# 1. Data Dictionary

| Entity Name | | Entity Description | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Column Name** | **Column Description** | **Data Type** | **Length** | **Primary Key** | **Nullable** | **Unique** |
| Alert | | An alert that is raised when something urgent occurs. All the users will be able to view this information. | | | | | |
|  | AlertID | Alert Unique Identifier. | varchar | 10 | true | false | true |
|  | AlertMessageContent | Alert message content. | varchar | 255 | false | false | false |
|  | LaunchByUserID | The unique identifier of the user who launched this alert. | varchar | 10 | false | false | false |
|  | SentByUserID | The unique identifier of the user who created this alert. | varchar | 10 | false | false | false |
| AnnualInventoryDeclaration | | The Annual Inventory Declaration | | | | | |
|  | AnnualInventoryDeclarationContent | The content of it. | varchar | 255 | false | false | false |
|  | AnnualInventoryDeclarationID | AnnualInventoryDeclaration Unique Identifier | varchar | 10 | true | false | true |
|  | ApprovedByUserID | The unique identifier of the user who approved it. | varchar | 10 | false | false | false |
|  | SubmittedByUserID | The unique identifier of the user who submitted it. | varchar | 10 | false | false | false |
| Apiary | | The apiary where the beekeepers work. | | | | | |
|  | ApiaryID | Apiary Unique Identifier. | varchar | 10 | true | false | true |
|  | TotalBees | Total number of bees in all the apiary. | integer | 10 | false | false | false |
|  | ZoneID | The unique identifier of the zone where the apiary is. | varchar | 10 | false | false | false |
| ApiaryCertification | | Certification that is valid to some apiary. | | | | | |
|  | ApiaryCertificationID | ApiaryCertification Unique Identifier. | varchar | 10 | true | false | true |
|  | ApiaryID | The certified apiary unique identifier. | varchar | 10 | false | false | false |
|  | CertificationID | The certification unique identifier. | varchar | 10 | false | false | false |
|  | EndDate | When the certification expires. | date | 0 | false | false | false |
|  | StartDate | When the certification is valid | date | 0 | false | false | false |
| ApiaryCertificationError | | Errors that might came up during certification process. | | | | | |
|  | ApiaryCertificationErrorID | ApiaryCertificationError Unique Identifier. | varchar | 10 | true | false | true |
|  | ApiaryCertificationID | The apiary certification unique identifier where the error came from. | varchar | 10 | false | false | false |
|  | ErrorDescription | Error description. | varchar | 255 | false | false | false |
|  | ErrorType | Type of error. It can be Minor, Bad or Extreme. | varchar | 10 | false | false | false |
| ApiaryProduct | | A product that exists in an apiary and the quantity. | | | | | |
|  | ApiaryID | The unique identifier of the apiary where the product exists. | varchar | 10 | false | false | false |
|  | ApiaryProductID | Apiary Product unique identifier. | varchar | 10 | true | false | true |
|  | ProductID | The unique identifier of the product. | varchar | 10 | false | false | false |
|  | quantity | Quantity of that product | integer | 10 | false | false | false |
| ApiaryProductCertification | | Certification that is valid to some apiary product. | | | | | |
|  | ApiaryProductCertificationID | ApiaryCertification Unique Identifier. | varchar | 10 | true | false | true |
|  | ApiarytProductQuantityID |  | varchar | 10 | false | false | false |
|  | CertificationID | The unique identifier of the certification. | varchar | 10 | false | false | false |
|  | EndDate | When the certification expires. | date | 0 | false | false | false |
|  | StartDate | When the certification is valid | date | 0 | false | false | false |
| ApiaryProductCertificationError | | Errors that might came up during certification process. | | | | | |
|  | ApiaryProductCertificatioID |  | varchar | 10 | false | false | false |
|  | ApiaryProductCertificationErrorID | ApiaryCertificationError Unique Identifier. | varchar | 10 | true | false | true |
|  | ErrorDescription | Error description. | varchar | 255 | false | false | false |
|  | ErrorType | Type of error. It can be Minor, Bad or Extreme. | varchar | 10 | false | false | false |
| Appointment | | An appointment to a session that involves some participants and the date of it. This is used to build calendars as well. If any participant can't go to the appointment it's canceled automatically. | | | | | |
|  | AppointmentDate | The Date and Time of the Appointment | date | 0 | false | false | false |
|  | AppointmentID |  | varchar | 10 | true | false | true |
|  | AppointmentStatus | Status of the appointment. Pending, Rejected, Accepted. | varchar | 10 | false | false | false |
| AppointmentParticipant | | Keep track of all the participants on a certain appointment. | | | | | |
|  | AppointmentID | The unique Identifier of the appointment itself. | varchar | 10 | false | false | false |
|  | ParticipantID | The unique identifier of a user that needs to be present on the appointment. | varchar | 10 | false | false | false |
| Beekeeper | | A specific type of User, Beekeeper | | | | | |
|  | UserID | Unique Identifier of the beekeeper. | varchar | 10 | true | false | false |
| BeekeeperApiary | | Keep track of all the apiaries on a certain beekeeper. | | | | | |
|  | ApiaryApiaryID |  | varchar | 10 | false | false | false |
|  | BeekeeperUserID |  | varchar | 10 | false | false | false |
| BeekeeperCertification | | Certification that is valid to some Beekeeper. | | | | | |
|  | BeekeeperCertificationID | BeekeeperCertification Unique Identifier. | varchar | 10 | true | false | true |
|  | BeekeeperUserID | Unique Identifier of the Beekeeper that's being certified. | varchar | 10 | false | false | false |
|  | CertificationID | The Unique Identifier of the certification being applied. | varchar | 10 | false | false | false |
|  | EndDate | When the certification expires. | date | 0 | false | false | false |
|  | StartDate | When the certification is valid | date | 0 | false | false | false |
| BeekeeperCertificationError | | Errors that might came up during certification process. | | | | | |
|  | BeekeeperCertificationErrorID | BeekeeperCertificationError Unique Identifier. | varchar | 10 | true | false | true |
|  | BeekeeperCertificationID |  | varchar | 10 | false | false | false |
|  | ErrorDescription | Error description. | varchar | 255 | false | false | false |
|  | ErrorType | Type of error. It can be Minor, Bad or Extreme. | varchar | 10 | false | false | false |
| Certification | | A certification that will be applied to an apiary. | | | | | |
|  | CertificationDescription | The complete description of the certification including requirements and explanation. | varchar | 255 | false | false | false |
|  | CertificationID | Certification Unique Identifier | varchar | 10 | true | false | true |
|  | CertificationType | Certification type. | varchar | 10 | false | false | false |
|  | ExpirationTime | How long does the certification lasts. | time | 7 | false | false | false |
| CertificationRequest | | A request that's made when you want to certify an apiary. | | | | | |
|  | ApiaryID | The unique identifier of the apiary that will possibly be certified. | varchar | 10 | false | false | false |
|  | CertificationID | Unique Identifier of the certification that's being requested. | varchar | 10 | false | false | false |
|  | CertificationRequestID | CertificationRequest Unique Identifier | varchar | 10 | true | false | true |
|  | CertificationStatus | Status of the Certification. Pending, Rejected, In Progress and Approved. | varchar | 10 | false | false | false |
|  | RequestedUserID | Unique Identifier of the Beekeeper who asks for the certification. | varchar | 10 | false | false | false |
| Fine | | Some sessions might result in fines. | | | | | |
|  | ApiaryID | The apiary that created this fine. | varchar | 10 | false | false | false |
|  | Cost | Cost of the fine. | double | 10 | false | false | false |
|  | FineID | Fine unique identifier. | varchar | 10 | true | false | true |
|  | Motive | Motive of the fine. | varchar | 255 | false | false | false |
|  | PaymentMethods | Payment methods are described here. | varchar | 255 | false | true | false |
|  | SessionResultID | Session Result where the fine was brought up. | varchar | 10 | false | false | false |
| Handle | | A compartment of the Hive where bees live. | | | | | |
|  | HandleID | Handle unique identifier. | varchar | 10 | true | false | false |
|  | HiveID |  | varchar | 10 | false | false | false |
|  | TotalBees | Number of bees in the Handle | integer | 10 | false | false | false |
| Hive | | A hive that contains bees. | | | | | |
|  | ApiaryID | The unique identifier of the Apiary where the Hive is located. | varchar | 10 | false | false | false |
|  | HiveID | Hive Unique Identifier. | varchar | 10 | true | false | true |
|  | HiveType | The type of Hive. Colmeia, núcleo ou cortiço. | varchar | 10 | false | false | false |
|  | TotalBees | Total number of bees in this hive. | integer | 10 | false | false | false |
| Inspection | | Inspection that will be done in some Hive. | | | | | |
|  | BeekeeperUserID | Unique Identifier of the Beekeeper. | varchar | 10 | false | false | false |
|  | Date | Dater of the inspection. | date | 0 | false | true | false |
|  | HiveID | Unique Identifier of the Hive being inspected. | varchar | 10 | false | false | false |
|  | InspectionID | Unique Identifier of the Inspection | varchar | 10 | true | false | false |
| Message | | A message that a user can send another. | | | | | |
|  | MessageContent | The message text. | varchar | 255 | false | true | false |
|  | MessageID | Message Unique Identifier. | varchar | 10 | true | false | true |
|  | ReceivedByUserID | The unique identifier of the user who received this message. | varchar | 10 | false | false | false |
|  | SentByUserID | The unique identifier of the user who sent this message. | varchar | 10 | false | false | false |
| Note | | A note that a beekeeper can write down about an hive. | | | | | |
|  | InspectionID | Unique Identifier of the Inspection that resulted in this note. | varchar | 10 | false | false | false |
|  | NoteContent | Content of the note. | varchar | 255 | false | false | false |
|  | NoteID | Note Unique Identifier. | varchar | 10 | true | false | true |
| Product | | A product that exists in a apiary. | | | | | |
|  | CautionText | Care that must be taken with the product. | varchar | 255 | false | false | false |
|  | Cost | Cost of the product. | double | 10 | false | false | false |
|  | Description | Product description. | varchar | 255 | false | true | false |
|  | Name | Product name. | varchar | 15 | false | false | false |
|  | ProductID | Product unique identifier. | varchar | 10 | true | false | true |
|  | ProductType | Type of product | varchar | 10 | false | false | false |
| SanitaryLock | | When we need to lock a certain apiary in a certain zone due to some issues. e.g. diseases and bad weather | | | | | |
|  | AdditionalComments |  | varchar | 255 | false | true | false |
|  | ApiaryID | The unique identifier of the apiary affected. | varchar | 10 | false | false | false |
|  | SanitaryLockID | SanitaryLock Unique Identifier. | varchar | 10 | true | false | true |
|  | ZoneID | The unique identifier of the zone affected. | varchar | 10 | false | false | false |
| Session | | The session itself. | | | | | |
|  | AppointmentID | The unique identifier of the appointment that created this session. | varchar | 10 | false | false | false |
|  | SessionCost | Cost of the session. | double | 10 | false | true | false |
|  | SessionEndTime | Timestamp of the session end. | timestamp | 0 | false | false | false |
|  | SessionID |  | varchar | 10 | true | false | true |
|  | SessionStartTime | Timestamp of the session start. | timestamp | 0 | false | false | false |
|  | SessionStatus | Status of the session. Pending, Rejected, In Progress and Done. | varchar | 10 | false | false | false |
|  | SessionType | The type of the session. It can be a certification company inspection, DGAV intervention or management entities inspection. | varchar | 10 | false | false | false |
| SessionResult | | The result of the session that might end up turning into a report. | | | | | |
|  | AdditionalComments |  | varchar | 255 | false | true | false |
|  | Conclusion | Conclusion of the session. | varchar | 255 | false | false | false |
|  | Files | Files that might be good to keep here such as photos or recorded data. | blob | 0 | false | true | false |
|  | Resume | Resume of the work done. | varchar | 255 | false | false | false |
|  | SessionDate | Session date. | date | 0 | false | false | false |
|  | SessionID | The session itself unique identifier. | varchar | 10 | false | false | false |
|  | SessionResultID | Session Result Unique Identifier. | varchar | 10 | true | false | true |
|  | Title | The title of the result, might be related to the Session Type. | varchar | 20 | false | false | false |
| Task | | A task that can be done by an user, specially the beekeeper. | | | | | |
|  | BeekeeperAssignedID | Unique ID of the beekeeper assigned to do the task. | varchar | 10 | false | false | false |
|  | CreatedByUserID | The unique identifier of the user who created this task. | varchar | 10 | false | false | false |
|  | TaskComment | A comment about the task. | varchar | 100 | false | true | false |
|  | TaskID | Task Unique Identifier | varchar | 10 | true | false | true |
|  | TaskStatus | Status of the task. Pending, Rejected, In Progress and Done. | varchar | 10 | false | false | false |
|  | TaskType | The type of task that's being done. | varchar | 10 | false | false | false |
|  | UserIDAssignes | Unique ID of the User who assigned a beekepper to do the task. | varchar | 10 | false | false | false |
| Treatment | | Treatment done in an Hive. | | | | | |
|  | Date | Date of the treatment. | date | 0 | false | true | false |
|  | HiveID |  | varchar | 10 | false | false | false |
|  | TreatmentID | Treatment Unique Identifier. | varchar | 10 | true | false | false |
|  | TreatmentNotes | What was done in this treatment. | integer | 10 | false | true | false |
| User | | Someone that uses the application. | | | | | |
|  | Email | Email of the user. | varchar | 50 | false | false | true |
|  | Name | Name of the user. | varchar | 50 | false | false | false |
|  | UserID | User Unique Identifier. | varchar | 10 | true | false | true |
|  | UserType | User Type such as Beekeeper , DGAV technician, Certification Responsible and Technician of the Management Entities of Controlled Areas. | varchar | 15 | false | false | false |
| Zone | | A zone that can have apiaries in it. | | | | | |
|  | City | The city where this zone is located at. | varchar | 10 | false | false | false |
|  | Country | The country where this zone is located at. | varchar | 10 | false | false | false |
|  | TerrainType | Terrain type of this zone such as Mountain, Hill, Forest, Plain, Tundra , Swamp, Desert , Valley, Marsh, Canyon, Plateau, Oasis , Butte, Dune... | varchar | 10 | false | false | false |
|  | xCoordinate | The x coordinate of the zone. | double | 10 | false | false | false |
|  | yCoordinate | The y coordinate of the zone. | double | 10 | false | false | false |
|  | zCoordinate | The z coordinate of the zone. | double | 10 | false | true | false |
|  | ZoneID | Zone Unique Identifier. | varchar | 10 | true | false | true |
| ZonePermission | | Keep track of all the zone permissions by apiary. | | | | | |
|  | ApiaryID | The unique identifier of the apiary that has permission to be in a certain zone. | varchar | 10 | false | false | false |
|  | ZoneID | The unique identifier of the zone the apiary has permission, | varchar | 10 | false | false | false |
|  | ZonePermissionD | ZonePermission Unique Identifier. | varchar | 10 | true | false | true |
|  | ZonePermissionRequestID | The ZonePermissionRequest Unique Identifier. | varchar | 10 | false | false | false |
| ZonePermissionRequest | | A request that's made when you want the permission to access a zone. | | | | | |
|  | AcceptedDeclinedByUserID | The unique identifier of the user who accepts/declines the request. | varchar | 10 | false | false | false |
|  | ApiaryID | The apiary that will be moved to this new zone. | varchar | 10 | false | false | false |
|  | RequestedByUserID | The unique identifier of the beekeeper that request the zone permission. | varchar | 10 | false | false | false |
|  | RequestStatus | Status of the zone permission request. Pending, Rejected, In Progress and Accepted. | varchar | 10 | false | false | false |
|  | ZoneID | The zone in cause. | varchar | 10 | false | false | false |
|  | ZonePermissionRequestID | ZonePermissionRequest unique identifier. | varchar | 10 | true | false | true |