Main accesses to the database and transactions: Artifact 9

This artefact shows the main accesses to the database, including the transactions.

SQL001	
Description	Get the password of the requested username. The returned password will be compared to the password given in the login process. If the user doesn't exist, nothing is returned and the login process fails.
Resource	R102

```
SELECT "userPassword"
FROM "User"
WHERE "userUsername" = $username;
```

SQL002	
Description	Insert used to register a user in the web application's database.
Resource	R105

```
INSERT INTO
"User"("userUsername","userPassword","userName","userEmail","userPhone","userMunicipalityID")
VALUES ($username,$password,$name,$email,$phone,$municipality);
```

SQL003	
Description	Select used to search for sports complexes that match the inserted information in the search form
Resource	R202

```
SELECT "complexID", "complexName", "complexPhone", "complexEmail",
"complexLocation"
        FROM "SportsComplex"
        WHERE
        setweight(to_tsvector('english', "complexName"), 'A')
        || ' ' ||
        setweight(to_tsvector('english', "complexLocation"), 'B')
        || ' ' ||
        setweight(to_tsvector('english', "complexDescription"), 'C')
        @@ plainto_tsquery($query::VARCHAR);
```

SQL004	
Description	Select used to get the information of the logged in user. This will be shown it in the user's profile page.
Resource	R216

```
SELECT "userName", "userUsername","userEmail", "userPhone",
"userMunicipalityID"
FROM "User"
WHERE "userID" = $userID;
```

SQL005	
Description	Update used to edit the logged in user's information.
Resource	R204

```
UPDATE "User"
SET
"userName" = $userName,
"userEmail" = $userEmail,
"userUsername" = $userUsername,
"userPhone" = $userPhone,
"userMunicipalityID" = $userMunicipalityID
WHERE
"userID" = $userID;
```

SQL006	
Description	Update used to edit the logged in user's password.
Resource	R205

```
UPDATE "User"
SET
"userPassword" = $password
WHERE
"userID" = $userID;
```

SQL007	
Description	Select used to get all the rentals made by the logged in user so that he can manage them.
Resource	R206

```
Select "rentalID", "rentalDate", "rentalDuration", "rentalState",
"spaceName", "complexName", "rentalStartTime", "rentalRating", "complexID",
"spaceID"

From "Rental", "User", "Space", "SportsComplex"

Where
"userID" = ?
AND "userID" = "rentalUserID"
AND "rentalSpaceID" = "spaceID"
AND "spaceComplexID" = "complexID"

ORDER BY "rentalDate", "rentalStartTime" DESC
LIMIT 10 OFFSET (10 * ?);
```

SQL008	
Description	Select used to get all the sports complex that the logged in user is manager of so he can manage them
Resource	R207

```
SELECT "complexID", "complexName"
FROM "SportsComplex"
JOIN "Manager"
ON "managerComplexID" = "complexID"
WHERE
"managerID" =
(SELECT "userID"
FROM "User"
WHERE "userUsername" = $username)
LIMIT 10 OFFSET (10 * $pageNumber);
```

SQL009	
Description	Select used to get the information of the sports complex with the given id. This information will be shown in the sports complex page.
Resource	R213

```
SELECT *
FROM "SportsComplex"
WHERE "complexID" = $complexID;
```

SQL010	
Description	Select used to get the list of information about all the spaces of the sports complex with the given id. This information will be shown in the sports complex page.
Resource	R213

```
SELECT "spaceID", "spaceName", "spaceIsCovered", "spaceSurfaceType",
"spacePrice"
FROM "Space"
WHERE "spaceComplexID" = $complexID AND
"spaceIsAvailable" = true
LIMIT 10 OFFSET (10 * $pageNumber);
```

SQL011	
Description	Select used to get the information, rating and list of sports of the space with the given id. This information will be shown in the space page.
Resource	R209

```
SELECT "spaceName", "spaceIsCovered", "spaceSurfaceType", "spacePrice",
"spaceComplexID", "complexName", "complexLocation", "complexEmail",
"complexPhone", "complexOpeningHour"
, "complexClosingHour", "complexOpenOnWeekends", avg("rentalRating"),
"sportName"
FROM "Space"
JOIN "SportsComplex" ON "spaceComplexID" = "complexID"
LEFT JOIN "Rental" ON "spaceID" = "rentalSpaceID"
LEFT JOIN "SpaceSports" ON "spaceID" = "spaceSportsSpaceID"
LEFT JOIN "Sport" ON "sportID" = "spaceSportsSportID"
WHERE
"spaceID" = $spaceID
GROUP BY "spaceName", "spaceIsCovered", "spaceSurfaceType", "spacePrice",
"spaceComplexID", "complexName", "complexLocation", "complexEmail",
"complexPhone", "complexOpeningHour", "complexClosingHour",
"complexOpenOnWeekends",
"sportName"
;
```

SQL012	
Description	Select used to get all the equipment (and it's information) that is available for a given rental in a sports complex space with a specified date, time and duration inserted by the user.
Resource	R209

```
SELECT "equipmentID", "equipmentName", "equipmentQuantity",
"equipmentQuantityUnavailable", "equipmentPrice",
sum("rentalEquipmentQuantity")
FROM "Space"
JOIN "SportsComplex" ON "spaceComplexID" = "complexID"
JOIN "Equipment" ON "complexID" = "equipmentComplexID"
JOIN "EquipmentSports" ON "equipmentID" = "equipmentSportsEquipmentID"
JOIN "Sport" ON "equipmentSportsSportID" = "sportID"
LEFT JOIN "RentalEquipment" ON "equipmentID" = "rentalEquipmentEquipmentID"
LEFT JOIN "Rental" ON "rentalEquipmentRentalID" = "rentalID"
WHERE
"spaceID" = $spaceID AND
"sportName" IN (SELECT "sportName"
                FROM "SpaceSports" JOIN "Sport" ON "sportID" =
"spaceSportsSportID"
                WHERE "spaceSportsSpaceID" = $spaceID) AND
"equipmentInactive" = FALSE
AND
((
NOT("rentalDate" + "rentalStartTime" = $date + $startTime)
AND NOT(
("rentalDate" + "rentalStartTime" < $date + $startTime) AND
("rentalDate" + "rentalStartTime" + "rentalDurationInMinutes" > $date +
$startTime))
AND NOT(
("rentalDate" + "rentalStartTime" > $date + $startTime) AND
("rentalDate" + "rentalStartTime" < $data + $startTime + $duration))
/* Não - começa depois, mas antes da outra terminar */
)
OR ("rentalEquipmentQuantity" IS NULL)
)
GROUP BY "equipmentID"
;
```

SQL013	
Description	Update used to set an user account to inactive. This will mean that the user is not active on the website and cannot make rentals until the account is activated again.
Resource	R210

```
UPDATE "User"
SET "userInactive" = true
WHERE "userUsername" = $username;
```

SQL014	
Description	Transation in which a new rental is inserted by the user into the database and, for each equipment in the said rental, insert a connection between the rental, equipment and quantity rented.
Resource	R211

```
BEGIN;
SET TRANSACTION ISOLATION LEVEL SERIALIZABLE;
SET TRANSACTION READ WRITE;

INSERT INTO "Rental" ("rentalUserID", "rentalSpaceID", "rentalDate",
"rentalStartTime", "rentalDurationInMinutes")
VALUES ($userID, $spaceID, $date, $startTime, $duration)
RETURNING "rentalID";

/* for each equipment */

INSERT INTO "RentalEquipment"
VALUES ($rentalID, $equipmentID, $quantity);

/* end for */

END;
```

SQL015	
Description	Update used to set an user account to active. This will mean that the user is active on the website and can make rentals, add sports complex, etc.
Resource	R214

```
UPDATE "User"
SET "userInactive" = false
WHERE "userUsername" = $username;
```

Module M03: Complex Manager

SQL016	
Description	Select used to get the complex name of the sports complex with the given id. This information will be shown in the add space page.
Resource	R301

```
SELECT "complexName"
FROM "SportsComplex"
WHERE "complexID" = $complexID;
```

SQL017	
Description	Transation used to add a space of a sports complex into the web application's database. It will insert the space information into the Space table and for each sport of the said space add a new entry to the SpaceSports table to connect the space to each of the sports the users will be able to practice there.
Resource	R302

```
BEGIN;
SET TRANSACTION ISOLATION LEVEL SERIALIZABLE;
SET TRANSACTION READ WRITE;

INSERT INTO
"Space"("spaceName","spaceSurfaceType","spaceIsCovered","spaceIsAvailable","spacePrice","spaceComplexID")
VALUES ($spaceName,$spaceSurfaceType,$spaceIsCovered,$spaceIsAvailable,$spacePrice,$spaceComplexID);

/*for each sport*/

INSERT INTO "SpaceSports" ("spaceSportsSpaceID","spaceSportsSportID")
VALUES ($spaceSportsSpaceID,$spaceSportsSportID);

/*end for*/

END;
```

SQL018

Description	Select used to get the information of the spaces of the sports complex with the given id. This information will be shown in the manage spaces page of a sports complex.
Resource	R303

```
SELECT "spaceID", "spaceName", "spaceIsCovered", "spaceSurfaceType",
"spacePrice"
FROM "Space"
WHERE "spaceComplexID" = $complexID AND
"spaceIsAvailable" = true
LIMIT 10 OFFSET (10 * $pageNumber);
```

SQL019

Description	Transation used to edit a space's information. It will update the space information, for each sport removed it will delete it from the SpaceSports table and for each sport added it will insert it into the SpaceSports table.
Resource	R304

```
BEGIN;
SET TRANSACTION ISOLATION LEVEL SERIALIZABLE;
SET TRANSACTION READ WRITE;

UPDATE "Space"
SET
"spaceSurfaceType" = $surfaceType,
"spaceIsCovered" = $isCovered,
"spacePrice" = $price,
"spaceIsAvailable" = $isAvailable
WHERE
"spaceID" = $spaceID;

/* for each sport to delete */

DELETE
FROM "SpaceSports"
WHERE "spaceSportsSpaceID" = $spaceID AND
"spaceSportSportID" = $sportID;

/*for each sport to insert */

INSERT INTO "SpaceSports" VALUES($spaceID, $sportID);

/*end for*/

END;
```

SQL020

Description	Select used to get the information of all the managers of the sports complex with the given id. This information will be shown in the Manage Managers page of the said complex.
Resource	R305

```
SELECT "managerID", "userName", "userEmail", "userPhone"
FROM "Manager"
JOIN "User"
ON "userID" = "managerID"
WHERE "managerComplexID" = $complexID
LIMIT 10 OFFSET (10 * $pageNumber);
```

SQL021

Description	Insert used to turn a user into a manager of the sports complex with the given id.
Resource	R306

```
INSERT INTO "Manager"
VALUES($complexID,
(
SELECT "userID"
FROM "User"
WHERE "userEmail" = $userEmail
));
```

SQL022	
Description	Update used to edit a sports complex information.
Resource	R308

```
UPDATE "SportsComplex"
SET
"complexName" = $name,
"complexLocation" = $location,
"complexMunicipalityID" = $municipalityID,
"complexEmail" = $email,
"complexPhone" = $phone,
"complexDescription" = $description,
"complexOpeningHour" = $openingHour,
"complexClosingHour" = $closingHour,
"complexOpenOnWeekends" = $openOnWeekends,
"complexPaypal" = $paypal
WHERE
"complexID" = $complexID;
```

SQL023	
Description	Select used to get all the sports complex equipment information. This will be shown in the Manage Equipment page of the sports complex with the given id.
Resource	R309

```
SELECT "equipmentID", "equipmentName", "equipmentQuantity",
"equipmentPrice",
"equipmentDetails", "equipmentQuantityUnavailable", "equipmentInactive",
"equipmentSportsSportID"
FROM "Equipment"
JOIN "EquipmentSports"
ON "equipmentSportsEquipmentID" = "equipmentID"
WHERE "equipmentComplexID" = $complexID
LIMIT 10 OFFSET (10 * $pageNumber);
```

SQL024	
Description	Transation used to add new equipment to a sports complex.
Resource	R310

```
BEGIN;
SET TRANSACTION ISOLATION LEVEL SERIALIZABLE;
SET TRANSACTION READ WRITE;
INSERT INTO "Equipment" ("equipmentComplexID", "equipmentName",
"equipmentQuantity", "equipmentDetails", "equipmentPrice")
VALUES ($complexID, $name, $stock, $details, $price);

/* for each sport of the equipment */

INSERT INTO "EquipmentSports" ("equipmentSportsEquipmentID",
"equipmentSportsSportID") VALUES ($equipmentID, $sportID);

/* end for */
END;
```

SQL025	
Description	Select used to get all the sports complex rentals information. This will be shown in the Manage Rentals page of the sports complex with the given id.
Resource	R311

```
SELECT "rentalDate", "rentalDurationInMinutes", "rentalState", "spaceName",
"complexName", "rentalStartTime"
FROM "Rental"
JOIN "User"
ON "userID" = "rentalUserID"
JOIN "Space"
ON "spaceID" = "rentalSpaceID"
JOIN "SportsComplex"
ON "complexID" = "spaceComplexID"
WHERE
"userUsername" = $username
ORDER BY "rentalDate", "rentalStartTime" DESC
LIMIT 10 OFFSET (10 * $pageNumber);
```

SQL026	
Description	Transation in which a new rental is inserted by the manager into the database and, for each equipment in the said rental, insert a connection between the rental, equipment and quantity rented.
Resource	R312

```
BEGIN;
SET TRANSACTION ISOLATION LEVEL READ UNCOMMITTED;
SET TRANSACTION READ WRITE;

INSERT INTO "Rental" ("rentalUserID", "rentalSpaceID", "rentalDate",
"rentalStartTime", "rentalDurationInMinutes")
VALUES ($managerID, $spaceID, $date, $startTime, $duration)
RETURNING "rentalID";

/* for each equipment */

INSERT INTO "RentalEquipment"
VALUES ($rentalID, $equipmentID, $quantity);

/* end for */

END;
```

SQL027	

Description	Update used so that the rental's state is changed to "canceled" by a manager of the sports complex.
Resource	R313

```
UPDATE "Rental"
SET "rentalState" = 'CANCELEDBYMANAGER';
WHERE "rentalID" = $rentalID;
```

SQL028	
Description	Update used to set a space state to inactive. This will mean that no rentals for that space will be allowed and the space won't be shown in the list of spaces of the sports complex.
Resource	R314

```
UPDATE "Space"
SET "spaceIsAvailable" = false;
WHERE "spaceID" = $spaceID;
```

SQL029	
Description	Delete used to remove the manager permissions of a sports complex manager.
Resource	R316

```
DELETE FROM "Manager"
WHERE "managerID" = $userID
AND "managerComplexID" = $complexID;
```

SQL030	
Description	Update used to set an equipment state to inactive. This will mean that no rentals of the equipment will be allowed and the equipment won't be shown in the list of equipments available for rental
Resource	R317

```
UPDATE "Equipment"
SET "equipmentInactive" = true
WHERE "equipmentID" = $equipmentID;
```

SQL031	
Description	Insert used to add a new sports complex to the web application's database.
Resource	R319

```
INSERT INTO
"SportsComplex"("complexName","complexLocation","complexEmail","complexPhone",
"complexDescription","complexOpeningHour","complexClosingHour","complexOpenOnWeekends",
"complexPaypal", "complexMunicipalityID")
VALUES ($complexName,$complexLocation,$complexEmail,$complexPhone,
$complexDescription,$complexOpeningHour,$complexClosingHour,$complexOpenOnWeekends,
$complexPaypal,$complexMunicipalityID);
```

SQL032	
Description	Update used to set the sports complex state to inactive. This will mean that the sports complex won't be shown in the resulting list of complexes of a search made by a user.
Resource	R320

```
UPDATE "SportsComplex"
SET "complexInactive" = true
WHERE "complexID" = $complexID;
```

SQL033	
Description	Update used to set a space state to active. This will mean that rentals for that space will be allowed and the space will be shown in the list of spaces of the sports complex.
Resource	R321

```
UPDATE "Space"
SET "spaceIsAvailable" = true;
WHERE "spaceID" = $spaceID;
```

SQL034

Description	Update used to set the sports complex state to active. This will mean that the sports complex will be shown in the resulting list of complexes of a search made by a user.
Resource	R322

```
UPDATE "SportsComplex"
SET "complexInactive" = false;
WHERE "complexID" = $complexID;
```

SQL035

Description	Select used to get all the sports complex issues information. This will be shown in the Manage Issues page of the sports complex with the given id.
Resource	R401

```
SELECT "userName", "rentalDate", "issueSubject", "issueCategory",
"issueDescription"
FROM "Issue"
JOIN "Rental"
ON "rentalID" = "issueRentalID"
JOIN "User"
ON "rentalUserID" = "userID"
JOIN "Space"
ON "spaceID" = "rentalSpaceID"
WHERE
"spaceComplexID" = $complexID
LIMIT 10 OFFSET (10 * $pageNumber);
```

SQL036

Description	Insert used to add an issue to a rental.
Resource	R402

```
INSERT INTO "Issue"("issueRentalID", "issueSubject", "issueCategory",
"issueDescription")
VALUES($rentalID, $subject, $category, $description);
```

SQL037

Description	Update used to update an issue so it will only be shown to the manager.
Resource	R403

```
UPDATE "Issue"
SET "issueForManager" = false
WHERE "issueID" = $issueID;
```

SQL038

Description	Select used to get the basic information of all the sports complex present in the web application's database.
Resource	R501

```
SELECT "complexName", "complexEmail", "complexPhone"
FROM "SportsComplex";
```

SQL039

Description	Select used to get the admin id of the admin with the username and password inserted in the login form of the web application to check if it exists in the database.
Resource	R504

```
SELECT "adminID"
FROM "Admin"
WHERE "adminUsername" = $username
AND "adminPassword" = $password;
```

SQL040	
Description	Select used to get the information of all the rentals present in the web application's database.
Resource	R505

```
SELECT "userName", "userPhone", "userEmail", "rentalDate",
"complexName", "complexPhone", "complexEmail", "spaceName",
"rentalStartTime", "rentalDurationInMinutes", "rentalState"
FROM "Rental"
JOIN "Space"
ON "spaceID" = "rentalSpaceID"
JOIN "SportsComplex"
ON "complexID" = "spaceComplexID"
JOIN "User"
ON "userID" = "rentalUserID"
LIMIT 10 OFFSET (10 * $pageNumber);
```

SQL041	
Description	Update used to set the rental state to a given state.
Resource	R506

```
UPDATE "Rental"
SET "rentalState" = $state
WHERE "rentalID" = $rentalID;
```

SQL042	
Description	Select used to get the information of all the users present in the web application's database.
Resource	R508

```
SELECT "userID", "userName", "userEmail", "userPhone"
FROM "User";
```

SQL043	
Description	Insert used to add a new website administrator account to the database.
Resource	R511

```
INSERT INTO "Admin"("adminUsername", "adminPassword")
VALUES($username, $password);
```

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