ACCOUNTANTS

Field Name	Data Type	
EMP_ID	Short Text	Contains the employee ID
CPA_LICENSE	Short Text	the accountant's CPA license
MAX_D_AMT_AUTH	Currency	the maximum dollar amount authorized
NUM_INVOICES	Number	and the number of invoices

Accountants

EMP_ID: Employee ID (Foreign Key, refers to Employee.EMP_ID)
CPA_License: CPA License
Max_DollarAmount_Authorized: Maximum Dollar Amount Authorized
Num_Of_Invoices: Number of Invoices

EMP_ID must be unique and not null, and refers to an existing Employee.EMP_ID (Foreign Key constraint).
CPA_License must not be null and should have a maximum length of 50 characters.
Max_DollarAmount_Authorized must be a positive number or zero, not null, and should be stored in a numeric data type (decimal).
Num_Of_Invoices must be a non-negative integer (zero or positive) and not null.

AGENTS

Field Name	Data Type	
EMP_ID	Short Text	Sales Rep Number (Primary Key)
AGENT_COMMISION	Currency	Last Name of Sales Rep

Agents

EMP_ID: Employee ID (Foreign Key, refers to Employee.EMP_ID)
Agent_Commission: Agent Commission

EMP_ID must be unique not null and refers to an existing Employee.EMP_ID (Foreign Key Constraint)
Agent_Commission must be a positive number or zero, no null, and should be stored in a numeric data type

APPLICATIONS

Field Name	Data Type	
C_ID	Short Text	Contains customer ID
APP_DATE	Date/Time	application date
P_ID	Short Text	Policy ID

Applications
C_ID: Claim ID (Primary Key and Foreign Key)
P_ID: Policy Date (Primary Key and Foreign Key)
App_Date: Application Date

C_ID is a foreign key referencing the "Claims" table
P_ID is a unique identifier for each application; cannot be null

CLAIMS

Field Name	Data Type	
CLAIM_ID	Short Text	Contains claim ID
TOTAL_AMOUNT	Currency	the total amount claimed
CLAIM_TYPE	Short Text	claim type
DATE_FILED	Date/Time	the date the claim was filed
OFFICE	Short Text	the office assigned to the claim
CLAIM_DATE	Date/Time	Claim date
P_ID	Short Text	Policy ID
EMP_ID	Short Text	Employee ID

Claims
C_ID: Claim ID (Primary Key)
C_FName: Claimant First Name
C_LName: Claimant Last Name
C_Address: Claimant Address
C_City: Claimant City
C_State: Claimant State
C_Zip: Claimant Zip
Emp_ID: Employee ID (foreign key)

C_ID is a unique identifier for each claim; cannot be null
C_Address, C_City, C_State, C_Zip cannot be null
Emp_ID is the foreign key referencing the employee responsible for the claim

Field Name	Data Type	
🔑 EMP_ID	Short Text	Contains employee ID
UNDERWRITER_LICENSES	Short Text	underwriter's license
MAX_RISK_AUTH	Short Text	maximum risk authorized

Underwriters
EMP_ID: Employee ID (Foreign Key, refers to Employee.EMP_ID)
UNDERWRITER_LICENSES: Underwriter Licenses
MAX_RISK_AUTH: Maximum Risk Authorization

EMP_ID must be unique not null and refers to an existing Employee.EMP_ID (Foreign Key Constraint)
UNDERWRITER_LICENSES must not be null anbd should have a maximum length of 250 characters
MAX_RISK_AUTH must be a positive number, no null and should be stored in a numeric data set.

CLIENT

Field Name	Data Type	
🔑 C_ID	Short Text	Primary Key is Customer Number
C_FNAME	Short Text	Customer First Name
C_LNAME	Short Text	Customer Last Name
C_ADDRESS	Short Text	Street Address
C_CITY	Short Text	City
C_STATE	Short Text	State (Two Chars)
C_ZIP	Short Text	Zip Code (Five Chars)
EMP_ID	Short Text	Number of Matching Sales Representative

Clients
C_ID: Client ID (Primary Key)
C_FNAME: Client First Name
C_LNAME: Client Last Name
C_ADDRESS: Client Address
C_ZIP: Client Zip Code
C_STATE: Client State
C_CITY: Client City
EMP_ID: Employee ID (Foreign Key, refers to Agents.EMP_ID)
C_ID must be unique and not null.
C_FNAME must not be null and should have a maximum length of 50 characters.
C_LNAME must not be null and should have a maximum length of 50 characters.
C_ADDRESS must not be null and should have a maximum length of 100 characters.

C_ZIP must not be null and should have a maximum length of 10 characters.
C_STATE must not be null and should have a maximum length of 2 characters
C_CITY must not be null and should have a maximum length of 50 characters.
EMP_ID must not be null and should refer to an existing Agents.EMP_ID (Foreign Key constraint).

EMPLOYEE

Field Name	Data Type	
EMP_ID	Short Text	Contains employee ID
EMP_FNAME	Short Text	Employee first name
EMP_LNAME	Short Text	Employee last name
EMP_SALARY	Currency	Employee salary
JOB_TYPE	Short Text	Job type

Employee
EMP_ID: Employee ID (Primary Key)
EMP_FNAME: Employee First Name
EMP_LNAME: Employee Last Name
EMP_SALARY: Employee Salary
JOB_TYPE: Job Type

EMP_ID must be unique not null
EMP_FNAME must not be null and should have a maximum length of 20 characters
EMP_LNAME must not be null and should have a maximum length of 20 characters
EMP_Salary must be a positive number, no null and should be stored in a numeric data type.

INVOICES

Field Name	Data Type	
INV_ID	Short Text	Contains invoice ID
TAX_AMT	Currency	Amount of tax on the invoice
TOTAL_AMT_DUE	Currency	Amount due on the invoice
C_ID	Short Text	Client ID
EMP_ID	Short Text	Employee ID
PD_ID	Short Text	POLICY DETAILS
P_ID	Short Text	

Invoices
INV_ID: Invoice ID (Primary Key)
C_ID: Customer ID (Foreign Key)
EMP_ID: Employee ID (Foreign Key, refers to Accountants.EMP_ID)

PD_ID: Product ID (Foreign Key)
P_ID: Payment ID (Foreign Key)
TOTALAMOUNTDUE: Total Amount Due

INV_ID must be unique and not null.
C_ID must not be null and should refer to an existing Customer entity (Foreign Key constraint).
EMP_ID must not be null, and it should refer to an existing Accountants.EMP_ID (Foreign Key constraint).
PD_ID must not be null and should refer to an existing Product entity (Foreign Key constraint).
P_ID must not be null and should refer to an existing Payment entity (Foreign Key constraint).
TOTALAMOUNTDUE must be a positive number or zero, not null, and should be stored in a numeric data type (decimal).

POLICIES

Field Name	Data Type	
P_ID	Short Text	Contains the policy ID
P_TYPE	Short Text	Policy type
P_STARTDATE	Date/Time	Policy Start Date
P_ENDDATE	Date/Time	Policy End Date
COVERAGE_TYPE	Short Text	Coverage type
DEDUCTIBLE_AMOUNT	Currency	Deductible Amount

Policies
P_ID: Policy ID (Primary Key)
P_DATE: Policy Date
P_TYPE: Policy Type
P_STARTDATE: Policy Start Date
P_ENDDATE: Policy End Date
COVERAGE_TYPE: Coverage Type
DEDUCTIBLEAMOUNT: Deductible Amount

P_ID must be unique and not null.
P_DATE must not be null and should be stored in a date data type.
P_TYPE must not be null and should have a maximum length of 50 characters.
P_STARTDATE must not be null and should be stored in a date data type.
P_ENDDATE must not be null and should be stored in a date data type.
COVERAGE_TYPE must not be null and should have a maximum length of 50 characters.
DEDUCTIBLEAMOUNT must be a positive number or zero, not null, and should be stored in a numeric data type (decimal).

HEALTH INSURANCE POLICIES

Field Name	Data Type	
P_ID	Short Text	Contains policy ID
PROVIDER_NAME	Short Text	Provider name
CO_PAY	Currency	Co-pay amount

Health Insurance Policies
P_ID: Policy ID (Primary Key and Foreign Key)
Provider_Name: Healthcare Provider Name
Co_Pay: Co-Pay Amount for the Policy

P_ID is a foreign key referencing the "Policies" table

HOMEOWNER INSURANCE POLICIES

Field Name	Data Type	
P_ID	Short Text	Contains policy ID, property type, and the address, city, state, and zip of the property
PROPERTY_TYPE	Short Text	Property Type
PROPERTY_ADDRESS	Short Text	Address of the property
PROPERTY_CITY	Short Text	City
PROPERTY_STATE	Short Text	State
PROPERTY_ZIP	Short Text	Zip

Homeowner Insurance Policies
P_ID: Policy ID (Primary Key and Foreign Key)
Property_Type: Type of Property Insured
Property_Address: Property Address
Property_City: Property City
Property_Zip: Property Zip

P_ID is a foreign key referencing the "Policies" table

AUTO INSURANCE POLICIES

Field Name	Data Type	
P_ID	Short Text	Contains policy ID
AUTO_MAKE	Short Text	Make of car
AUTO_MODEL	Short Text	Model of car
AUTO_YEAR	Short Text	Year the car was made
AUTO_DRIVERFNAME	Short Text	insured driver's first name
AUTO_DRIVERLNAME	Short Text	insured driver's last name

Auto Insurance Policies

P_ID: Policy ID (Primary Key and Foreign Key)
Make: Make of Insured Vehicle
Model: Model of Insured Vehicle
Year: Year of Insured Vehicle
Driver_FName: First Name of Insured Driver
Driver_LName: Last Name of Insured Driver

P_ID is a foreign key referencing the "Policies" table

LIFE INSURANCE POLICIES

Field Name	Data Type	
P_ID	Short Text	Contains policy ID
BENEFICIARY_FNAME	Short Text	Beneficiary First Name
BENEFICIARY_LNAME	Short Text	Beneficiary Last Name
POLICY_HOLDER	Short Text	Policy Holder Name

Life Insurance Policies
P_ID: Policy ID (Primary Key and Foreign Key)
Beneficiary_FName: First Name of the Policy Beneficiary
Beneficiary_LName: Last Name of the Policy Beneficiary
Policy_Holder: Name of the Policy Holder

P_ID is a foreign key referencing the "Policies" table

RENTER INSURANCE POLICIES

Field Name	Data Type	
P_ID	Short Text	Contains the policy ID
RENTAL_TYPE	Short Text	Rental type
RENTAL_ADDRESS	Short Text	Rental address
RENTAL_CITY	Short Text	City
RENTAL_STATE	Short Text	State
RENTAL_ZIP	Short Text	Zip

Renter Insurance Policies
P_ID: Policy ID (Primary Key and Foreign Key)
Rental_Type: Type of Rental Insured
Rental_Address: Rental Address
Rental_City: Rental City
Rental_State: Rental State
Rental_Zip: Rental Zip

P_ID is a foreign key referencing the "Policies" table

POLICY DETAILS

Field Name	Data Type	
PD_ID	Short Text	policy details ID
PREMIUM_AMOUNT	Currency	Premium amount
PREMIUM_STARTDATE	Date/Time	Start Date
PREMIUM_ENDDATE	Date/Time	End Date
EMP_ID	Short Text	Employee ID
P_ID	Short Text	Policy ID

Policies
P_ID: Policy ID (Foreign Key)
P_Type: Policy Type
P_StartDate: Policy Start Date
P_EndDate: Policy End Date
Coverage_Type: Coverage Type Provided by the Policy
Deductible_Amount: Deductible Amount
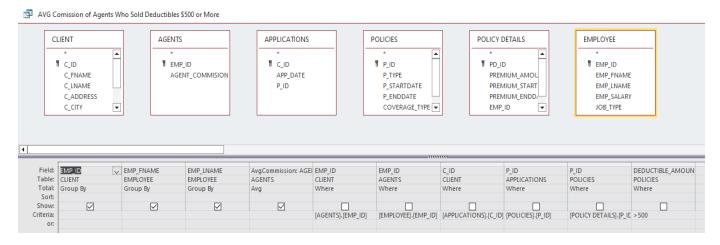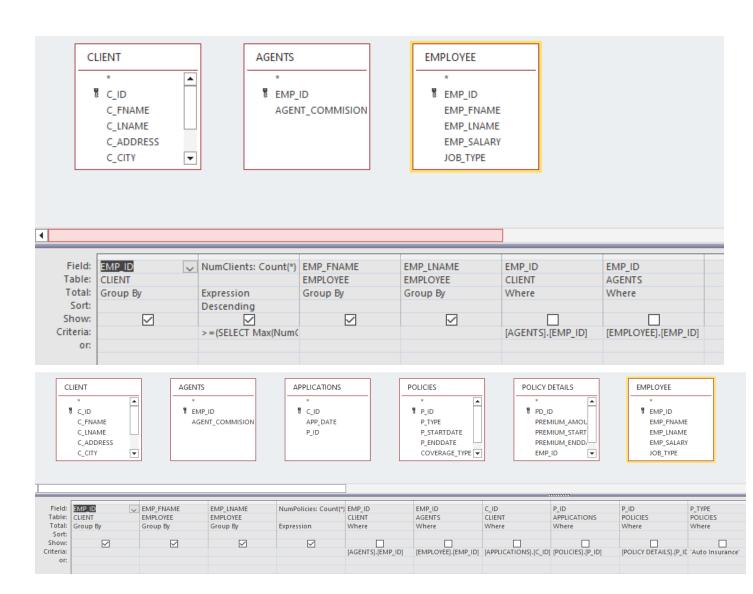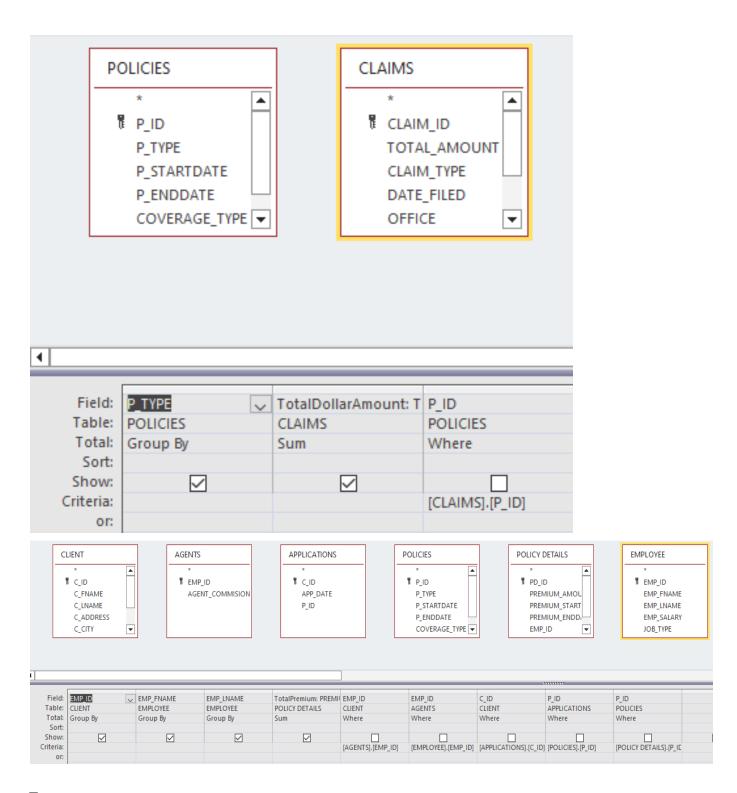
P_ID is a unique identifier for each policy; cannot be null

Queries

AVG Comission of Agents Who Sold Deductibles $500 or More

CLIENT	AGENTS	APPLICATIONS	POLICIES	POLICY DETAILS	EMPLOYEE
*	*	*	*	*	*
C_ID	EMP_ID	C_ID	P_ID	PD_ID	EMP_ID
C_FNAME	AGENT_COMMISION	APP_DATE	P_TYPE	PREMIUM_AMOU	EMP_FNAME
C_LNAME		P_ID	P_STARTDATE	PREMIUM_START	EMP_LNAME
C_ADDRESS			P_ENDDATE	PREMIUM_ENDD	EMP_SALARY
C_CITY			COVERAGE_TYPE	EMP_ID	JOB_TYPE

Field:	EMP_ID	EMP_FNAME	EMP_LNAME	AvgCommission: AGE	EMP_ID	EMP_ID	C_ID	P_ID	P_ID	DEDUCTIBLE_AMOUN
Table:	CLIENT	EMPLOYEE	EMPLOYEE	AGENTS	CLIENT	AGENTS	CLIENT	APPLICATIONS	POLICIES	POLICIES
Total:	Group By	Group By	Group By	Avg	Where	Where	Where	Where	Where	Where
Sort:										
Show:	☑	☑	☑	☑	☐	☐	☐	☐	☐	☐
Criteria:					[AGENTS].[EMP_ID]	[EMPLOYEE].[EMP_ID]	[APPLICATIONS].[C_ID]	[POLICIES].[P_ID]	[POLICY DETAILS].[P_ID]	>500
or:										

Query 1 design grid

Tables: CLIENT, AGENTS, EMPLOYEE

Field:	EMP_ID	NumClients: Count(*)	EMP_FNAME	EMP_LNAME	EMP_ID	EMP_ID
Table:	CLIENT		EMPLOYEE	EMPLOYEE	CLIENT	AGENTS
Total:	Group By	Expression	Group By	Group By	Where	Where
Sort:		Descending				
Show:	☑	☑	☑	☑	☐	☐
Criteria:		>=(SELECT Max(NumC			[AGENTS].[EMP_ID]	[EMPLOYEE].[EMP_ID]
or:						

Query 2 design grid

Tables: CLIENT, AGENTS, APPLICATIONS, POLICIES, POLICY DETAILS, EMPLOYEE

Field:	EMP_ID	EMP_FNAME	EMP_LNAME	NumPolicies: Count(*)	EMP_ID	EMP_ID	C_ID	P_ID	P_ID	P_TYPE
Table:	CLIENT	EMPLOYEE	EMPLOYEE		CLIENT	AGENTS	CLIENT	APPLICATIONS	POLICIES	POLICIES
Total:	Group By	Group By	Group By	Expression	Where	Where	Where	Where	Where	Where
Sort:										
Show:	☑	☑	☑	☑	☐	☐	☐	☐	☐	☐
Criteria:					[AGENTS].[EMP_ID]	[EMPLOYEE].[EMP_ID]	[APPLICATIONS].[C_ID]	[POLICIES].[P_ID]	[POLICY DETAILS].[P_ID	'Auto Insurance'
or:										

POLICIES

- *
- 🔑 P_ID
- P_TYPE
- P_STARTDATE
- P_ENDDATE
- COVERAGE_TYPE

CLAIMS

- *
- 🔑 CLAIM_ID
- TOTAL_AMOUNT
- CLAIM_TYPE
- DATE_FILED
- OFFICE

Field:	P_TYPE	TotalDollarAmount: T	P_ID
Table:	POLICIES	CLAIMS	POLICIES
Total:	Group By	Sum	Where
Sort:			
Show:	☑	☑	☐
Criteria:			[CLAIMS].[P_ID]
or:			

CLIENT
- *
- 🔑 C_ID
- C_FNAME
- C_LNAME
- C_ADDRESS
- C_CITY

AGENTS
- *
- 🔑 EMP_ID
- AGENT_COMMISION

APPLICATIONS
- *
- 🔑 C_ID
- APP_DATE
- P_ID

POLICIES
- *
- 🔑 P_ID
- P_TYPE
- P_STARTDATE
- P_ENDDATE
- COVERAGE_TYPE

POLICY DETAILS
- *
- 🔑 PD_ID
- PREMIUM_AMOU
- PREMIUM_START
- PREMIUM_ENDD
- EMP_ID

EMPLOYEE
- *
- 🔑 EMP_ID
- EMP_FNAME
- EMP_LNAME
- EMP_SALARY
- JOB_TYPE

Field:	EMP_ID	EMP_FNAME	EMP_LNAME	TotalPremium: PREMI	EMP_ID	EMP_ID	C_ID	P_ID	P_ID
Table:	CLIENT	EMPLOYEE	EMPLOYEE	POLICY DETAILS	CLIENT	AGENTS	CLIENT	APPLICATIONS	POLICIES
Total:	Group By	Group By	Group By	Sum	Where	Where	Where	Where	Where
Sort:									
Show:	☑	☑	☑	☑	☐	☐	☐	☐	☐
Criteria:					[AGENTS].[EMP_ID]	[EMPLOYEE].[EMP_ID]	[APPLICATIONS].[C_ID]	[POLICIES].[P_ID]	[POLICY DETAILS].[P_ID
or:									

Forms

CLAIMS

Claim ID	CLAIM_ID	Office Name	OFFICE
Total Amount	TOTAL_AMOUNT	Claim Date	CLAIM_DATE
Type of Claim	CLAIM_TYPE	Policy ID	P_ID
Date Filed	DATE_FILED	Employee ID	EMP_ID

CLIENT

ID	C_ID	City	C_CITY
First Name	C_FNAME	State	C_STATE
Last Name	C_LNAME	Zipcode	C_ZIP
Address	C_ADDRESS	Employee ID	EMP_ID

EMPLOYEE

ID	EMP_ID
First Name	EMP_FNAME
Last Name	EMP_LNAME
	EMP_SALARY
Job Type	JOB_TYPE

Form 1: POLICIES

Form Header

📊 POLICIES

Detail

Label	Field
Policy ID	P_ID
Policy Type	P_TYPE
Policy Start Date	P_STARTDATE
Policy End Date	P_ENDDATE
Coverage Type	COVERAGE_TYPE
Deductible Amount	DEDUCTIBLE_AMOUNT

Form Footer

Form 2: POLICY DETAILS

Form Header

📋 POLICY DETAILS

Detail

Label	Field
Policy Details ID	PD_ID
Premium Amount	PREMIUM_AMOUNT
Premium Start Date	PREMIUM_STARTDATE
Premium End Date	PREMIUM_ENDDATE
Employee ID	EMP_ID
Policy ID	P_ID

Form Footer

Reports

Report Header

Average Commision of Agents Who Sold
Deductibles $500 or More

=Date()
=Time()

Page Header

Employee ID	Employee First Name	Employee Last Name	Average Commission

Detail

EMP_ID	EMP_FNAME	EMP_LNAME	AvgCommission

Page Footer

="Page " & [Page] & " of " & [Pages]

Report Footer

Number of Agents Who Sold $500 or More	=Count(*)

Report 1

Report Header

Number of Auto Policies Sold by Each Employee
=Date()
=Time()

Page Header

Employee ID	Employee First Name	Employee Last Name	Number of Auto Policies

Detail

EMP_ID	EMP_FNAME	EMP_LNAME	NumPolicies

Page Footer

="Page " & [Page] & " of " & [Pages]

Report Footer

Total Number of Auto Policies Sold =Sum([NumPolicies])

Report 2

Report Header

Top 5 Agents by Client Count
=Date()
=Time()

Page Header

Employee ID	Employee First Name	Employee Last Name	Number of Clients

Detail

EMP_ID	EMP_FNAME	EMP_LNAME	NumClients

Page Footer

="Page " & [Page] & " of " & [Pages]

Report Footer

Total Number of Clients =Sum([NumClients])

Report 3

Report Header

Total Dollar Amount of Claims by Insurance Policy
=Date()
=Time()

Page Header

Policy Type	Total Dollar Amount

Detail

P_TYPE	TotalDollarAmount

Page Footer

="Page " & [Page] & " of " & [Pages]

Report Footer

Total Claims Payable =Sum([TotalDollarAmo

Report 4

Report Header

Total Premium Amount for All Policies Sold by Each Employee
=Date()
=Time()

Page Header

Employee ID	Employee First Name	Employee Last Name	Total Monthly Premium

Detail

EMP_ID	EMP_FNAME	EMP_LNAME	TotalPremium

Page Footer

="Page " & [Page] & " of " & [Pages]

Report Footer

Total Monthly Premiums Recievable =Sum([TotalPremium])