Normalization

The schema is normalized to Third Normal Form (3NF):

- 1NF: No repeating groups; atomic values
- 2NF: No partial dependencies
- 3NF: No transitive dependencies

Tables and Fields

Table	Field	Data Type	Constraints
Location	LocationID	INT	PRIMARY KEY
	County	VARCHAR(100)	NOT NULL
	SubCounty	VARCHAR(100)	NOT NULL
	Ward	VARCHAR(100)	
	GPSCoordinates	VARCHAR(255)	
Organization	OrganizationID	INT	PRIMARY KEY
	OrgName	VARCHAR(100)	NOT NULL
	OrgType	VARCHAR(50)	
	ContactInfo	VARCHAR(255)	
	RegistrationNo	VARCHAR(50)	UNIQUE
ResponseTeam	TeamID	INT	PRIMARY KEY
	Name	VARCHAR(100)	NOT NULL
	OrganizationID	INT	FOREIGN KEY → Organization
	ContactInfo	VARCHAR(255)	
	Specialization	VARCHAR(100)	
Disaster Event	EventID	INT	PRIMARY KEY
	Type	VARCHAR(100)	NOT NULL
	LocationID	INT	FOREIGN KEY → Location
	SeverityLevel	VARCHAR(50)	
	StartDate	DATE	
	EndDate	DATE	
	Description	TEXT	
ImpactReport	ReportID	INT	PRIMARY KEY
	EventID	INT	FOREIGN KEY → DisasterEvent
	ReportDate	DATE	
	Casualties	INT	
	Injuries	INT	
	PropertyDamage	TEXT	
	Remarks	TEXT	
Deployment	DeploymentID	INT	PRIMARY KEY

	TeamID	INT	FOREIGN KEY → ResponseTeam
	EventID	INT	FOREIGN KEY → DisasterEvent
	DeploymentDate	DATE	
	Status	VARCHAR(50)	
AffectedPerson	PersonID	INT	PRIMARY KEY
	FullName	VARCHAR(100)	NOT NULL
	Age	INT	
	LocationID	INT	FOREIGN KEY → Location
	Needs	TEXT	
	Status	VARCHAR(50)	
	Gender	VARCHAR(10)	
AidResource	ResourceID	INT	PRIMARY KEY
	ResourceType	VARCHAR(100)	NOT NULL
	Description	TEXT	
	QuantityAvailable	INT	DEFAULT 0
ResourceDistribution	DistributionID	INT	PRIMARY KEY
	ResourceID	INT	FOREIGN KEY → AidResource
	PersonID	INT	FOREIGN KEY → AffectedPerson
	EventID	INT	FOREIGN KEY → DisasterEvent
	Quantity	INT	NOT NULL
	DistributionDate	DATE	

Indexes (Performance Optimization)

Table	Field(s) to Index	Purpose
Disaster Event	LocationID, SeverityLevel	Faster filtering by location or severity
ResponseTeam	OrganizationID	Quick lookup of teams under an organization
AffectedPerson	LocationID, Status	For filtering affected people by location/status
ResourceDistribution	EventID, PersonID, ResourceID	Faster joins and reports
Deployment	TeamID, EventID	Efficient team-event deployment tracking