

COSMIC VAULT SCHEMA DESIGN

Table Name	Column Name	Data Type	Constraints
ObjectTypes			
ObjectTypes	TypeID	INT	PRIMARY KEY IDENTITY(1,1)
ObjectTypes	TypeName	VARCHAR(50)	NOT NULL UNIQUE
Constellations			
Constellations	ConstellationID	INT	PRIMARY KEY IDENTITY(1,1)
Constellations	Name	VARCHAR(100)	NOT NULL UNIQUE
Constellations	Abbreviation	VARCHAR(10)	NOT NULL
Constellations	Description	TEXT	
CelestialObjects			
CelestialObjects	ObjectID	INT	PRIMARY KEY IDENTITY(1,1)
CelestialObjects	Name	VARCHAR(100)	NOT NULL
CelestialObjects	TypeID	INT	NOT NULL FOREIGN KEY REFERENCES ObjectTypes (TypeID)
CelestialObjects	ConstellationID	INT	FOREIGN KEY REFERENCES Constellations (ConstellationID)
CelestialObjects	RightAscension	DECIMAL(10, 2)	
CelestialObjects	Declination	DECIMAL(10, 2)	
CelestialObjects	DistanceLightYears	DECIMAL(15, 2)	
CelestialObjects	ApparentMagnitude	DECIMAL(5, 2)	
StarDetails			
StarDetails	StarID	INT	PRIMARY KEY FOREIGN KEY REFERENCES CelestialObjects(ObjectID)
StarDetails	SpectralClass	VARCHAR(10)	
StarDetails	LuminosityClass	VARCHAR(20)	
StarDetails	Temperature	INT	
StarDetails	MassSolar	DECIMAL(10, 2)	
ExoplanetDetails			
ExoplanetDetails	ExoplanetID	INT	PRIMARY KEY FOREIGN KEY REFERENCES CelestialObjects(ObjectID)
ExoplanetDetails	HostStarID	INT	FOREIGN KEY REFERENCES CelestialObjects (ObjectID)
ExoplanetDetails	OrbitalPeriodDays	DECIMAL(10, 2)	
ExoplanetDetails	SemiMajorAxisAU	DECIMAL(10, 2)	
ExoplanetDetails	Eccentricity	DECIMAL(5, 2)	
Users			
Users	UserID	INT	PRIMARY KEY IDENTITY(1,1)
Users	Username	VARCHAR(50)	NOT NULL UNIQUE
Users	Email	VARCHAR(100)	NOT NULL UNIQUE
Users	Pass_word	VARCHAR(256)	NOT NULL
Users	CreatedAt	DATETIME	DEFAULT GETDATE()
ObservationLogs			
ObservationLogs	LogID	INT	PRIMARY KEY IDENTITY(1,1)
ObservationLogs	UserID	INT	NOT NULL FOREIGN KEY REFERENCES Users (UserID)
ObservationLogs	ObjectID	INT	NOT NULL FOREIGN KEY REFERENCES CelestialObjects(ObjectID)
ObservationLogs	ObservationDate	DATETIME	NOT NULL
ObservationLogs	Notes	TEXT	
ObservationLogs	EquipmentUsed	VARCHAR(200)	
ObservationLogs	SeeingConditions	VARCHAR(100)	