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Entity Relationship Diagram

# DataModel



|  |  |
| --- | --- |
| **Name** | **Value** |
| Request Validate Snap To Grid | false |
| Name | DataModel |
| Data Model | Physical |

## Summary

|  |  |
| --- | --- |
| **Name** | **Documentation** |
| Image1.png [CalculationMethods](#xt.gthyEwTmek20.) | Table containing the different methods for calculating carbon emissions |
| Image1.png [TripCarbonEmissions](#gaM3NhyEwTmekzwF) | Table containing the estimated carbon emissions of each trip. |
| Image1.png [Groups](#_uRVNhyEwTmek60n) | Groups that exist in a university (e.g. research groups) |
| Image1.png [Trips](#okpbNhyEwTmekycp) |  |
| Image1.png [GroupMembers](#DoV9NhyEwTmek.AW) | It contains user's and the groups they are member of |
| Image1.png [Addresses](#PakrNhyEwTmekx1s) | A table containing details about addresses. |
| Image1.png [Users](#._lFNhyEwTmek6by) | Table with the system's users |
| Image1.png [userAddresses](#Ht2AthyEwTmek2nT) |  |
| Image1.png [Faculties](#kZ0TNhyEwTmekwWF) | Faculties of a university |
| Image1.png [AcademicUnits](#ifQjNhyEwTmek.a6) | Academic units of a faculty. |
| Image1.png [Campuses](#CV.zNhyEwTmekwvH) | University campuses |
| Image1.png [UserCars](#FB.fNhyEwTmek1X.) | Table containing the cars that are owned by users |
| Image1.png [Cars](#BILPNhyEwTmek1A8) | Table containing some information about cars. The original data set is located in <http://carfueldata.direct.gov.uk/> |
| Image1.png [UniversityCampuses](#PN2wthyEwTmek3Mh) | Table containing the campuses of a university |
| Image1.png [University](#P6T1NhyEwTmek67D) | Table describing a university |
| Image1.png [EFSources](#Cgj_NhyEwTmek2cD) | Table containing the sources for emission factors, which are used for in the carbon emission calculation formula. |

## Details

### Image1.png CalculationMethods

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | Table containing the different methods for calculating carbon emissions |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| methodID | integer(10) | PK | No | Record id |
| tier | smallint(1) |  | No | The tier type of the method (refer to [IPCC 2006](http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html) ) |
| description | clob |  | No | Some additional information about the method. |
| TripCarbonEmissionsid | integer(10) |  | No |  |

#### Columns

|  |  |
| --- | --- |
| **methodID** | |
| Documentation | Record id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | true |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **tier** | |
| Documentation | The tier type of the method (refer to [IPCC 2006](http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html) ) |
| Type | smallint |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 1 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **description** | |
| Documentation | Some additional information about the method. |
| Type | clob |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 0 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **TripCarbonEmissionsid** | |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

#### Comments

|  |  |
| --- | --- |
| **Note!** | |
| Documentation | This table is still vague, since I haven't figured what does the term "method" means in the scope of carbon emissions calculation. |
| Author | Pavlos Polianidis |
| Date Time | 9 Ιουλ 2012 7:36:35 μμ |

### Image1.png TripCarbonEmissions

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | Table containing the estimated carbon emissions of each trip. |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| id | integer(10) | PK | No | The record ID |
| tripID | integer(10) | FK ([Trips.tripID](#okpbNhyEwTmekycq)) | No | The id of the trip that the carbon emission where made from |
| methodID | integer(10) | FK ([CalculationMethods.methodID](#xt.gthyEwTmek20_)) | No | The id of the method that was used for calculating the co2 emissions |
| value (kg/km) | decimal(7) |  | No | The value of the carbon emission estimation as it was produced by a calculation method. |

#### Columns

|  |  |
| --- | --- |
| **id** | |
| Documentation | The record ID |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | true |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **tripID** | |
| Documentation | The id of the trip that the carbon emission where made from |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **methodID** | |
| Documentation | The id of the method that was used for calculating the co2 emissions |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **value (kg/km)** | |
| Documentation | The value of the carbon emission estimation as it was produced by a calculation method. |
| Type | decimal |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 7 |
| Scale | 3 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

#### Constraints

|  |  |
| --- | --- |
| **FK** | |
| Columns | |  |  | | --- | --- | | **tripID** | | | Documentation | The id of the trip that the carbon emission where made from | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | false | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes |  |  |  | | --- | --- | | **methodID** | | | Documentation | The id of the method that was used for calculating the co2 emissions | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | false | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes | |

### Image1.png Groups

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | Groups that exist in a university (e.g. research groups) |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| groupID | integer(10) | PK | No | Group id |
| academicUnitID | integer(10) |  | No | The academic unit which the group if part of |
| name | varchar(255) |  | No | The group's name |
| description | clob |  | No | Some additional information for a group |
| GroupMembersuserID | integer(10) |  | No |  |

#### Columns

|  |  |
| --- | --- |
| **groupID** | |
| Documentation | Group id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | true |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **academicUnitID** | |
| Documentation | The academic unit which the group if part of |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **name** | |
| Documentation | The group's name |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 255 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **description** | |
| Documentation | Some additional information for a group |
| Type | clob |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 0 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **GroupMembersuserID** | |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

### Image1.png Trips

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| tripID | integer(10) | PK | No | The trip id |
| sourceAddressID | integer(10) | FK ([Addresses.addressID](#PakrNhyEwTmekx1t)) | No | The id of the address that represents the source of the trip (i.e. starting point) |
| destinationAddressID | integer(10) | FK ([Addresses.addressID](#PakrNhyEwTmekx1t)) | No | The id of the address that represents the destination of the trip |
| transportMeanType | varchar(10) |  | No | The id of the transport mean that was user during the travel |
| type | varchar(10) |  | No | The type of the travel (e.g. commuter, business travel etc) |
| duration(minutes) | decimal(6) |  | No | The duration of the trip |
| distance(km) | decimal(6) |  | No | The overall distance covered during the trip |

#### Columns

|  |  |
| --- | --- |
| **tripID** | |
| Documentation | The trip id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | true |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **sourceAddressID** | |
| Documentation | The id of the address that represents the source of the trip (i.e. starting point) |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **destinationAddressID** | |
| Documentation | The id of the address that represents the destination of the trip |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **transportMeanType** | |
| Documentation | The id of the transport mean that was user during the travel |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **type** | |
| Documentation | The type of the travel (e.g. commuter, business travel etc) |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **duration(minutes)** | |
| Documentation | The duration of the trip |
| Type | decimal |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 6 |
| Scale | 2 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **distance(km)** | |
| Documentation | The overall distance covered during the trip |
| Type | decimal |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 6 |
| Scale | 2 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

#### Constraints

|  |  |
| --- | --- |
| **FK** | |
| Columns | |  |  | | --- | --- | | **sourceAddressID** | | | Documentation | The id of the address that represents the source of the trip (i.e. starting point) | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | false | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes |  |  |  | | --- | --- | | **destinationAddressID** | | | Documentation | The id of the address that represents the destination of the trip | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | false | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes |  |  |  | | --- | --- | | **transportMeanType** | | | Documentation | The id of the transport mean that was user during the travel | | Type | varchar | | Nullable | false | | Unique | false | | Primary Key | false | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes | |

### Image1.png GroupMembers

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | It contains user's and the groups they are member of |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| groupID | integer(10) | PK/FK ([Groups.groupID](#_uRVNhyEwTmek60o)) | No | Identification of a group |
| userID | integer(10) | PK/FK ([Users.userID](#._lFNhyEwTmek6bz)) | No | User identification. This represents a user is member of a group |

#### Columns

|  |  |
| --- | --- |
| **groupID** | |
| Documentation | Identification of a group |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **userID** | |
| Documentation | User identification. This represents a user is member of a group |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

#### Constraints

|  |  |
| --- | --- |
| **FK** | |
| Columns | |  |  | | --- | --- | | **groupID** | | | Documentation | Identification of a group | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | true | | Index | false | | Length | 10 | | Scale | 0 | | Id Generator | native | | Generated | Unspecified | | Sync To Attribute | Yes |  |  |  | | --- | --- | | **userID** | | | Documentation | User identification. This represents a user is member of a group | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | true | | Index | false | | Length | 10 | | Scale | 0 | | Id Generator | native | | Generated | Unspecified | | Sync To Attribute | Yes | |

### Image1.png Addresses

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | A table containing details about addresses. |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| addressID | integer(10) | PK | No | The address id |
| country | varchar(50) |  | No | The country of the address |
| county | varchar(50) |  | No | The county of the address |
| city | varchar(50) |  | No | the city of the address |
| postalCode | varchar(10) |  | No | The postal code of the address |
| longitude | decimal(9) |  | No | The longitude value of the address |
| latitude | decimal(9) |  | No | The latitude value of the address |

#### Columns

|  |  |
| --- | --- |
| **addressID** | |
| Documentation | The address id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | true |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **country** | |
| Documentation | The country of the address |
| Default Value | UK |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 50 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **county** | |
| Documentation | The county of the address |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 50 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **city** | |
| Documentation | the city of the address |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 50 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **postalCode** | |
| Documentation | The postal code of the address |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **longitude** | |
| Documentation | The longitude value of the address |
| Type | decimal |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 9 |
| Scale | 6 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **latitude** | |
| Documentation | The latitude value of the address |
| Type | decimal |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 9 |
| Scale | 6 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

### Image1.png Users

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | Table with the system's users |
| Records | N/A |
| Primary Key Constraint Name | userID |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| userID | integer(10) | PK | No | User Id |
| firstName | varchar(20) |  | No | User's first name |
| lastName | varchar(20) |  | No | User's last name |
| title | varchar(5) |  | No | User's title |
| type | varchar(30) |  | No | User's type. A user can be either a student or member of the staff. |
| occupation | integer(50) |  | Yes | This concerns the users who are members of the staff. It represents the member's occupation (e.g. professor) |
| email | varchar(255) |  | Yes | User's email address |
| GroupMembersgroupID | integer(10) |  | No |  |

#### Columns

|  |  |
| --- | --- |
| **userID** | |
| Documentation | User Id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | true |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **firstName** | |
| Documentation | User's first name |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 20 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **lastName** | |
| Documentation | User's last name |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 20 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **title** | |
| Documentation | User's title |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 5 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **type** | |
| Documentation | User's type. A user can be either a student or member of the staff. |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 30 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **occupation** | |
| Documentation | This concerns the users who are members of the staff. It represents the member's occupation (e.g. professor) |
| Type | integer |
| Nullable | true |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 50 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **email** | |
| Documentation | User's email address |
| Type | varchar |
| Nullable | true |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 255 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **GroupMembersgroupID** | |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

### Image1.png userAddresses

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Records | N/A |
| DDLClauses | The addresses that user uses during the creation of a trip. Each user might want to store a set of addresses that she can use while creating a trip. |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| userID | integer(10) | PK/FK ([Users.userID](#._lFNhyEwTmek6bz)) | No | User id |
| addressID | integer(10) | PK/FK ([Addresses.addressID](#PakrNhyEwTmekx1t)) | No | Address id |

#### Columns

|  |  |
| --- | --- |
| **userID** | |
| Documentation | User id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **addressID** | |
| Documentation | Address id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

#### Constraints

|  |  |
| --- | --- |
| **FK** | |
| Columns | |  |  | | --- | --- | | **userID** | | | Documentation | User id | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | true | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes |  |  |  | | --- | --- | | **addressID** | | | Documentation | Address id | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | true | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes | |

### Image1.png Faculties

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | Faculties of a university |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| facultyID | integer(10) | PK | No | Faculty id |
| name | varchar(50) |  | No | The name of the faculty (e.g. Faculty of Physics and Applied Sciences) |
| description | clob |  | No | Some additional information about the faculty |

#### Columns

|  |  |
| --- | --- |
| **facultyID** | |
| Documentation | Faculty id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | true |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **name** | |
| Documentation | The name of the faculty (e.g. Faculty of Physics and Applied Sciences) |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 50 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **description** | |
| Documentation | Some additional information about the faculty |
| Type | clob |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 0 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

### Image1.png AcademicUnits

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | Academic units of a faculty. |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| id | integer(10) | PK | No | Academic unit id |
| facultyID | integer(10) | FK ([Faculties.facultyID](#kZ0TNhyEwTmekwWG)) | No | The id of the faculty, which the academic unit is member of |
| campusID | integer(10) | FK ([Campuses.campusID](#CV.zNhyEwTmekwvI)) | No | The id of the campus where the academic unit is located in |
| name | varchar(255) |  | No | The name of academic unit (e.g. Electronics and Computer Science) |
| description | clob |  | No | Additional information about an academic unit |

#### Columns

|  |  |
| --- | --- |
| **id** | |
| Documentation | Academic unit id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | true |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **facultyID** | |
| Documentation | The id of the faculty, which the academic unit is member of |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **campusID** | |
| Documentation | The id of the campus where the academic unit is located in |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **name** | |
| Documentation | The name of academic unit (e.g. Electronics and Computer Science) |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 255 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **description** | |
| Documentation | Additional information about an academic unit |
| Type | clob |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 0 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

#### Constraints

|  |  |
| --- | --- |
| **FK** | |
| Columns | |  |  | | --- | --- | | **facultyID** | | | Documentation | The id of the faculty, which the academic unit is member of | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | false | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes | |

|  |  |
| --- | --- |
| **FK** | |
| Columns | |  |  | | --- | --- | | **campusID** | | | Documentation | The id of the campus where the academic unit is located in | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | false | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes | |

### Image1.png Campuses

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | University campuses |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| campusID | integer(10) | PK | No | The campus id |
| addressID | integer(10) | FK ([Addresses.addressID](#PakrNhyEwTmekx1t)) | No | The id of the campus address |
| name | varchar(100) |  | No | The name of the campus (e.g. Highgield campus) |
| description | clob |  | No | Some additional information about the campus |

#### Columns

|  |  |
| --- | --- |
| **campusID** | |
| Documentation | The campus id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **addressID** | |
| Documentation | The id of the campus address |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **name** | |
| Documentation | The name of the campus (e.g. Highgield campus) |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 100 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **description** | |
| Documentation | Some additional information about the campus |
| Type | clob |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 0 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

#### Constraints

|  |  |
| --- | --- |
| **FK** | |
| Columns | |  |  | | --- | --- | | **addressID** | | | Documentation | The id of the campus address | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | false | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes | |

### Image1.png UserCars

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | Table containing the cars that are owned by users |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| userID | integer(10) | PK/FK ([Users.userID](#._lFNhyEwTmek6bz)) | No | The id of the user who owns the car |
| carID | integer(10) | PK/FK ([Cars.carID](#BILPNhyEwTmek1A9)) | No | The id of the car that is owned by the user |

#### Columns

|  |  |
| --- | --- |
| **userID** | |
| Documentation | The id of the user who owns the car |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **carID** | |
| Documentation | The id of the car that is owned by the user |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

#### Constraints

|  |  |
| --- | --- |
| **FK** | |
| Columns | |  |  | | --- | --- | | **userID** | | | Documentation | The id of the user who owns the car | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | true | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes |  |  |  | | --- | --- | | **carID** | | | Documentation | The id of the car that is owned by the user | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | true | | Index | false | | Length | 10 | | Scale | 0 | | Generated | Unspecified | | Sync To Attribute | Yes | |

### Image1.png Cars

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | Table containing some information about cars. The original data set is located in <http://carfueldata.direct.gov.uk/> |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| carID | integer(10) | PK | No | Record Id |
| manufacturer | varchar(50) |  | No | The manufacturer of the car |
| model | varchar(100) |  | No | The specific model of the car |
| description | clob |  | No | Some additional information about the car |
| transmission | varchar(5) |  | No | The car trasmission |
| engineCapacity | integer(10) |  | No | The car's engine capacity |
| fuelType | varchar(20) |  | No | The type of fuel that the car uses |
| COEmissions(g/km) | decimal(5) |  | No | The amount of carbon emitted by the car per km |
| euroStandard | smallint(1) |  | No | The euro standard |

#### Columns

|  |  |
| --- | --- |
| **carID** | |
| Documentation | Record Id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | true |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **manufacturer** | |
| Documentation | The manufacturer of the car |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 50 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **model** | |
| Documentation | The specific model of the car |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 100 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **description** | |
| Documentation | Some additional information about the car |
| Type | clob |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 0 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **transmission** | |
| Documentation | The car trasmission |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 5 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **engineCapacity** | |
| Documentation | The car's engine capacity |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **fuelType** | |
| Documentation | The type of fuel that the car uses |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 20 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **COEmissions(g/km)** | |
| Documentation | The amount of carbon emitted by the car per km |
| Type | decimal |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 5 |
| Scale | 3 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **euroStandard** | |
| Documentation | The euro standard |
| Type | smallint |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 1 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

### Image1.png UniversityCampuses

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | Table containing the campuses of a university |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| universityID | integer(10) | PK/FK ([University.universityID](#P6T1NhyEwTmek67E)) | No | The id of a university |
| campusID | integer(10) | PK/FK ([Campuses.campusID](#CV.zNhyEwTmekwvI)) | No | The id of a campus |

#### Columns

|  |  |
| --- | --- |
| **universityID** | |
| Documentation | The id of a university |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **campusID** | |
| Documentation | The id of a campus |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | false |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

#### Constraints

|  |  |
| --- | --- |
| **FK** | |
| Columns | |  |  | | --- | --- | | **universityID** | | | Documentation | The id of a university | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | true | | Index | false | | Length | 10 | | Scale | 0 | | Id Generator | native | | Generated | Unspecified | | Sync To Attribute | Yes |  |  |  | | --- | --- | | **campusID** | | | Documentation | The id of a campus | | Type | integer | | Nullable | false | | Unique | false | | Primary Key | true | | Index | false | | Length | 10 | | Scale | 0 | | Id Generator | native | | Generated | Unspecified | | Sync To Attribute | Yes | |

### Image1.png University

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | Table describing a university |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| universityID | integer(10) | PK | No | University id |
| name | varchar(50) |  | No | The name of the university |
| description | clob |  | No | A brief description about the univeristy |

#### Columns

|  |  |
| --- | --- |
| **universityID** | |
| Documentation | University id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | true |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **name** | |
| Documentation | The name of the university |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 50 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **description** | |
| Documentation | A brief description about the univeristy |
| Type | clob |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 0 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

### Image1.png EFSources

|  |  |
| --- | --- |
| **Name** | **Value** |
| Data Model | Physical |
| Documentation | Table containing the sources for emission factors, which are used for in the carbon emission calculation formula. |
| Records | N/A |

#### Columns Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DataType** | **Constraints** | **Nullable** | **Documentation** |
| EFID | integer(10) | PK | No | Record id |
| name | varchar(50) |  | No | The name of the source (e.g. organization providing emission facto data sets) |
| link | varchar(100) |  | No | The link to the source (e.g. web site, email etc.) |

#### Columns

|  |  |
| --- | --- |
| **EFID** | |
| Documentation | Record id |
| Type | integer |
| Nullable | false |
| Unique | false |
| Primary Key | true |
| Index | true |
| Length | 10 |
| Scale | 0 |
| Id Generator | native |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **name** | |
| Documentation | The name of the source (e.g. organization providing emission facto data sets) |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 50 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |

|  |  |
| --- | --- |
| **link** | |
| Documentation | The link to the source (e.g. web site, email etc.) |
| Type | varchar |
| Nullable | false |
| Unique | false |
| Primary Key | false |
| Index | false |
| Length | 100 |
| Scale | 0 |
| Generated | Unspecified |
| Sync To Attribute | Yes |