|  |
| --- |
|  |
| Each QualifiedTechnician must have one and only one training  Each training must have one or more QualifiedTechnician(s) |

|  |
| --- |
|  |
| Each test must have one or many testitem(s)  Each testItem must have one and only one Test |

|  |
| --- |
|  |
| Each Manufacturer makes one or many aircraftModel(s)  Each AircraftModel must have one and only one Manufacturer |

|  |
| --- |
|  |
| Each country must have one or many Airline(s)  Each Airline must have one and only one country |

|  |
| --- |
|  |
| Each PassengerModel is one and only one SubModel  Each SubModel is one and only one passengerModel |

|  |
| --- |
|  |
| Each cargoModel is one and only one SubModel  Each SubModel is one and only one cargoModel |

|  |
| --- |
|  |
| Each EngineModel must be one or many engine(s)  Each Engine must be one and only one EngineModel |

|  |
| --- |
|  |
| Each aircraft is one and only one AircraftModel  Each AircraftModel can be one or many Aircraft |

# Part C

A screenshot of a computer

Description automatically generated with medium confidence

# Part D

Country (**countyID**, countryName)

Airline (**airlineID**, *country*, airlineName, street, suburb, state, contactPhone, websiteAddress)

Manufacturer (**manufacturerID**, manufacturerName)

AircraftModel (**aircraftModelID**, *manufacturerID*)

Aircraft (**aircraftID**, *airlineID*, *aircraftModelID*, aircraftName)

SubModel (**SubModelId**, *AircraftModel\_AircraftModelID*, length, height, wingspanArea, maxPayload, maxCrusingSpeed, maxRange)

EngineModel (**engineModelName**, *Manufacturer*, thrustRange, dryWeight)

Engine (**engineIDNumber**, aircraftModel, engineModelName, manufacturingDate)

Cargo (**CargoCatagoryID*, SubModel\_SubModelId1***, maxCargoWeight, mainDeckCapacity, lowerDeckCapacity)

Passanger (**PassangerCatagoryID, *SubModel\_SubModelId1***, maxPassagers, maxFirstClassPassangers, maxEconomyPassangers)

Technician (**technicianID**, ***supervisorID***, firstName, lastName, streetAddress, suburb, postcode, phone, salary, loginName, country)

Training (**trainingId**, trainingName, trainingDate)

QualifiedTechnician (***technicianID, trainingId,*** aircraftID, completionStatus)

Manager (**technicianID**, commencedManagment)

Test (**testID**, TestName)

TestItem (**testItemCode,** *testID*, *technicianID*, testResult)

TestEvent (**testEventCode**, *technicianID*, dateStart, dateEnd, testResult, hoursSpent, resultComment, aircraftID)

TestItemTestEvent (***TestItemCode****,* ***testEventCode***)

TechnicianTestItemTestEvent (**t*estItemCode, testEventCode, TechnicianID***)

# Part D ii

|  |  |  |  |
| --- | --- | --- | --- |
| **Table Name** | **Field Name** | **Data Type** | **Relational Description** |
| AircraftModel | aircraftModelID  manufacturerID | INT  INT | Each AircraftModel must be one or many aircraft.  Each AircraftModel must be one or many subModels  Each AircraftModel must have one and only one Manufacturer |
| EngineModel | engineModelName  manufacturer  thrustRange  dryWeight | Varchar  Varchar  INT  Decimal | Each EngineModel must have one or Engine |
| Passanger | PassangerCatagoryID  subModelID  maxPassangers  maxFirstClassPassangers  maxEconomyClassPassangers | VARCHAR  VARCHAR  INT  INT  INT | Passanger must have one and only one SubModel |

# Part D III

|  |  |
| --- | --- |
| **DATA DICTIONARY: – ATTRIBUTE DESCRIPTION** | |
| SYSTEM : SAMS | DATE: 13/05/2023 |
| AUTHOR : Andre Alexandrov | PAGE: 1/1 |
| ATTRIBUTE NAME: maxPassangers | |
| ALIAS (Synonym) : N/A | |
| DATA SOURCE: Passanger | |
| **DATA STRUCTURE** | |
| Type: INT | |
| Length and Format: INT max value of 4294967295 | |
| **Characteristics** | |
| Range of Values  There is no specified range so goes by INT max of 4294967295 | |
| DESCRIPTION  The INT value describes the maximum number of passengers a passenger model plane can carry irrespective of class | |
|  | |
| **DATA DICTIONARY: – ATTRIBUTE DESCRIPTION** | |
| SYSTEM : SAMS | DATE: 13/05/2023 |
| AUTHOR : Andre Alexandrov | PAGE: 1/1 |
| ATTRIBUTE NAME: dryWeight | |
| ALIAS (Synonym) : N/A | |
| DATA SOURCE: EngineModel | |
| **DATA STRUCTURE** | |
| Type: DECIMAL | |
| Length and Format: max length of 6 with 2 digits reserved for after the decimal point | |
| **Characteristics** | |
| Range of Values  0000.00 – 9999.99 | |
| DESCRIPTION  A decimal describing the dry weight of an engine model | |
|  | |
| **DATA DICTIONARY: – ATTRIBUTE DESCRIPTION** | |
| SYSTEM : SAMS | DATE: 13/05/2023 |
| AUTHOR : Andre Alexandrov | PAGE: 1/1 |
| ATTRIBUTE NAME: manufacturer | |
| ALIAS (Synonym) : N/A | |
| DATA SOURCE: EngineModel | |
| **DATA STRUCTURE** | |
| Type: VARCHAR | |
| Length and Format: string with a max length of 45 | |
| **Characteristics** | |
| Range of Values  Any string shorter than 45 characters in length | |
| DESCRIPTION  Value to define who the manufacturer of the specific engine model is. | |

