Travel Consulting Business ERD

customer

customerId (PK)	firstName	lastName
75	Anna	Smith
772	Richard	John

call

callId (PK)	call.customerId (FK)	call.consultantId (FK)	callDate	callDuration	callType
11275	75	21	2/17/26	1.5	New Reservation
12242	772	27	2/17/26	15.7	Existing Reservation

reservation

reservationId (PK)	reservation.customerId (FK)
12211	75
13343	772

consultant

consultantId (PK)	firstName	lastName
21	John	Smith
27	Ananya	Devraj

team

teamId (PK)	teamName	team.regionId (FK)
1	Giraffe	11
2	Penguin	22
3	Gazelle	33
4	Cheetah	44
5	Elephant	55
6	Moose	66
7	Horse	77
8	Dog	88
9	Cat	99
10	Meerkat	110
11	Panda	121
12	Whale	132

team_assignment

assignmentId (PK)	team_assignment.consultantId (FK)	team_assignment.teamId (FK)
675	21	1
676	21	2

region

regionId (PK)	commonTravel	regionName
11	Business	North America
22	Adventure	South East Asia
33	Adventure	South Asia
44	Business	East Asia
55	Adventure	Central Asia
66	Business	Middle East
77	Business	Europe
88	Business	North Africa
99	Business	Oceania
110	Business	LATAM
121	Business	Southern Africa
132	Adventure	East Africa

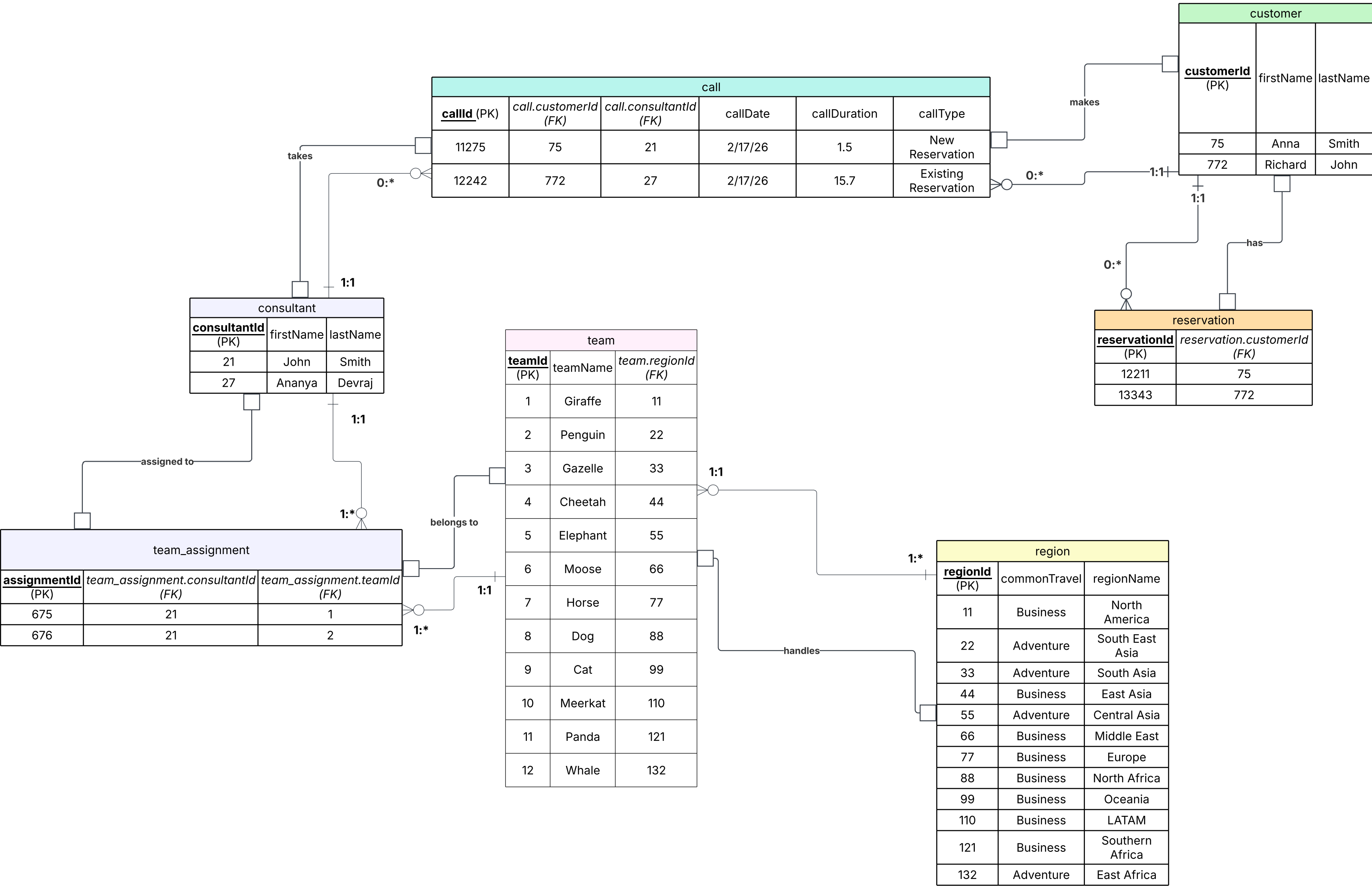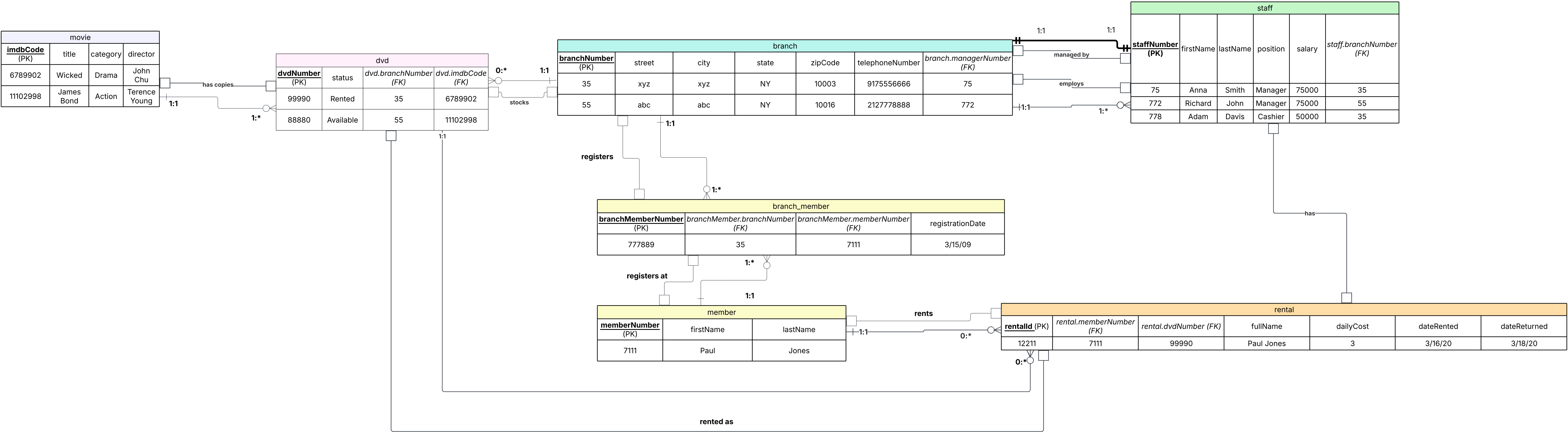Relationship labels: makes, takes, 0:*, 1:1, has, 0:*, assigned to, belongs to, handles, 1:1, 1:*, 1:*

ASSUMPTIONS
- Each team handles exactly one region at a time, and a region may have multiple teams assigned to it
- Consultants can be on multiple teams simultaneously --> M:N via team_assignment junction table
- "call" captures callType (new need vs. existing reservation), callDate, and callDuration for statistics.
- callDuration is recorded in minutes

DVD Business ERD

movie

imdbCode (PK)	title	category	director
6789902	Wicked	Drama	John Chu
11102998	James Bond	Action	Terence Young

dvd

dvdNumber (PK)	status	dvd.branchNumber (FK)	dvd.imdbCode (FK)
99990	Rented	35	6789902
88880	Available	55	11102998

branch

branchNumber (PK)	street	city	state	zipCode	telephoneNumber	branch.managerNumber (FK)
35	xyz	xyz	NY	10003	9175556666	75
55	abc	abc	NY	10016	2127778888	772

staff

staffNumber (PK)	firstName	lastName	position	salary	staff.branchNumber (FK)
75	Anna	Smith	Manager	75000	35
772	Richard	John	Manager	75000	55
778	Adam	Davis	Cashier	50000	35

branch_member

branchMemberNumber (PK)	branchMember.branchNumber (FK)	branchMember.memberNumber (FK)	registrationDate
777889	35	7111	3/15/09

member

memberNumber (PK)	firstName	lastName
7111	Paul	Jones

rental

rentalId (PK)	rental.memberNumber (FK)	rental.dvdNumber (FK)	fullName	dailyCost	dateRented	dateReturned
12211	7111	99990	Paul Jones	3	3/16/20	3/18/20

Relationships: has copies, stocks, managed by (1:1), employs, registers, registers at, rents, has, rented as

ASSUMPTIONS
- A manager is a member of staff, so managerNumber FK on the branch table points to staffNumber in the staff table.
  --> This means two relationship lines exist between branch and staff: "employs" (1:M, a branch has many staff) and "managed by" (1:1, a branch has exactly one manager at any given time).

- Staff work at only one branch at a time. Reassignment is handled by updating the branchNumber FK on the staff table, so a junction table is not needed.

- Customers can register as members at multiple branches simultaneously --> creating a many-to-many relationship --> is resolved with the branch_member junction table, which holds its own standalone PK (branchMemberNumber) and two FKs pointing to branch and member

- registrationDate is stored on branch_member rather than member, because a customer registers at each branch at a different time.
- dailyRentalCost is stored on rental rather than on dvd or movie, since the rate is standard per branch and could change over time. Storing it on rental captures the rate at the time of the transaction.

- The maximum of 10 DVDs rented at one time is a business rule enforced at the application level, not something modeled in the ERD.