\_moder varchar(255),  
 fk\_mod\_pack\_game\_name varchar(255),  
 fk\_mod\_pack\_name varchar(255),  
 PRIMARY KEY (fk\_moder, fk\_mod\_pack\_game\_name, fk\_mod\_pack\_name)  
 );  
  
--  
-- Structure de la table ‘mod\_pack\_version‘  
--  
DROP TABLE IF EXISTS mod\_pack\_version;  
CREATE TABLE IF NOT EXISTS mod\_pack\_version  
(  
 fk\_version varchar(255),  
 fk\_mod\_pack\_game\_name varchar(255),  
 fk\_mod\_pack\_name varchar(255),  
 PRIMARY KEY (fk\_version, fk\_mod\_pack\_game\_name, fk\_mod\_pack\_name)  
 );  
  
--  
-- Structure de la table ‘mod\_pack\_impact‘  
--  
DROP TABLE IF EXISTS mod\_pack\_impact;  
CREATE TABLE IF NOT EXISTS mod\_pack\_impact  
(  
 fk\_impact varchar(255),  
 fk\_mod\_pack\_game\_name varchar(255),  
 fk\_mod\_pack\_name varchar(255),  
 PRIMARY KEY (fk\_impact, fk\_mod\_pack\_game\_name, fk\_mod\_pack\_name)  
 );  
  
-- AJOUT DES CONTRAINTES ---------------------------------------------------------------------------  
  
--  
-- Contraintes pour la table ‘genre\_game‘  
--  
ALTER TABLE genre\_game  
 ADD CONSTRAINT genre\_game\_fk\_game FOREIGN KEY (fk\_game) REFERENCES game (name)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT genre\_game\_fk\_genre FOREIGN KEY (fk\_genre) REFERENCES genre (name)  
 ON UPDATE CASCADE;  
  
--  
-- Contraintes pour la table ‘game\_version‘  
--  
ALTER TABLE game\_version  
 ADD CONSTRAINT game\_version\_fk\_game FOREIGN KEY (fk\_game) REFERENCES game (name)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT game\_version\_fk\_version FOREIGN KEY (fk\_version) REFERENCES version (name);  
  
--  
-- Contraintes pour la table ‘mod‘  
--  
ALTER TABLE mod  
 ADD CONSTRAINT mod\_fk\_game FOREIGN KEY (fk\_game) REFERENCES game (name)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE;  
  
--  
-- Contraintes pour la table ‘screenshot‘  
--  
ALTER TABLE screenshot  
 ADD CONSTRAINT screenshot\_fk\_mod FOREIGN KEY (fk\_mod\_name, fk\_mod\_game\_name) REFERENCES mod (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE;  
  
--  
-- Contraintes pour la table ‘mod\_dependence‘  
--  
ALTER TABLE mod\_dependence  
 ADD CONSTRAINT mod\_dependence\_fk\_mod FOREIGN KEY (fk\_mod\_name, fk\_mod\_game\_name) REFERENCES mod (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT mod\_dependence\_fk\_dependence FOREIGN KEY (fk\_mod\_name, fk\_mod\_game\_name) REFERENCES mod (name, fk\_game)  
 ON UPDATE CASCADE;  
  
--  
-- Contraintes pour la table ‘mod\_version‘  
--  
ALTER TABLE mod\_version  
 ADD CONSTRAINT mod\_version\_fk\_mod FOREIGN KEY (fk\_mod\_name, fk\_mod\_game\_name) REFERENCES mod (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT mod\_version\_fk\_version FOREIGN KEY (fk\_version) REFERENCES version (name);  
  
--  
-- Contraintes pour la table ‘mod\_impact‘  
--  
ALTER TABLE mod\_impact  
 ADD CONSTRAINT mod\_impact\_fk\_mod FOREIGN KEY (fk\_mod\_name, fk\_mod\_game\_name) REFERENCES mod (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT mod\_impact\_fk\_impact FOREIGN KEY (fk\_impact) REFERENCES impact (name)  
 ON UPDATE CASCADE;  
  
--  
-- Contraintes pour la table ‘note‘  
--  
ALTER TABLE note  
 ADD CONSTRAINT note\_fk\_mod FOREIGN KEY (fk\_mod\_name, fk\_mod\_game\_name) REFERENCES mod (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT note\_fk\_user FOREIGN KEY (fk\_user) REFERENCES \_user (name)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE;  
  
 --  
 -- Contraintes pour la table ‘comment‘  
 --  
ALTER TABLE comment  
 ADD CONSTRAINT comment\_fk\_mod FOREIGN KEY (fk\_mod\_name, fk\_mod\_game\_name) REFERENCES mod (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT comment\_fk\_user FOREIGN KEY (fk\_user) REFERENCES \_user (name)  
 ON UPDATE CASCADE  
 ON DELETE SET NULL;  
  
 --  
 -- Contraintes pour la table ‘mod\_collection‘  
 --  
ALTER TABLE mod\_collection  
 ADD CONSTRAINT mod\_collection\_fk\_user FOREIGN KEY (fk\_user) REFERENCES \_user (name)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT mod\_collection\_fk\_game FOREIGN KEY (fk\_game) REFERENCES game (name)  
 ON UPDATE CASCADE  
 ON DELETE SET NULL;  
  
 --  
 -- Contraintes pour la table ‘mod\_mod\_collection‘  
 --  
ALTER TABLE mod\_mod\_collection  
 ADD CONSTRAINT mod\_mod\_collection\_fk\_mod FOREIGN KEY (fk\_mod\_name, fk\_mod\_game\_name) REFERENCES mod (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE SET NULL,  
 ADD CONSTRAINT mod\_mod\_collection\_fk\_mod\_collection FOREIGN KEY (fk\_mod\_collection\_name, fk\_mod\_collection\_user\_name) REFERENCES mod\_collection (name, fk\_user)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE;  
  
 --  
 -- Contraintes pour la table ‘mod\_pack‘  
 --  
ALTER TABLE mod\_pack  
 ADD CONSTRAINT mod\_pack\_fk\_game FOREIGN KEY (fk\_game) REFERENCES game (name)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE;  
  
--  
-- Contraintes pour la table ‘mod\_mod\_pack‘  
--  
ALTER TABLE mod\_mod\_pack  
 ADD CONSTRAINT mod\_mod\_pack\_fk\_mod FOREIGN KEY (fk\_mod\_name, fk\_mod\_game\_name) REFERENCES mod (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE SET NULL,  
 ADD CONSTRAINT mod\_mod\_pack\_fk\_mod\_pack FOREIGN KEY (fk\_mod\_pack\_name, fk\_mod\_pack\_game\_name) REFERENCES mod\_pack (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE;  
  
 --  
 -- Contraintes pour la table ‘moder‘  
 --  
ALTER TABLE moder  
 ADD CONSTRAINT moder\_fk\_user FOREIGN KEY (fk\_user) REFERENCES \_user (name)  
 ON UPDATE CASCADE  
 ON DELETE SET NULL;  
  
--  
-- Contraintes pour la table ‘mod\_moder‘  
--  
ALTER TABLE mod\_moder  
 ADD CONSTRAINT mod\_moder\_fk\_mod FOREIGN KEY (fk\_mod\_name, fk\_mod\_game\_name) REFERENCES mod (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT mod\_moder\_fk\_moder FOREIGN KEY (fk\_moder) REFERENCES moder (pseudo)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE;  
  
 --  
 -- Contraintes pour la table ‘mod\_pack\_moder‘  
 --  
ALTER TABLE mod\_pack\_moder  
 ADD CONSTRAINT mod\_pack\_moder\_fk\_mod\_pack FOREIGN KEY (fk\_mod\_pack\_name, fk\_mod\_pack\_game\_name) REFERENCES mod\_pack (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT mod\_moder\_fk\_moder FOREIGN KEY (fk\_moder) REFERENCES moder (pseudo)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE;  
  
 --  
 -- Contraintes pour la table ‘mod\_pack\_version‘  
 --  
ALTER TABLE mod\_pack\_version  
 ADD CONSTRAINT mod\_pack\_version\_fk\_mod\_pack FOREIGN KEY (fk\_mod\_pack\_name, fk\_mod\_pack\_game\_name) REFERENCES mod\_pack (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT mod\_version\_fk\_version FOREIGN KEY (fk\_version) REFERENCES version (name);  
  
--  
-- Contraintes pour la table ‘mod\_pack\_impact‘  
--  
ALTER TABLE mod\_pack\_impact  
 ADD CONSTRAINT mod\_pack\_impact\_fk\_mod\_pack FOREIGN KEY (fk\_mod\_pack\_name, fk\_mod\_pack\_game\_name) REFERENCES mod\_pack (name, fk\_game)  
 ON UPDATE CASCADE  
 ON DELETE CASCADE,  
 ADD CONSTRAINT mod\_impact\_fk\_impact FOREIGN KEY (fk\_impact) REFERENCES impact (name);

Script des vues et triggers

-- TRIGGER/VIEW SCRIPT—FUNCTION -------------------------------------------------------------------------------------------------------------------------------------------------------------  
  
  
-- Function that create a view for the username given.—The view will be called [username]\_view and contain all versions of all mod collections of this user  
CREATE OR REPLACE FUNCTION *create\_view\_user*()  
 RETURNS TRIGGER AS  
$$  
BEGIN  
 EXECUTE ‘CREATE OR REPLACE VIEW ‘ || NEW.name || ‘\_view AS  
 SELECT \*  
 FROM mod\_collection\_logger  
 WHERE fk\_mod\_collection\_user\_name = «  » || NEW.name || «  »  
 ORDER BY fk\_mod\_collection\_name, version DESC;’;  
 RETURN NULL;  
END;  
$$  
 LANGUAGE plpgsql;  
  
-- Function that drop the view user called [username]\_view and the content  
CREATE OR REPLACE FUNCTION *drop\_view\_user*()  
 RETURNS TRIGGER AS  
$$  
DECLARE  
 username varchar(255);  
BEGIN  
 username := OLD.name;  
 EXECUTE ‘DELETE  
 FROM ‘ || username || ‘\_view;’;  
 EXECUTE ‘DROP VIEW IF EXISTS ‘ || username || ‘\_view;’;  
 RETURN NULL;  
END;  
$$  
 LANGUAGE plpgsql;  
  
-- Function that get all mods from a mod collection given (format is : fkMod1;fkMod2;...;fkModN) as text  
CREATE OR REPLACE FUNCTION *get\_mods\_from\_mod\_collection*(mod\_collection\_name varchar(255), username varchar(255))  
 RETURNS text AS  
$$  
DECLARE  
 fk\_mod\_list text;  
BEGIN  
 -- Using STRING\_AGG allow us to concat all fk\_mod\_name result as a string. About as a sum for string.  
 -- The second parameter is the separator  
 SELECT *string\_agg*(fk\_mod\_name, ‘;’)  
 INTO fk\_mod\_list  
 FROM mod\_mod\_collection  
 WHERE fk\_mod\_collection\_name = mod\_collection\_name  
 AND fk\_mod\_collection\_user\_name = username;  
  
 RETURN fk\_mod\_list;  
END;  
$$  
 LANGUAGE plpgsql;  
  
-- Function that get the mod collection from the pk of it  
CREATE OR REPLACE FUNCTION *get\_mod\_collection*(mod\_collection\_name varchar(255), username varchar(255))  
 RETURNS mod\_collection AS  
$$  
DECLARE  
 mod\_collection\_res mod\_collection;  
BEGIN  
 -- Will return only one line, we stock it on mod\_collection\_res to return it  
 SELECT \*  
 INTO mod\_collection\_res  
 FROM mod\_collection  
 WHERE name = mod\_collection\_name  
 AND fk\_user = username;  
  
 RETURN mod\_collection\_res;  
END;  
$$  
 LANGUAGE plpgsql;  
  
-- Function that log the version \_row of mod collection on mod\_collection\_logger  
CREATE OR REPLACE FUNCTION *log\_mod\_collection*()  
 RETURNS TRIGGER AS  
$$  
DECLARE  
 \_row mod\_collection;  
BEGIN  
 IF TG\_OP = ‘INSERT’ THEN  
 IF TG\_TABLE\_NAME = ‘mod\_collection’ THEN  
 \_row := NEW;  
 ELSIF TG\_TABLE\_NAME = ‘mod\_mod\_collection’ THEN  
 \_row := *get\_mod\_collection*(NEW.fk\_mod\_collection\_name, NEW.fk\_mod\_collection\_user\_name);  
 END IF;  
 ELSIF TG\_OP = ‘UPDATE’ OR TG\_OP = ‘DELETE’ THEN  
 IF TG\_TABLE\_NAME = ‘mod\_collection’ THEN  
 \_row := OLD;  
 ELSIF TG\_TABLE\_NAME = ‘mod\_mod\_collection’ THEN  
 \_row := *get\_mod\_collection*(OLD.fk\_mod\_collection\_name, OLD.fk\_mod\_collection\_user\_name);  
 END IF;  
 END IF;  
  
 INSERT INTO mod\_collection\_logger  
 VALUES (*now*(),  
 \_row.name,  
 \_row.fk\_user,  
 \_row.relative\_path\_to\_folder,  
 \_row.logo,  
 \_row.description,  
 \_row.fk\_game,  
 *get\_mods\_from\_mod\_collection*(\_row.name, \_row.fk\_user)); -- this function make sense now, don’t it?  
 IF TG\_WHEN = ‘BEFORE’ THEN  
 RETURN NEW;  
 ELSE  
 RETURN null;  
 END IF;  
END;  
$$  
 LANGUAGE plpgsql;  
  
-- Function that cancel an update  
CREATE OR REPLACE FUNCTION *cancel\_update*()  
 RETURNS TRIGGER AS  
$$  
BEGIN  
 RETURN OLD; -- Could be done with users and rights but I think it’s a lot much funny to do it like this  
END;  
$$  
 LANGUAGE plpgsql;  
  
  
-- TRIGGERS -------------------------------------------------------------------------------------------------------------------------------------------------------------  
  
-- On user insert we create a view associated  
CREATE OR REPLACE TRIGGER after\_user\_insert  
 AFTER INSERT  
 ON \_user  
 FOR EACH ROW  
EXECUTE FUNCTION *create\_view\_user*();  
  
  
-- On user delete we delete the view associated (and the content meaning the mod\_collection of this user)  
CREATE OR REPLACE TRIGGER after\_user\_delete  
 AFTER DELETE  
 ON \_user  
 FOR EACH ROW  
EXECUTE FUNCTION *drop\_view\_user*();  
  
-- On mod\_collection update we save the before update value of it on mod\_collection\_logger  
CREATE OR REPLACE TRIGGER before\_mod\_collection\_update  
 BEFORE UPDATE  
 ON mod\_collection  
 FOR EACH ROW  
EXECUTE FUNCTION *log\_mod\_collection*();  
  
-- On mods added to the mod\_collection we save the before insert value of it on mod\_collection\_logger  
CREATE OR REPLACE TRIGGER before\_mod\_mod\_collection\_insert  
 BEFORE INSERT  
 ON mod\_mod\_collection  
 FOR EACH ROW  
EXECUTE FUNCTION *log\_mod\_collection*();  
  
-- On mods updated on the mod\_collection we save the before update value of it on mod\_collection\_logger—Note that we probably never update as it’s would make no sense  
CREATE OR REPLACE TRIGGER before\_mod\_mod\_collection\_update  
 BEFORE UPDATE  
 ON mod\_mod\_collection  
 FOR EACH ROW  
EXECUTE FUNCTION *log\_mod\_collection*();  
  
-- On mods deleted of the mod\_collection we save the before delete value of it on mod\_collection\_logger  
CREATE OR REPLACE TRIGGER before\_mod\_mod\_collection\_delete  
 BEFORE DELETE  
 ON mod\_mod\_collection  
 FOR EACH ROW  
EXECUTE FUNCTION *log\_mod\_collection*();  
  
-- On mod collection logger update we cancel it because it’s a logger so it’s not supposed to be update (or even deleted but let’s allow it for specials cases)  
CREATE OR REPLACE TRIGGER before\_mod\_mod\_collection\_delete  
 BEFORE UPDATE  
 ON mod\_collection\_logger  
 FOR EACH ROW  
EXECUTE FUNCTION *cancel\_update*();

Script des insertions

-- INSERT SCRIPT—Sources (not exhaustive) : <https://en.wikipedia.org/wiki/List_of_video_game_genres>, <https://www.9minecraft.net/>  
BEGIN;  
--INSERT INTO ENTITY—Table genre  
INSERT INTO genre VALUES  
 (‘Action’),  
 (‘Platform (or Platformer)’),  
 (‘Shooter’),  
 (‘Fighting’),  
 (‘Beat « em ups (or brawlers)’),  
 (‘Stealth’),  
 (‘Survival’),  
 (‘Rhythm’),  
 (‘Battle Royale’),  
 (‘Action-Adventure’),  
 (‘Survival Horror’),  
 (‘Metroidvania’),  
 (‘Adventure’),  
 (‘Text Adventure’),  
 (‘Graphic Adventure’),  
 (‘Visual Novels’),  
 (‘Interactive Movie’),  
 (‘Real-Time 3D Adventure’),  
 (‘Puzzle’),  
 (‘Breakout Clone (Or block-breaking or ball-and-paddle)’),  
 (‘Logical’),  
 (‘Physics’),  
 (‘Programming’),  
 (‘Trial-and-error / Exploration’),  
 (‘Hidden object (or hidden picture or hidden object puzzle adventure(HOPA))’),  
 (‘Reveal The Picture’),  
 (‘Tile-matching’),  
 (‘Traditional puzzle’),  
 (‘Puzzle-platform’),  
 (‘Role-playing’),  
 (‘Action Role-playing (or Action RPG)’),  
 (‘Massively Multiplayer Online Role-playing (or MMORPG)’),  
 (‘Roguelike’),  
 (‘Tactical Role-playing (Tactical RPG)’),  
 (‘Sandbox RPG (or Open World RPG)’),  
 (‘First-person party-based RPG (or blobber or Dungeon RPG (DRPG)’),  
 (‘Monster Tamer’),  
 (‘Simulation’),  
 (‘Construction and Management Simulation (CMS)’),  
 (‘City-building’),  
 (‘Business Simulation’),  
 (‘Government Simulation’),  
 (‘Life Simulation (or Artificial Life)’),  
 (‘Pet-raising Simulation (or Digital Pet)’),  
 (‘Social Simulation’),  
 (‘Vehicle Simulation’),  
 (‘Flight Simulation’),  
 (‘Racing’),  
 (‘Space Flight Simulator’),  
 (‘Train Simulator’),  
 (‘Vehicular Combat (or Car Combat)’),  
 (‘Strategy’),  
 (‘4X’),  
 (‘Artillery’),  
 (‘Auto battler (or Auto Chess)’),  
 (‘Multiplayer Online Battle Arena (MOBA)’),  
 (‘Real-Time Strategy (RTS)’),  
 (‘Real-Time Tactics (RTT)’),  
 (‘Tower Defense’),  
 (‘Turn-Based Strategy (TBS)’),  
 (‘Turn-Based Tactics (TBT)’),  
 (‘Wargame’),  
 (‘Grand Strategy Wargame’),  
 (‘Sports’),  
 (‘Sport Racing’),  
 (‘Competitive (or not-traditional/fictional sport)’),  
 (‘Sports-based fighting’),  
 (‘Massively Multiplayer Online (MMO or MMOG)’),  
 (‘Board’),  
 (‘Card’),  
 (‘Casino’),  
 (‘Digital Collectible Card (DCCG)’),  
 (‘Digital Therapeutic’),  
 (‘Gacha’),  
 (‘Horror’),  
 (‘Idle’),  
 (‘Party’),  
 (‘Photography’),  
 (‘Social Deduction’),  
 (‘Trivial’),  
 (‘Typing’),  
 (‘Advergame’),  
 (‘Art’),  
 (‘Casual’),  
 (‘Christian’),  
 (‘Educational’),  
 (‘ESports’),  
 (‘Exergame (Fitness)’),  
 (‘Personalized’),  
 (‘Serious’),  
 (‘Sandbox’),  
 (‘Creative’),  
 (‘Open World’);  
  
-- Table impact  
INSERT INTO impact VALUES  
 (‘Adventure’),  
 (‘RPG’),  
 (‘Animal’),  
 (‘Pet’),  
 (‘Anime’),  
 (‘Manga’),  
 (‘Armor’),  
 (‘Weapon’),  
 (‘Backpack’),  
 (‘Boat’),  
 (‘Boss’),  
 (‘Bow’),  
 (‘Arrow’),  
 (‘Building’),  
 (‘Structure’),  
 (‘Cape’),  
 (‘Elytra’),  
 (‘Car’),  
 (‘Vehicle’),  
 (‘Christmas’),  
 (‘Cut Down Trees’),  
 (‘Decoration’),  
 (‘Furniture’),  
 (‘Dimension’),  
 (‘Biome’),  
 (‘Dragon’),  
 (‘Dungeon’),  
 (‘Cave’),  
 (‘Item Transport’),  
 (‘Fly’),  
 (‘Fluid’),  
 (‘Food’),  
 (‘FPS, CPU, RAM’),  
 (‘Gun’),  
 (‘Information’),  
 (‘Guide’),  
 (‘Library (API)’),  
 (‘Lucky Block’),  
 (‘Magic’),  
 (‘Minecraft Pixelmon’),  
 (‘Minigame’),  
 (‘Shaders, Graphics, Sound’),  
 (‘Minimap’),  
 (‘Mob’),  
 (‘Creature’),  
 (‘Monster’),  
 (‘Morph’),  
 (‘Photo’),  
 (‘Video’),  
 (‘Redstone’),  
 (‘Server Utility’),  
 (‘Ore’),  
 (‘Flower’),  
 (‘Agriculture’),  
 (‘Technology’),  
 (‘Storage’),  
 (‘Sword’),  
 (‘Blade’),  
 (‘Automation’),  
 (‘Auto-Crafting’),  
 (‘The End’),  
 (‘Nether’),  
 (‘Tool’),  
 (‘Utility’),  
 (‘Energy’),  
 (‘Machine’),  
 (‘Engine’),  
 (‘Explosive’),  
 (‘Cheats’);  
  
-- Table version  
INSERT INTO version VALUES  
 (‘1.0.0’),  
 (‘1.0.1’),  
 (‘1.1’),  
 (‘1.2.1’),  
 (‘1.2.2’),  
 (‘1.2.3’),  
 (‘1.2.4’),  
 (‘1.2.5’),  
 (‘1.3.1’),  
 (‘1.3.2’),  
 (‘1.4.0’),  
 (‘1.4.1’),  
 (‘1.4.2’),  
 (‘1.4.3’),  
 (‘1.4.4’),  
 (‘1.4.5’),  
 (‘1.4.6’),  
 (‘1.4.7’),  
 (‘1.5’),  
 (‘1.5.1’),  
 (‘1.5.2’),  
 (‘1.6.1’),  
 (‘1.6.2’),  
 (‘1.6.3’),  
 (‘1.6.4’),  
 (‘1.7.2’),  
 (‘1.7.4’),  
 (‘1.7.5’),  
 (‘1.7.6’),  
 (‘1.7.7’),  
 (‘1.7.8’),  
 (‘1.7.9’),  
 (‘1.7.10’),  
 (‘1.8’),  
 (‘1.8.1’),  
 (‘1.8.2’),  
 (‘1.8.3’),  
 (‘1.8.4’),  
 (‘1.8.5’),  
 (‘1.8.6’),  
 (‘1.8.7’),  
 (‘1.8.8’),  
 (‘1.8.9’),  
 (‘1.9’),  
 (‘1.9.1’),  
 (‘1.9.2’),  
 (‘1.9.3’),  
 (‘1.9.4’),  
 (‘1.10’),  
 (‘1.10.1’),  
 (‘1.10.2’),  
 (‘1.11’),  
 (‘1.11.1’),  
 (‘1.11.2’),  
 (‘1.12’),  
 (‘1.12.1’),  
 (‘1.12.2’),  
 (‘1.13’),  
 (‘1.13.1’),  
 (‘1.13.2’),  
 (‘1.14’),  
 (‘1.14.1’),  
 (‘1.14.2’),  
 (‘1.14.3’),  
 (‘1.14.4’),  
 (‘1.15’),  
 (‘1.15.1’),  
 (‘1.15.2’),  
 (‘1.16’),  
 (‘1.16.1’),  
 (‘1.16.2’),  
 (‘1.16.3’),  
 (‘1.16.4’),  
 (‘1.16.5’),  
 (‘1.17’),  
 (‘1.17.1’),  
 (‘1.18’),  
 (‘1.18.1’),  
 (‘1.18.2’),  
 (‘1.19’),  
 (‘1.19.1’),  
 (‘1.19.2’),  
 (‘1.19.3’),  
 (‘1.19.4’),  
 (‘1.20’),  
 (‘1.20.1’),  
 (‘1.20.2’),  
 (‘1.20.3’),  
 (‘1.21’);  
  
-- Table game  
INSERT INTO game VALUES  
 (‘Minecraft’,  
 ‘https://st5.depositphotos.com/69187398/66863/v/450/depositphotos\_668639188-stock-illustration-vector-logo-video-game-minecraft.jpg’,  
 ‘Explorez votre propre monde unique, survivez à la nuit et créez tout ce que vous pouvez imaginer !’,  
 ‘./mods’),  
 (‘GameProposition1 (Adventure, Sandbox)’,  
 NULL,  
 ‘To test the request proposition (should appear for each \_user playing Minecraft)’,  
 NULL),  
 (‘GameProposition2 (Adventure)’,  
 NULL,  
 ‘To test the request proposition (should appear for each \_user playing Minecraft)’,  
 NULL),  
 (‘GameProposition3 (Sandbox)’,  
 NULL,  
 ‘To test the request proposition (should appear for each \_user playing Minecraft)’,  
 NULL),  
 (‘GameProposition4 (Serious, Christian)’,  
 NULL,  
 ‘To test the request proposition (should not appear for each \_user playing Minecraft)’,  
 NULL);  
  
-- Table mod  
INSERT INTO mod VALUES  
 (‘Forge’, ‘Minecraft’,  
 ‘http://files.minecraftforge.net/’,  
 ‘Forge is a free, open-source modding API all of your favourite mods use! Modifications to the Minecraft base files to assist in compatibility between mods.’,  
 ‘https://pbs.twimg.com/profile\_images/778706890914095109/fhMDH9o6\_400x400.jpg’);  
INSERT INTO mod VALUES  
 (‘LibVulpes’, ‘Minecraft’,  
 ‘http://www.9minecraft.net/wp-content/uploads/2017/03/LibVulpes.jpg’,  
 ‘LibVulpes est une petite bibliothèque contenant des fonctions et des classes communes aux mods de zmaster587. Actuellement requis pour exécuter le mod suivant : Advanced Rocketry.’,  
 ‘http://www.9minecraft.net/libvulpes/’);  
INSERT INTO mod VALUES  
 (‘Advanced Rocketry’, ‘Minecraft’,  
 ‘http://www.9minecraft.net/wp-content/uploads/2017/10/Advanced-Rocketry-Mod-Logo.jpg’,  
 ‘Advanced Rocketry Mod est un mod Minecraft conçu pour ajouter au jeu des planètes aléatoires ou spécifiées par le joueur. Ces planètes ont chacune des propriétés uniques telles que la densité de l »atmosphère, la distance au soleil, la composition de l »atmosphère, la température moyenne et la taille. Les joueurs peuvent construire des fusées à partir de blocs pour voyager vers ces autres mondes.’,  
 ‘http://www.9minecraft.net/advanced-rocketry-mod/’);  
INSERT INTO mod VALUES  
 (‘Advent of Ascension’, ‘Minecraft’,  
 ‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Mod-Logo.jpg’,  
 ‘Advent of Ascension Mod ajoute de nombreuses dimensions uniques, des tas de nouveaux monstres, de nouveaux boss. Toutes sortes de nouvelles armes, armures, outils et enchantements qui peuvent être placés dessus, ainsi que des matériaux qui servent tous à des fins uniques. Le mod ajoute également plus de 1000 nouveaux effets sonores et musiques.’,  
 ‘http://www.9minecraft.net/advent-of-ascension-mod’);  
INSERT INTO mod VALUES  
 (‘AdventureCraft’, ‘Minecraft’,  
 ‘https://media.forgecdn.net/attachments/thumbnails/10/610/310/172/AdventureCraft\_Title.png’,  
 ‘AdventureCraft est un mod Work-In-Progress, renommé à partir du mod précédent, MythicalCraft, il ajoute de nouveaux monstres, blocs, objets et plus encore à votre monde Minecraft.’,  
 ‘https://www.curseforge.com/minecraft/mc-mods/adventurecraft/files’);  
INSERT INTO mod VALUES  
 (‘Gilded Games Util’, ‘Minecraft’,  
 ‘https://media.forgecdn.net/attachments/19/319/10698602\_289797107895427\_7006135484967270906\_n.png’,  
 ‘Mod qui facilite la programmation des mods Minecraft. \n Aide actuellement à se connecter aux joueurs et aux mondes, simplifie la création d »interface graphique, optimise l »éclairage de Minecraft et gère les E/S. \n Dans les versions ultérieures, cela inclura davantage d »utilitaires GUI, un système Party abstrait et des astuces d »IA utiles.’,  
 ‘https://www.curseforge.com/minecraft/mc-mods/gilded-games-util’);  
INSERT INTO mod VALUES  
 (‘Orbis API’, ‘Minecraft’,  
 ‘http://www.9minecraft.net/wp-content/uploads/2018/04/Orbis-API.png’,  
 ‘L »API Orbis est destinée à être utilisée avec les mods qui utilisent le mod Orbis de Gilded Games pour les fonctionnalités de structure.’,  
 ‘https://www.9minecraft.net/orbis-api/’);  
INSERT INTO mod VALUES  
 (‘Aether 2’, ‘Minecraft’,  
 ‘http://www.9minecraft.net/wp-content/uploads/2017/12/Aether-2-Mod-2018-Logo.jpg’,  
 ‘Aether 2 (Aether II) est un mod très complet pour Minecraft ajoutant un royaume opposé au Nether. L »Aether 2 est la suite de l »Aether 1. Beaucoup de choses ont changé depuis l »époque de l »Aether 1, mais il reste toujours une collaboration entre des personnes de différentes disciplines avec un objectif commun de créer une dimension nouvelle et unique.’,  
 ‘http://www.9minecraft.net/aether-2-mod’);  
INSERT INTO mod VALUES  
 (‘Animal Bikes’, ‘Minecraft’,  
 ‘http://www.9minecraft.net/wp-content/uploads/2017/01/Animal-Bikes-Mod-1024x576.jpg’,  
 ‘Animal Bikes Mod vous permet d »invoquer facilement des animaux et d »autres créatures chevauchables. Tous ces vélos ont des attributs/capacités spéciales. Pour créer ces vélos, vous aurez besoin d »une selle. Cette selle peut être trouvée dans les coffres des donjons ou être créée avec la recette ci-dessous. Ce mod fonctionne à la fois en solo et en multijoueur.’,  
 ‘http://www.9minecraft.net/animal-bikes-mod/’);  
INSERT INTO mod VALUES  
 (‘Applied Energistics 2’, ‘Minecraft’,  
 NULL,  
 ‘Applied Energistics 2 (AE2) est un mod complet pour Minecraft qui introduit une approche unique de la gestion des stocks dans le jeu. Il présente un thème futuriste basé sur la technologie, centré sur le concept de l »utilisation de l »énergie et de la technologie pour convertir la matière en énergie et vice versa.’,  
 ‘https://minecraft.curseforge.com/projects/applied-energistics-2’);  
  
-- Table screenshot  
INSERT INTO screenshot VALUES  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/03/Advanced-Rocketry-Mod-1.jpg’,  
 ‘Advanced Rocketry’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/03/Advanced-Rocketry-Mod-2.jpg’,  
 ‘Advanced Rocketry’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/03/Advanced-Rocketry-Mod-3.jpg’,  
 ‘Advanced Rocketry’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/03/Advanced-Rocketry-Mod-4.jpg’,  
 ‘Advanced Rocketry’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/03/Advanced-Rocketry-Mod-5.jpg’,  
 ‘Advanced Rocketry’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/03/Advanced-Rocketry-Mod-7.jpg’,  
 ‘Advanced Rocketry’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/03/Advanced-Rocketry-Mod-8.jpg’,  
 ‘Advanced Rocketry’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/03/Advanced-Rocketry-Mod-6.jpg’,  
 ‘Advanced Rocketry’, ‘Minecraft’),  
 (‘https://youtu.be/qzfAff5N-34;https://youtu.be/uJuz01ySMW8’,  
 ‘Advanced Rocketry’, ‘Minecraft’);  
INSERT INTO screenshot VALUES  
 (‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Features-1.jpg’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Features-2.png’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Features-3.png’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Features-4.png’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Features-5.png’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Features-6.png’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Features-7.png’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Features-8.png’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Features-9.png’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Features-10.png’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2016/08/Advent-of-Ascension-Features-11.png’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/09/Advent-of-Ascension-Mod-Screenshots-50.jpg’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/09/Advent-of-Ascension-Mod-Screenshots-51.jpg’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/09/Advent-of-Ascension-Mod-Screenshots-52.jpg’,  
 ‘Advent of Ascension’, ‘Minecraft’),  
 (‘http://www.9minecraft.net/wp-content/uploads/2017/09/Advent-of-Ascension-Mod-Screenshots-53.jpg’,  
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INSERT INTO screenshot VALUES  
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 ‘Applied Energistics 2’, ‘Minecraft’);  
  
-- Table \_user  
INSERT INTO \_user VALUES  
 (‘LeVraiGG’,  
 ‘dee78c0da836c8f9130c2b7a0184e4f2c76b3896ad0ca7f0c54eeba00dea03a4’, --mdp is loLmDr\_01!  
 TRUE);  
  
-- Table moder  
INSERT INTO moder VALUES (‘Inconnu’);  
INSERT INTO moder VALUES (‘LeVraiGG’, ‘LeVraiGG’);  
INSERT INTO moder VALUES (‘zmaster587’);  
INSERT INTO moder VALUES (‘Xolova’);  
INSERT INTO moder VALUES (‘TheAetherTeam’);  
INSERT INTO moder VALUES (‘Noppes’);  
INSERT INTO moder VALUES (‘AlgorithmX2’);  
INSERT INTO moder VALUES (‘thatsIch’);  
INSERT INTO moder VALUES (‘FireBall1725’);  
  
-- Table comment  
INSERT INTO comment (content, fk\_mod\_name, fk\_mod\_game\_name, fk\_user) VALUES  
 (‘Good mod! I would just change the name to ULTRA DIMENSIONAL SPACESHIP CREATOR. It would be great if you do that.’,  
 ‘Advanced Rocketry’, ‘Minecraft’,  
 ‘LeVraiGG’);  
  
-- Table note  
INSERT INTO note VALUES  
 (‘Advanced Rocketry’, ‘Minecraft’,  
 ‘LeVraiGG’,  
 5);  
  
-- Table mod\_pack  
INSERT INTO mod\_pack VALUES  
 (‘Test’, ‘Minecraft’,  
 ‘https://yt3.ggpht.com/ytc/APkrFKb0lgUQ-yi2jMgEBm1KIYWql4MWPkGeZlqenrYatg=s600-c-k-c0x00ffffff-no-rj-rp-mo’,  
 ‘A test modpack. It contains all mods needed to use Advanced Rocketry properly (it means Forge, LibVulpes, and Advanced Rocketry).’,  
 ‘https://www.swisstransfer.com/d/e41185ca-8ce8-4228-965d-13f244119845’);  
  
-- Table mod\_collection  
INSERT INTO mod\_collection VALUES  
 (‘Test’, ‘LeVraiGG’,  
 ‘C:\Users\tuxca\Documents\S3\_BDR\Pratique\Projet\modPackTestSim\1.7.10’, -- not very relative but w/e it just a test  
 ‘https://yt3.ggpht.com/ytc/APkrFKb0lgUQ-yi2jMgEBm1KIYWql4MWPkGeZlqenrYatg=s600-c-k-c0x00ffffff-no-rj-rp-mo’,  
 ‘A test mod collection based on the modpack Test. It contains all mods needed to use Advanced Rocketry properly (it means Forge, LibVulpes, and Advanced Rocketry).’,  
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-- INSERT INTO FK/TR—Table genre\_game  
INSERT INTO genre\_game VALUES  
 (‘Minecraft’, ‘Sandbox’),  
 (‘Minecraft’, ‘Adventure’);  
INSERT INTO genre\_game VALUES  
 (‘GameProposition1 (Adventure, Sandbox)’, ‘Adventure’),  
 (‘GameProposition1 (Adventure, Sandbox)’, ‘Sandbox’);  
INSERT INTO genre\_game VALUES  
 (‘GameProposition2 (Adventure)’,’Adventure’);  
INSERT INTO genre\_game VALUES  
 (‘GameProposition3 (Sandbox)’, ‘Sandbox’);  
INSERT INTO genre\_game VALUES  
 (‘GameProposition4 (Serious, Christian)’, ‘Serious’),  
 (‘GameProposition4 (Serious, Christian)’, ‘Christian’);  
  
-- Table game\_version  
INSERT INTO game\_version VALUES  
 (‘Minecraft’, ‘1.0.0’),  
 (‘Minecraft’, ‘1.0.1’),  
 (‘Minecraft’, ‘1.1’),  
 (‘Minecraft’, ‘1.2.1’),  
 (‘Minecraft’, ‘1.2.2’),  
 (‘Minecraft’, ‘1.2.3’),  
 (‘Minecraft’, ‘1.2.4’),  
 (‘Minecraft’, ‘1.2.5’),  
 (‘Minecraft’, ‘1.3.1’),  
 (‘Minecraft’, ‘1.3.2’),  
 (‘Minecraft’, ‘1.4.2’),  
 (‘Minecraft’, ‘1.4.4’),  
 (‘Minecraft’, ‘1.4.5’),  
 (‘Minecraft’, ‘1.4.6’),  
 (‘Minecraft’, ‘1.4.7’),  
 (‘Minecraft’, ‘1.5’),  
 (‘Minecraft’, ‘1.5.1’),  
 (‘Minecraft’, ‘1.5.2’),  
 (‘Minecraft’, ‘1.6.1’),  
 (‘Minecraft’, ‘1.6.2’),  
 (‘Minecraft’, ‘1.6.4’),  
 (‘Minecraft’, ‘1.7.2’),  
 (‘Minecraft’, ‘1.7.4’),  
 (‘Minecraft’, ‘1.7.5’),  
 (‘Minecraft’, ‘1.7.6’),  
 (‘Minecraft’, ‘1.7.7’),  
 (‘Minecraft’, ‘1.7.8’),  
 (‘Minecraft’, ‘1.7.9’),  
 (‘Minecraft’, ‘1.7.10’),  
 (‘Minecraft’, ‘1.8’),  
 (‘Minecraft’, ‘1.8.1’),  
 (‘Minecraft’, ‘1.8.2’),  
 (‘Minecraft’, ‘1.8.3’),  
 (‘Minecraft’, ‘1.8.4’),  
 (‘Minecraft’, ‘1.8.5’),  
 (‘Minecraft’, ‘1.8.6’),  
 (‘Minecraft’, ‘1.8.7’),  
 (‘Minecraft’, ‘1.8.8’),  
 (‘Minecraft’, ‘1.8.9’),  
 (‘Minecraft’, ‘1.9’),  
 (‘Minecraft’, ‘1.9.1’),  
 (‘Minecraft’, ‘1.9.2’),  
 (‘Minecraft’, ‘1.9.3’),  
 (‘Minecraft’, ‘1.9.4’),  
 (‘Minecraft’, ‘1.10’),  
 (‘Minecraft’, ‘1.10.1’),  
 (‘Minecraft’, ‘1.10.2’),  
 (‘Minecraft’, ‘1.11’),  
 (‘Minecraft’, ‘1.11.1’),  
 (‘Minecraft’, ‘1.11.2’),  
 (‘Minecraft’, ‘1.12’),  
 (‘Minecraft’, ‘1.12.1’),  
 (‘Minecraft’, ‘1.12.2’),  
 (‘Minecraft’, ‘1.13’),  
 (‘Minecraft’, ‘1.13.1’),  
 (‘Minecraft’, ‘1.13.2’),  
 (‘Minecraft’, ‘1.14’),  
 (‘Minecraft’, ‘1.14.1’),  
 (‘Minecraft’, ‘1.14.2’),  
 (‘Minecraft’, ‘1.14.3’),  
 (‘Minecraft’, ‘1.14.4’),  
 (‘Minecraft’, ‘1.15’),  
 (‘Minecraft’, ‘1.15.1’),  
 (‘Minecraft’, ‘1.15.2’),  
 (‘Minecraft’, ‘1.16’),  
 (‘Minecraft’, ‘1.16.1’),  
 (‘Minecraft’, ‘1.16.2’),  
 (‘Minecraft’, ‘1.16.3’),  
 (‘Minecraft’, ‘1.16.4’),  
 (‘Minecraft’, ‘1.16.5’),  
 (‘Minecraft’, ‘1.17’),  
 (‘Minecraft’, ‘1.17.1’),  
 (‘Minecraft’, ‘1.18’),  
 (‘Minecraft’, ‘1.18.1’),  
 (‘Minecraft’, ‘1.18.2’),  
 (‘Minecraft’, ‘1.19’),  
 (‘Minecraft’, ‘1.19.1’),  
 (‘Minecraft’, ‘1.19.2’),  
 (‘Minecraft’, ‘1.19.3’),  
 (‘Minecraft’, ‘1.19.4’),  
 (‘Minecraft’, ‘1.20’),  
 (‘Minecraft’, ‘1.20.1’),  
 (‘Minecraft’, ‘1.20.2’),  
 (‘Minecraft’, ‘1.20.3’),  
 (‘Minecraft’, ‘1.21’);  
-- Table mod\_version  
INSERT INTO mod\_version VALUES  
 (‘Forge’, ‘Minecraft’, ‘1.1’),  
 (‘Forge’, ‘Minecraft’, ‘1.2.3’),  
 (‘Forge’, ‘Minecraft’, ‘1.2.4’),  
 (‘Forge’, ‘Minecraft’, ‘1.2.5’),  
 (‘Forge’, ‘Minecraft’, ‘1.3.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.4.0’),  
 (‘Forge’, ‘Minecraft’, ‘1.4.1’),  
 (‘Forge’, ‘Minecraft’, ‘1.4.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.4.3’),  
 (‘Forge’, ‘Minecraft’, ‘1.4.4’),  
 (‘Forge’, ‘Minecraft’, ‘1.4.5’),  
 (‘Forge’, ‘Minecraft’, ‘1.4.6’),  
 (‘Forge’, ‘Minecraft’, ‘1.4.7’),  
 (‘Forge’, ‘Minecraft’, ‘1.5’),  
 (‘Forge’, ‘Minecraft’, ‘1.5.1’),  
 (‘Forge’, ‘Minecraft’, ‘1.5.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.6.1’),  
 (‘Forge’, ‘Minecraft’, ‘1.6.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.6.3’),  
 (‘Forge’, ‘Minecraft’, ‘1.6.4’),  
 (‘Forge’, ‘Minecraft’, ‘1.7.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.7.10’),  
 (‘Forge’, ‘Minecraft’, ‘1.8’),  
 (‘Forge’, ‘Minecraft’, ‘1.8.8’),  
 (‘Forge’, ‘Minecraft’, ‘1.8.9’),  
 (‘Forge’, ‘Minecraft’, ‘1.9’),  
 (‘Forge’, ‘Minecraft’, ‘1.9.4’),  
 (‘Forge’, ‘Minecraft’, ‘1.10’),  
 (‘Forge’, ‘Minecraft’, ‘1.10.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.11’),  
 (‘Forge’, ‘Minecraft’, ‘1.11.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.12’),  
 (‘Forge’, ‘Minecraft’, ‘1.12.1’),  
 (‘Forge’, ‘Minecraft’, ‘1.12.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.13.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.14.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.14.3’),  
 (‘Forge’, ‘Minecraft’, ‘1.14.4’),  
 (‘Forge’, ‘Minecraft’, ‘1.15’),  
 (‘Forge’, ‘Minecraft’,’1.15.1’),  
 (‘Forge’, ‘Minecraft’, ‘1.15.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.16.1’),  
 (‘Forge’, ‘Minecraft’, ‘1.16.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.16.3’),  
 (‘Forge’, ‘Minecraft’, ‘1.16.4’),  
 (‘Forge’, ‘Minecraft’, ‘1.16.5’),  
 (‘Forge’, ‘Minecraft’, ‘1.17.1’),  
 (‘Forge’, ‘Minecraft’, ‘1.18’),  
 (‘Forge’, ‘Minecraft’, ‘1.18.1’),  
 (‘Forge’, ‘Minecraft’, ‘1.18.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.19’),  
 (‘Forge’, ‘Minecraft’, ‘1.19.1’),  
 (‘Forge’, ‘Minecraft’, ‘1.19.2’),  
 (‘Forge’, ‘Minecraft’, ‘1.19.3’),  
 (‘Forge’, ‘Minecraft’, ‘1.19.4’),  
 (‘Forge’, ‘Minecraft’, ‘1.20’),  
 (‘Forge’, ‘Minecraft’, ‘1.20.1’),  
 (‘Forge’, ‘Minecraft’, ‘1.20.2’);  
INSERT INTO mod\_version VALUES  
 (‘LibVulpes’, ‘Minecraft’, ‘1.7.10’),  
 (‘LibVulpes’, ‘Minecraft’, ‘1.10.2’),  
 (‘LibVulpes’, ‘Minecraft’, ‘1.11.2’),  
 (‘LibVulpes’, ‘Minecraft’, ‘1.12.2’),  
 (‘LibVulpes’, ‘Minecraft’, ‘1.16.5’);  
INSERT INTO mod\_version VALUES  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘1.7.10’),  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘1.10.2’),  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘1.11.2’),  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘1.12.2’),  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘1.16.5’);  
INSERT INTO mod\_version VALUES  
 (‘Advent of Ascension’, ‘Minecraft’, ‘1.7.10’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘1.12.2’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘1.15.2’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘1.16.5’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘1.18.2’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘1.19’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘1.19.1’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘1.19.2’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘1.19.3’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘1.19.4’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘1.20.1’);  
INSERT INTO mod\_version VALUES  
 (‘AdventureCraft’, ‘Minecraft’, ‘1.6.4’);  
INSERT INTO mod\_version VALUES  
 (‘Gilded Games Util’, ‘Minecraft’, ‘1.7.10’);  
INSERT INTO mod\_version VALUES  
 (‘Orbis API’, ‘Minecraft’, ‘1.12.2’);  
INSERT INTO mod\_version VALUES  
 (‘Aether 2’, ‘Minecraft’, ‘1.7.10’),  
 (‘Aether 2’, ‘Minecraft’, ‘1.10.2’),  
 (‘Aether 2’, ‘Minecraft’, ‘1.11.2’),  
 (‘Aether 2’, ‘Minecraft’, ‘1.12.2’);  
INSERT INTO mod\_version VALUES  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.4.6’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.4.7’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.5’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.5.1’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.5.2’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.6.1’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.6.2’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.6.4’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.7.2’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.7.10’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.8’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.8.8’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.8.9’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.9’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.10.2’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.11.2’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.12.2’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.13.2’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.14.4’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘1.16.5’);  
INSERT INTO mod\_version VALUES  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.7.2’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.7.10’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.10.2’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.12’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.12.1’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.12.2’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.15.2’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.16.1’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.16.2’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.16.3’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.16.4’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.16.5’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.17.1’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.18’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.18.1’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.18.2’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.19’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.19.1’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.19.2’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.19.3’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘1.20.1’);  
  
  
  
-- Table mod\_pack\_version  
INSERT INTO mod\_pack\_version VALUES  
 (‘1.7.10’, ‘Minecraft’, ‘Test’),  
 (‘1.10.2’, ‘Minecraft’, ‘Test’),  
 (‘1.11.2’, ‘Minecraft’, ‘Test’),  
 (‘1.12.2’, ‘Minecraft’, ‘Test’),  
 (‘1.16.5’, ‘Minecraft’, ‘Test’);  
  
-- Table mod\_mod\_pack  
INSERT INTO mod\_mod\_pack VALUES  
 (‘Forge’, ‘Minecraft’, ‘Minecraft’, ‘Test’),  
 (‘LibVulpes’, ‘Minecraft’, ‘Minecraft’, ‘Test’),  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘Minecraft’, ‘Test’);  
  
-- Table mod\_mod\_collection  
INSERT INTO mod\_mod\_collection VALUES  
 (‘Forge’, ‘Minecraft’, ‘Test’, ‘LeVraiGG’),  
 (‘LibVulpes’, ‘Minecraft’, ‘Test’, ‘LeVraiGG’),  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘Test’, ‘LeVraiGG’);  
  
-- Table mod\_impact  
INSERT INTO mod\_impact VALUES  
 (‘Forge’, ‘Minecraft’, ‘Library (API)’);  
INSERT INTO mod\_impact VALUES  
 (‘LibVulpes’, ‘Minecraft’, ‘Library (API)’);  
INSERT INTO mod\_impact VALUES  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘Car’),  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘Vehicle’),  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘Dimension’),  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘Biome’);  
INSERT INTO mod\_impact VALUES  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Adventure’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘RPG’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Decoration’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Furniture’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Dimension’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Biome’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Magic’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Monster’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Boss’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Animal’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Pet’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Armor’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Weapon’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Food’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Sword’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Blade’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Minigame’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Tool’),  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Utility’);  
INSERT INTO mod\_impact VALUES  
 (‘AdventureCraft’, ‘Minecraft’, ‘Mob’),  
 (‘AdventureCraft’, ‘Minecraft’, ‘Creature’);  
INSERT INTO mod\_impact VALUES  
 (‘Gilded Games Util’, ‘Minecraft’, ‘Library (API)’);  
INSERT INTO mod\_impact VALUES  
 (‘Orbis API’, ‘Minecraft’, ‘Library (API)’);  
INSERT INTO mod\_impact VALUES  
 (‘Aether 2’, ‘Minecraft’, ‘Boss’),  
 (‘Aether 2’, ‘Minecraft’, ‘Building’),  
 (‘Aether 2’, ‘Minecraft’, ‘Structure’),  
 (‘Aether 2’, ‘Minecraft’, ‘Dimension’),  
 (‘Aether 2’, ‘Minecraft’, ‘Biome’),  
 (‘Aether 2’, ‘Minecraft’, ‘Monster’);  
INSERT INTO mod\_impact VALUES  
 (‘Animal Bikes’, ‘Minecraft’, ‘Animal’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘Pet’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘Car’),  
 (‘Animal Bikes’, ‘Minecraft’, ‘Vehicle’);  
INSERT INTO mod\_impact VALUES  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘Tool’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘Energy’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘Item Transport’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘Ore’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘Technology’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘Machine’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘Automation’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘Auto-Crafting’),  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘Storage’);  
  
  
-- Table mod\_pack\_impact  
INSERT INTO mod\_pack\_impact VALUES  
 (‘Car’, ‘Minecraft’, ‘Test’),  
 (‘Vehicle’, ‘Minecraft’, ‘Test’),  
 (‘Dimension’, ‘Minecraft’, ‘Test’),  
 (‘Biome’, ‘Minecraft’, ‘Test’);  
  
-- Table mod\_moder  
INSERT INTO mod\_moder VALUES  
 (‘Inconnu’, ‘Minecraft’, ‘Forge’);  
INSERT INTO mod\_moder VALUES  
 (‘zmaster587’, ‘Minecraft’, ‘LibVulpes’);  
INSERT INTO mod\_moder VALUES  
 (‘zmaster587’, ‘Minecraft’, ‘Advanced Rocketry’);  
INSERT INTO mod\_moder VALUES  
 (‘Xolova’, ‘Minecraft’, ‘Advent of Ascension’);  
INSERT INTO mod\_moder VALUES  
 (‘Inconnu’, ‘Minecraft’, ‘AdventureCraft’);  
INSERT INTO mod\_moder VALUES  
 (‘TheAetherTeam’, ‘Minecraft’, ‘Gilded Games Util’);  
INSERT INTO mod\_moder VALUES  
 (‘TheAetherTeam’, ‘Minecraft’, ‘Orbis API’);  
INSERT INTO mod\_moder VALUES  
 (‘TheAetherTeam’, ‘Minecraft’, ‘Aether 2’);  
INSERT INTO mod\_moder VALUES  
 (‘Noppes’, ‘Minecraft’, ‘Animal Bikes’);  
INSERT INTO mod\_moder VALUES  
 (‘AlgorithmX2’, ‘Minecraft’, ‘Applied Energistics 2’),  
 (‘thatsIch’, ‘Minecraft’, ‘Applied Energistics 2’),  
 (‘FireBall1725’, ‘Minecraft’, ‘Applied Energistics 2’);  
  
-- Table mod\_pack\_moder  
INSERT INTO mod\_pack\_moder VALUES  
 (‘LeVraiGG’, ‘Minecraft’, ‘Test’);  
  
-- Table mod\_dependence  
INSERT INTO mod\_dependence VALUES  
 (‘LibVulpes’, ‘Minecraft’, ‘Forge’, ‘Minecraft’);  
INSERT INTO mod\_dependence VALUES  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘Forge’, ‘Minecraft’),  
 (‘Advanced Rocketry’, ‘Minecraft’, ‘LibVulpes’, ‘Minecraft’);  
INSERT INTO mod\_dependence VALUES  
 (‘Advent of Ascension’, ‘Minecraft’, ‘Forge’, ‘Minecraft’);  
INSERT INTO mod\_dependence VALUES  
 (‘Orbis API’, ‘Minecraft’, ‘Forge’, ‘Minecraft’);  
INSERT INTO mod\_dependence VALUES  
 (‘Aether 2’, ‘Minecraft’, ‘Forge’, ‘Minecraft’),  
 (‘Aether 2’, ‘Minecraft’, ‘Gilded Games Util’, ‘Minecraft’),  
 (‘Aether 2’, ‘Minecraft’, ‘Orbis API’, ‘Minecraft’);  
INSERT INTO mod\_dependence VALUES  
 (‘Animal Bikes’, ‘Minecraft’, ‘Forge’, ‘Minecraft’);  
INSERT INTO mod\_dependence VALUES  
 (‘Applied Energistics 2’, ‘Minecraft’, ‘Forge’, ‘Minecraft’);  
  
COMMIT;

Script des requêtes « SELECT »

• Simple request for each entity SELECT \* FROM genre;

SELECT \*

FROM game;

SELECT \*

FROM version;

SELECT \*

FROM mod;

SELECT \*

FROM impact;

SELECT \*

FROM moder;

SELECT \*

FROM \_user;

SELECT \*

FROM mod\_collection;

SELECT \*

FROM mod\_pack;

SELECT \*

FROM note;

SELECT \*

FROM comment;

SELECT \*

FROM mod\_collection\_logger;

SELECT \*

FROM LeVraiGG\_view;

• More complex request for entity

• Number of games for each genre. Ordered by number of games max to min and by name a to z.

SELECT name, count(fk\_genre) nbGames

FROM genre

LEFT JOIN genre\_game gg

ON genre.name = gg.fk\_genre

GROUP BY name

ORDER BY nbGames DESC, name;

• Number of genre, versions, and mods for each game. Ordered by number of mods max to min and by name a to z.

SELECT game.\*,

count(gg) nbGenre,

(SELECT count(gv)

FROM game

LEFT JOIN game\_version gv

ON game.name = gv.fk\_game) nbVersion,

(SELECT count(m)

FROM game

LEFT JOIN mod m

ON game.name = m.fk\_game) nbMods

FROM game

LEFT JOIN genre\_game gg

ON game.name = gg.fk\_game

GROUP BY game.name, game.logo, game.description, modfolder

ORDER BY nbMods DESC, game.name;

• Number of games and mods for each version. Ordered by number of games max to min, number of mods max to min and version max to min (TODO but 1.10 comes before 1.2 sadly).

SELECT version.\*,

count(gv) nbGames,

count(mv) nbMods

FROM version

LEFT JOIN game\_version gv

ON version.name = gv.fk\_version

LEFT JOIN mod\_version mv

ON version.name = mv.fk\_version

GROUP BY name

ORDER BY nbGames DESC, nbMods DESC, version.name DESC;

• List mods with its dependencies mods, its screenshots, and its version and number of version. Ordered by mod name a to z.

SELECT mod.\*,

(SELECT string\_agg(s.img\_path, ‘;’)

FROM screenshot s

WHERE mod.name = s.fk\_mod\_name

AND mod.fk\_game = s.fk\_mod\_game\_name) screenshots,

(SELECT string\_agg(md.fk\_dependence\_name, ‘;’)

FROM mod\_dependence md

WHERE md.fk\_mod\_name = mod.name

AND mod.fk\_game = md.fk\_mod\_game\_name) dependences,

count(mv) nbVersion,

string\_agg(mv.fk\_version, ‘;’) versions

FROM mod

INNER JOIN game g

ON g.name = mod.fk\_game

INNER JOIN mod\_version mv

ON mv.fk\_mod\_name = mod.name

AND mv.fk\_mod\_game\_name = g.name

GROUP BY mod.name, fk\_game, mod.logo, mod.description, downloadlink, nbdownload

ORDER BY name;

• List number of mods for each impact. Ordered by number of mods max to min and name a to z.

SELECT i.\*,

count(mi) nbMods

FROM impact i

LEFT JOIN public.mod\_impact mi

ON i.name = mi.fk\_impact

GROUP BY name

ORDER BY nbMods DESC, name;

• List moders with their user (if not having one, null), their number of mods, and number of mod packs.

SELECT pseudo,

u.password,

(SELECT count(\*)

FROM mod\_moder

WHERE moder.pseudo = fk\_moder) nbMods,

(SELECT count(\*)

FROM mod\_pack\_moder

WHERE moder.pseudo = fk\_moder) nbModPacks

FROM moder

LEFT JOIN \_user u

ON u.name = moder.fk\_user;

• List mod collections of each user

SELECT u.name pseudo,

mc.fk\_game game,

mc.name mod\_collection,

mc.logo,

mc.relative\_path\_to\_folder folder,

mc.description

FROM \_user u

LEFT JOIN mod\_collection mc on u.name = mc.fk\_user;

• List mod collection with theirs mods, the number of modification done to it since added and the last modification date. Ordered by name a to z.

SELECT mc.\*,

get\_mods\_from\_mod\_collection(mc.name, mc.fk\_user) mods,

count(mcl) nbModification,

max(mcl.version) last\_modification\_date

FROM mod\_collection mc

LEFT JOIN mod\_collection\_logger mcl

ON mc.name = mcl.fk\_mod\_collection\_name

AND mc.fk\_user = mcl.fk\_mod\_collection\_user\_name

GROUP BY name, fk\_user, mc.relative\_path\_to\_folder, mc.logo, mc.description, mc.fk\_game

ORDER BY name;

• Mod packs listed with theirs mods and the moder who proposed it. Ordered by number of downloads max to min, number of mods max to min and by moder a to z.

SELECT mp.name,

mp.fk\_game game\_name,

mp.logo,

mp.description,

mp.downloadlink,

mp.nbdownload,

mpm.fk\_moder proposed\_by,

string\_agg(fk\_mod\_name, ‘;’) mods

FROM mod\_pack mp

LEFT JOIN mod\_mod\_pack mmp

ON mmp.fk\_mod\_pack\_name = mp.name

AND mmp.fk\_mod\_pack\_game\_name = mp.fk\_game

LEFT JOIN mod\_pack\_moder mpm

ON mpm.fk\_mod\_pack\_name = mp.name

AND mpm.fk\_mod\_pack\_game\_name = mp.fk\_game

GROUP BY mp.name, mp.fk\_game, mp.name, mp.logo, mp.description, mp.downloadlink, mp.nbdownload, mpm.fk\_moder

ORDER BY nbdownload DESC, count(fk\_mod\_name) DESC, proposed\_by;

• « Filter » request (this kind of request who will use a parameter to get information about one entity)

• Select games with this gender and this version (Ordered by name).

SELECT game.\*

FROM game

INNER JOIN game\_version gv

ON game.name = gv.fk\_game

INNER JOIN genre\_game gg

ON game.name = gg.fk\_game

WHERE gv.fk\_version = ‘1.7.10’

AND gg.fk\_genre = ‘Sandbox’

ORDER BY game.name;

• Select mods of this game (Ordered by mod name)

SELECT m.\*

FROM mod m

WHERE m.fk\_game = ‘Minecraft’

ORDER BY m.name;

• Select mods of this moder

SELECT m.\*

FROM mod m

INNER JOIN mod\_moder mm

ON mm.fk\_mod\_game\_name = m.fk\_game

AND mm.fk\_mod\_name = m.name

WHERE mm.fk\_moder = ‘Inconnu’;

• Select mods who isn’t in any mod pack and not in any mod collection (Ordered by name).

SELECT m.\*

FROM mod m

LEFT JOIN mod\_mod\_pack mmp

ON mmp.fk\_mod\_name = m.name

AND mmp.fk\_mod\_game\_name = m.fk\_game

LEFT JOIN mod\_mod\_collection mmc

ON mmc.fk\_mod\_name = m.name

AND mmc.fk\_mod\_game\_name = m.fk\_game

WHERE mmp.fk\_mod\_pack\_name IS NULL

AND mmc.fk\_mod\_collection\_name IS NULL

ORDER BY m.name;

• Select « good » mods (note above 3) and « unknow » mods (note = null). Ordered by notes max to min, WITH NULL VALUES LAST (then oredered by number of downloads and number of comments).

SELECT m.\*,

n.value note,

count© nbComments

FROM mod m

LEFT JOIN note n

ON n.fk\_mod\_game\_name = m.fk\_game

AND n.fk\_mod\_name = m.name

LEFT JOIN comment c

ON c.fk\_mod\_game\_name = m.fk\_game

AND c.fk\_mod\_name = m.name

WHERE n.value IS NULL

OR n.value > 3

GROUP BY m.name, m.fk\_game, m.logo, m.description, m.downloadlink, m.nbdownload, note

ORDER BY note DESC NULLS LAST, m.nbdownload DESC, nbComments DESC;

• Select a user and his infos (\_user content, mod collection of this user, and is he a moder?).

SELECT u.\*,

count(m) > 0 isModer,

mc.fk\_game game\_name,

mc.name,

mc.logo,

mc.description,

mc.relative\_path\_to\_folder

FROM \_user u

LEFT JOIN mod\_collection mc

ON mc.fk\_user = u.name

LEFT JOIN moder m

ON m.fk\_user = u.name

WHERE u.name = :pseudo

GROUP BY u.name, u.password, u.isadmin, game\_name, mc.name, mc.logo, mc.description, mc.relative\_path\_to\_folder;

• Very complex request (No we won’t use it, it just to show how strong we are)

• just some aggregate values about the note of users

SELECT u.name,

count(n) nbNote,

avg(n.value) moyenne,

mode() WITHIN GROUP (ORDER BY n.value),

min(n.value),

max(n.value)

FROM \_user u

INNER JOIN note n

ON n.fk\_user = u.name

GROUP BY u.name

ORDER BY nbNote, moyenne, u.name;

• Complexity it with some filter to get only the extreme people

-- (I don’t think we can identify terrorist based on the notes they give for some mods on an app like ours but we never know)

WITH user\_notes\_stats AS (

SELECT u.name,

count(n) nbNote,

avg(n.value) moyenne,

mode() WITHIN GROUP (ORDER BY n.value) mode,

min(n.value) min,

max(n.value) max

FROM \_user u

INNER JOIN note n

ON n.fk\_user = u.name

GROUP BY u.name, n.value

ORDER BY nbNote, moyenne, u.name)

(SELECT \*

FROM user\_notes\_stats

WHERE moyenne < 2

OR max < 3

OR mode = 1) -- could use having but without ‘with’ but as we use this « stats » two time it’s better like this

UNION

(SELECT \*

FROM user\_notes\_stats

WHERE moyenne > 4

OR max > 3

OR mode = 6);

• Games « played » by a user

SELECT DISTINCT u.name,

g.name

FROM \_user u

INNER JOIN mod\_collection mc

ON mc.fk\_user = u.name

INNER JOIN game g

ON mc.fk\_game = g.name;

• Uh, veryAnnoyingCustomer asked me to add a game proposition for each user depending of the top 3 reccuring genre of the games he play.

• But this game proposition is limited to 3 games and must not be composed with a game he already, only « new » game.

WITH game\_proposition(username, name, row\_number) AS (

SELECT

u.name username,

g.name AS name,

row\_number() OVER byUser row\_number

FROM \_user u

LEFT JOIN game g

ON g.name NOT IN (

SELECT—SELECT the games the user play

g.name

FROM game g

INNER JOIN mod\_collection mc

ON mc.fk\_game = g.name

WHERE mc.fk\_user = u.name)

WHERE g.name IN (

SELECT fk\_game

FROM genre\_game gg

WHERE gg.fk\_genre =ANY

(SELECT -- SELECT the 3 most recurring game genre for the user

\_gg.fk\_genre genre

FROM \_user \_u

INNER JOIN mod\_collection \_mc

ON \_mc.fk\_user = u.name

INNER JOIN game g—the games played by the user

ON \_mc.fk\_game = g.name

INNER JOIN genre\_game \_gg—the genres played by the user

ON \_gg.fk\_game = g.name

GROUP BY genre

ORDER BY count(\_gg.fk\_genre) DESC

LIMIT 3)

GROUP BY gg.fk\_game

ORDER BY count(fk\_game) DESC)

WINDOW byUser AS (PARTITION BY u.name ORDER BY g.name)

ORDER BY row\_number

)

SELECT u.name username,

(SELECT string\_agg(name, ‘;’) FROM game\_proposition) gameProposition

FROM \_user u

group by u.name

ORDER BY username;

• Number of user for each game

SELECT game.name,

count(mc) nbUser

FROM game

LEFT JOIN mod\_collection mc

ON mc.fk\_game = game.name

GROUP BY game.name

ORDER BY nbUser DESC, game.name;

• veryAnnoyingCustomer came back to ask me to do an affinity user-moder based on percentage (numberOfModOfThisModerTheUserUse/numberOfModsModerDid or 100% for the moder account with himself)

SELECT

u.name AS username,

m.pseudo AS moder,

CASE

WHEN m.pseudo = u.name THEN 100

ELSE (

SELECT—Count number of mods, of this moder, the user use

count(\_mm) numberOfModsOfThisModerTheUserUse

FROM \_user \_u

LEFT JOIN mod\_collection \_mc

ON \_mc.fk\_user = u.name

INNER JOIN mod\_mod\_collection \_mmc

ON \_mmc.fk\_mod\_collection\_name = \_mc.name

AND \_mmc.fk\_mod\_collection\_user\_name = u.name

INNER JOIN mod\_moder \_mm

ON \_mm.fk\_mod\_name = \_mmc.fk\_mod\_name

AND \_mm.fk\_mod\_game\_name = \_mmc.fk\_mod\_game\_name

WHERE \_mm.fk\_moder = m.pseudo

GROUP BY \_u.name)

/ (

SELECT count(\_mm) numberOfModsModerDid

FROM moder \_m

LEFT JOIN mod\_moder \_mm

ON \_m.pseudo = \_mm.fk\_moder

WHERE \_m.pseudo = m.pseudo

GROUP BY \_m.pseudo)

• 100

END AS affinity --(numberOfModOfThisModerTheUserUse/numberOfModsModerDid) affinity

FROM \_user u

CROSS JOIN moder m

ORDER BY username, affinity DESC, moder;

• veryAnnoyingCustomer asked me a last thing, do a list of « unwanted user ».

• A unwanted user is a user who has at least one of his comments who has a word matching a « black » list.

SELECT u.name,

(SELECT (upper(content) = content

OR lower(content) LIKE ‘%kys%’

OR lower(content) LIKE ‘%fuck%’

OR lower(content) LIKE ‘%kill yourself%’

OR lower(content) LIKE ‘%shit%’

OR lower(content) LIKE ‘%banned\_word%’) -- here is just a list of example, the true list can be whatever we want to ban on chat

FROM comment

WHERE fk\_user = u.name) is\_unwanted,

(SELECT count(\*)

FROM comment

WHERE fk\_user = u.name

AND (upper(content) = content

OR lower(content) LIKE ‘%kys%’

OR lower(content) LIKE ‘%fuck%’

OR lower(content) LIKE ‘%kill yourself%’

OR lower(content) LIKE ‘%shit%’

OR lower(content) LIKE ‘%banned\_word%’)) numberOfUnwantedComment

FROM \_user u;

• All dependencies of a mod (recursive)

WITH RECURSIVE dependencies(dependency) AS (

SELECT fk\_dependence\_name

FROM mod\_dependence d1

WHERE fk\_mod\_game\_name = ‘Minecraft’

AND fk\_mod\_name = ‘Advanced Rocketry’

UNION

SELECT fk\_dependence\_name

FROM mod\_dependence d2

INNER JOIN dependencies d

ON d2.fk\_mod\_game\_name = ‘Minecraft’

AND fk\_mod\_name = d.dependency

)

SELECT \*

FROM dependencies;

Diagramme de classe



Concernant l’organisation du code nous avons plusieurs classes de style bien différent :

En vert, le contrôleur qui fait le lien entre vue et logique. En gris, la classe App, main de notre application. En bleu, le worker qui fait les accès dans la db. En orange, ce sont diverses classe qui nous ont aidé dans notre développement (Popups pour l’affichage des popus de l’application, Constantes contien nos diverses constantes, PostgresqlJDBC contient la logique générale du JDBC postgresql et Utilities contient diverses méthodes de transformation de données, c’est une sorte de « fourre tous » pour les méthodes utilisé par plusieurs classes) tous ces classes aidantes on été développées par nos soins, soit pendant ce projet, soit par le passé. Les classes en roses sont des « beans » c’est-à-dire des classes représentant des entités de notre base de données.

Aspects intéressant du code et problèmes rencontrés

Beaucoup de problèmes ont pu être résolu à l’heure actuel. Voici donc, pour commencer, des aspects intéressant du code qui nous ont donnés du fil à retordre :

**Intégration de CSS dans JavaFX**

FXMLLoader fxmlLoader = new FXMLLoader(App.class.getResource("view.fxml"));  
Scene scene = new Scene(fxmlLoader.load());

Ces deux lignes, qui semblent assez triviales, ont en réalité été un peu plus difficile à mettre en place car avec Maven il faut penser à ajouter App.class.getResource. Maven met ses fichiers où il veut, il faut donc les retrouver (via cette méthode).

Ensuite, il suffit d’ajouter dans le contrôleur un id ou une classe pour intégrer le CSS correspondant.

**Affichage de popus en JavaFX**

L’affichage de popus a aussi été un défi pour nous. Nous nous sommes inspirés d’un site pour arriver à nos fin (Cf. Sources).

**Afficher (et télécharger) des images provenant d’un URL internet dans une ImageView**

public static Image internetUrlToImage(URL url, Image defaultImage) {  
 try {  
 BufferedImage i = ImageIO.*read*(url);  
 WritableImage im = new WritableImage(200, 132);  
 im = SwingFXUtils.*toFXImage*(i, im);  
 return im;  
 } catch (IOException | NullPointerException e) {  
 return defaultImage;  
 }  
}

Ces quelques lignes nous ont pris pas mal de temps. Elles sont, nous semblent-ils, fonctionnelles en l’état actuel, mais certaines images ne chargent quand même pas. Nous pensons que le site qui contient ces images-ci n’en permet pas l’accès.

**Comportements inadéquats**

Notre application n’étant pas encore terminée, nous avons encore certaines fonctionnalités ne n’ayant pas le comportement attendu (bien que déjà implémentées). En voici la liste :

|  |  |  |
| --- | --- | --- |
| Fonctionnalité | Problème | Résolution probable |
| CSS | Certains éléments ne sont pas dans le bon thème couleur.  Les textes internes aux menus ne sont pas mis en gras « onHover ». | L’élément n’est pas modifié dans le CSS, donc l’ajouter dans le CSS. NB : dans certaines versions alternatives (malheureusement perdues), les éléments du menu étaient en gras. |
| UI | Si nous nous déconnectons, puis reconnectons certains éléments ne sont pas correctement remis à zéro. De plus, d’autres éléments créent des NullPointeurException. | Concernant le premier point, remettre à zéro ces éléments dans les fonctions de Set UI. Concernant les exceptions, mieux tester les éléments potentiellement null. |

Toutes les fonctionnalités n’ayant pas forcément été testées, il est probable que cette liste ne soit pas exhaustive. (Pour la gestion administrateur particulièrement.)

Déploiement

Comment déployer notre application

Pour commencer, installer Docker.

Dans le dossier "db" :

docker compose up –detach

docker exec -it bmm-db psql -U u\_app -d db\_app

Dans le cmd du container maintenant ouvert taper le mot de passe (à savoir "super\_secret"). Puis exécuter le script "all.sql".

Si vous souhaitez aussi tester les fonctionnalités utilisateurs dans le même contexte que nous (ou que vous avez la flemme d’insérer des données manuellement via l’app) nous avons mis à disposition un script contenant certaines données supplémentaire (exécutable dans le container à la suite de all.sql) que nous avons nommé "context.sql".

Conclusion

Ressenti de Monsieur Stadlin

En toute honnêteté, les bases de données font partie de mes bêtes noires quant à la programmation (de pair avec les regex et docker), par conséquent je ne peux qu’être satisfait du résultat final. Durant ce semestre, je ne connaissais pas non plus Java au début de ce semestre et encore moins JavaFX et JDBC par conséquent, il me semble néanmoins avoir pu en saisir une partie de l’essentiel (bien que pour JavaFX, j’ai souvent eu des pensées qui peuvent se résumer par « c’est bien plus facile à implémenter en C# »).

Ressenti de Monsieur Gonin

Bien que je connaisse très bien Java, JavaFX ou les concepts de database, j’ai tout de même appris des choses via ce projet (download via java de photo, CSS dans JavaFX, …). Je suis satisfait de l’état du projet qui est plutôt bien avancé (ce qui est normal vu le nombre d’heure hors cours que j’ai fait dessus). J’ai l’impression d’avoir planifié/organisé le projet d’une manière assez réussie. Je suis aussi content de la prestation de mon collègue qui fut, pour moi, une aide utile.

Ressenti général de l’équipe

Nous nous sommes enthousiasmés à l’idée d’un projet avec un sujet à choix et nous sommes plutôt satisfait de l’état du projet. Ce projet nous a appris un certain nombre de nouvelles choses, que ce soit concernant Java, PostgreSQL ou même Docker.

Et pour l’avenir ?

Nous sommes intéressés à continuer ce projet dans notre temps libre à l’avenir. L’on suivra l’ordre de priorité et ajouterons probablement quelques fonctionnalités.

Sources

(Liste non exhaustive)

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