

## Global Startup Ecosystem:

### Classes:

- **Startup**: Attributes: **startupID**, **name**, **category**, **fundingTotal**, **status**.
- **Investor**: Attributes: **investorID**, **name**, **investorType**.
- **FundingRound**: Attributes: **roundID**, **fundingRoundType**, **fundingDate**.
- **Venue**: Attributes: **venueID**, **venueName**, **location**.
- **Founder**: Attributes: **founderID**, **founderName**, **birthDate**, **nationality**.
- **Relationships**:
  - Many-to-many between **Startup** and **Investor** through **FundingRound**.
  - One-to-many between **Venue** and **Startup**

### Nouns

### Verbs

### Rules

- A **Venue** can **host** multiple **funding rounds** but a funding round can be **hosted** at a single **Venue**.
- Each **Startup** may **receive** investments from multiple **Investors** through different **Funding Rounds**.
- An **Investor** can **invest** in multiple **Startups** and **participate** in various **Funding Rounds**.
- **Investors** can be **categorized** into **Individual Investors** and **Institutional Investors**.
- Each **Funding Round** is **associated** with one **Startup** and one **Investor**.
- A **Founder** can be **associated** with multiple **Startups**.
- A **Startup** can have multiple **Founders**.

### Nouns

- Venue
- Startup
- Funding Rounds
- Investor
- Individual Investor
- Institutional Investor
- Founder

## **Verbs**

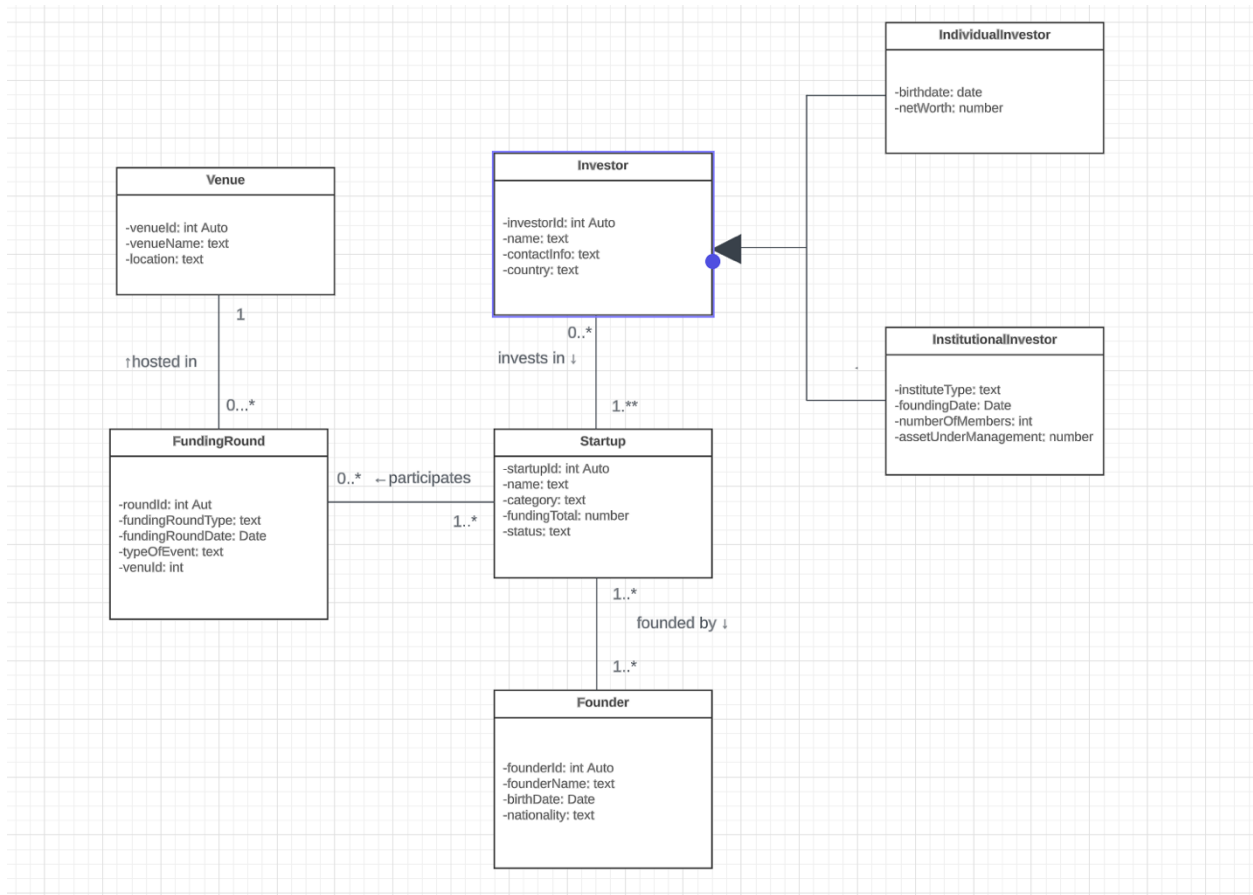
- Hosts
- Invests
- Participates
- Associated
- Receive
- Categorized

## **List of Possible Actions**

- Register a new Startup
- Update Startup details
- Delete a Startup
- Add a new Investor
- Update Investor details
- Delete an Investor
- Record a new Funding Round
- Update Funding Round details
- Delete a Funding Round
- View all Startups from a specific Country
- View all Funding Rounds for a particular Startup
- View all Investments made by an Investor
- Analyze Investor preferences by Country
- Determine Startup categories preferred by Investors from a specific Country
- Analyze the funding received by a certain type of startups
- Determine the type of startups receiving the most number amount of funding.

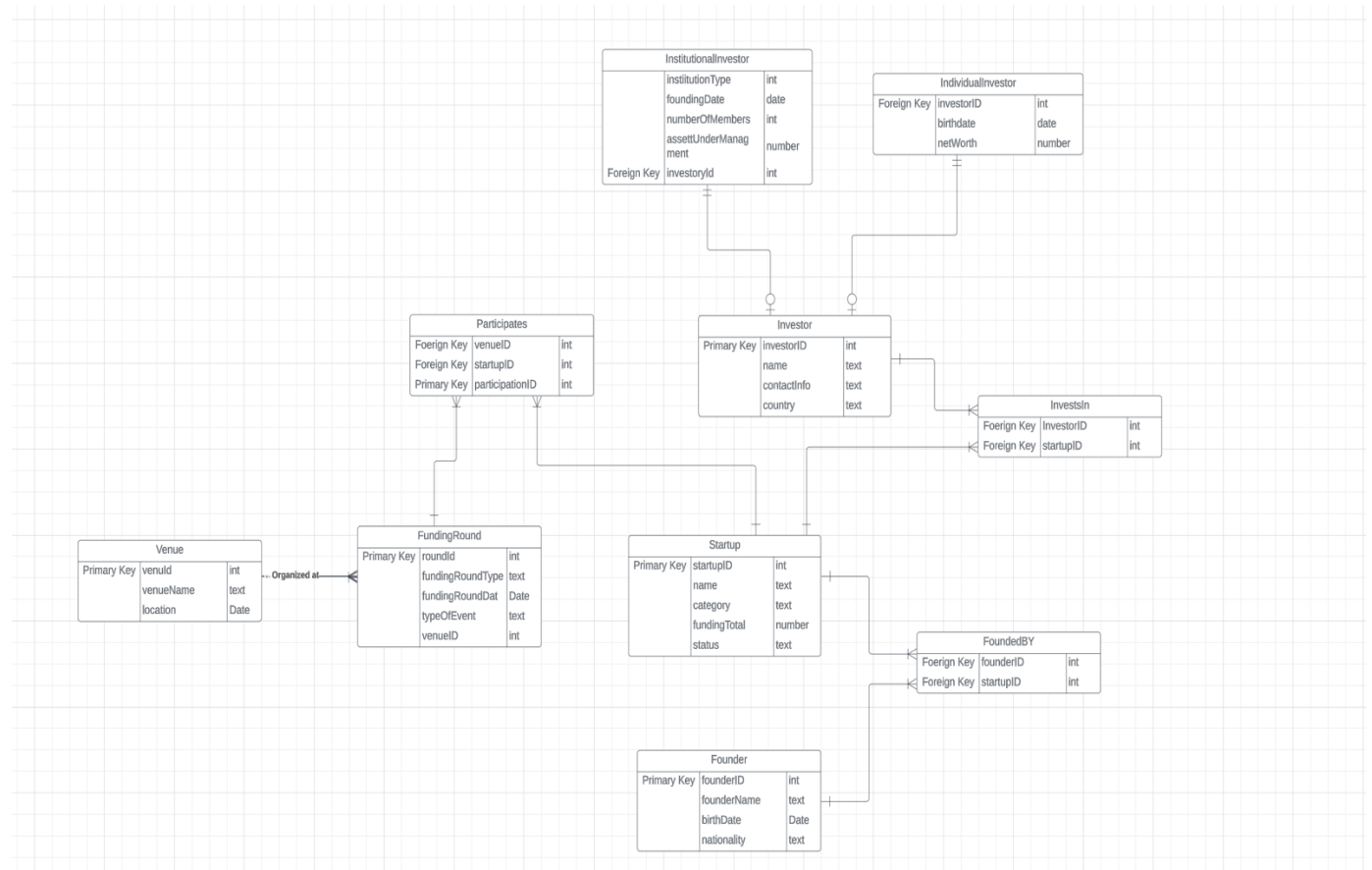
# UML Diagram

[Link to UML diagram](#)



## ERD Diagram

[Link to ERD Diagram](#)



## BCNF

### 1. Venue

Functional Dependency:  $\text{venueId} \rightarrow \text{venueName}, \text{location}$

Superkey:  $\text{venueId}$

Since  $\text{venueId}$  is a superkey, this relation is in BCNF.

### 2. FundingRound

Functional Dependency:  $\text{roundId} \rightarrow \text{fundingRoundType}, \text{typeOfEvent}, \text{venueId}$

Superkey:  $\text{roundId}$

Since  $\text{roundId}$  is a superkey, this relation is in BCNF.

### 3. Startup

Functional Dependency:  $\text{startupId} \rightarrow \text{name}, \text{category}, \text{fundingTotal}, \text{status}$

Superkey:  $\text{startupId}$

Since  $\text{startupId}$  is a superkey, this relation is in BCNF.

### 4. Investor

Functional Dependency:  $\text{investorId} \rightarrow \text{name}, \text{contactInfo}, \text{country}$

Superkey:  $\text{investorId}$

Since  $\text{investorId}$  is a superkey, this relation is in BCNF.

#### 5. InstitutionalInvestor

Functional Dependency: investorId  $\rightarrow$  institutionType, foundingDate, numberOfMembers, assetUnderManagement

Superkey: investorId

Since investorId is a superkey, this relation is in BCNF.

#### 6. IndividualInvestor

Functional Dependency: investorId  $\rightarrow$  birthdate, netWorth

Superkey: investorId

Since investorId is a superkey, this relation is in BCNF.

#### 7. Founder

Functional Dependency:

founderId  $\rightarrow$  founderName, birthDate, nationality

Superkey: founderId

Since founderId is a superkey, this relation is in BCNF.

#### 8. Participates

This is a junction table, and its primary key is a combination of all its attributes, making it in BCNF by definition.

#### 9. InvestsIn

This is another junction table, and its primary key is a combination of all its attributes, making it in BCNF by definition.

## 10. FoundedBy

This is a junction table as well, and its primary key is a combination of all its attributes, making it in BCNF by definition.