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
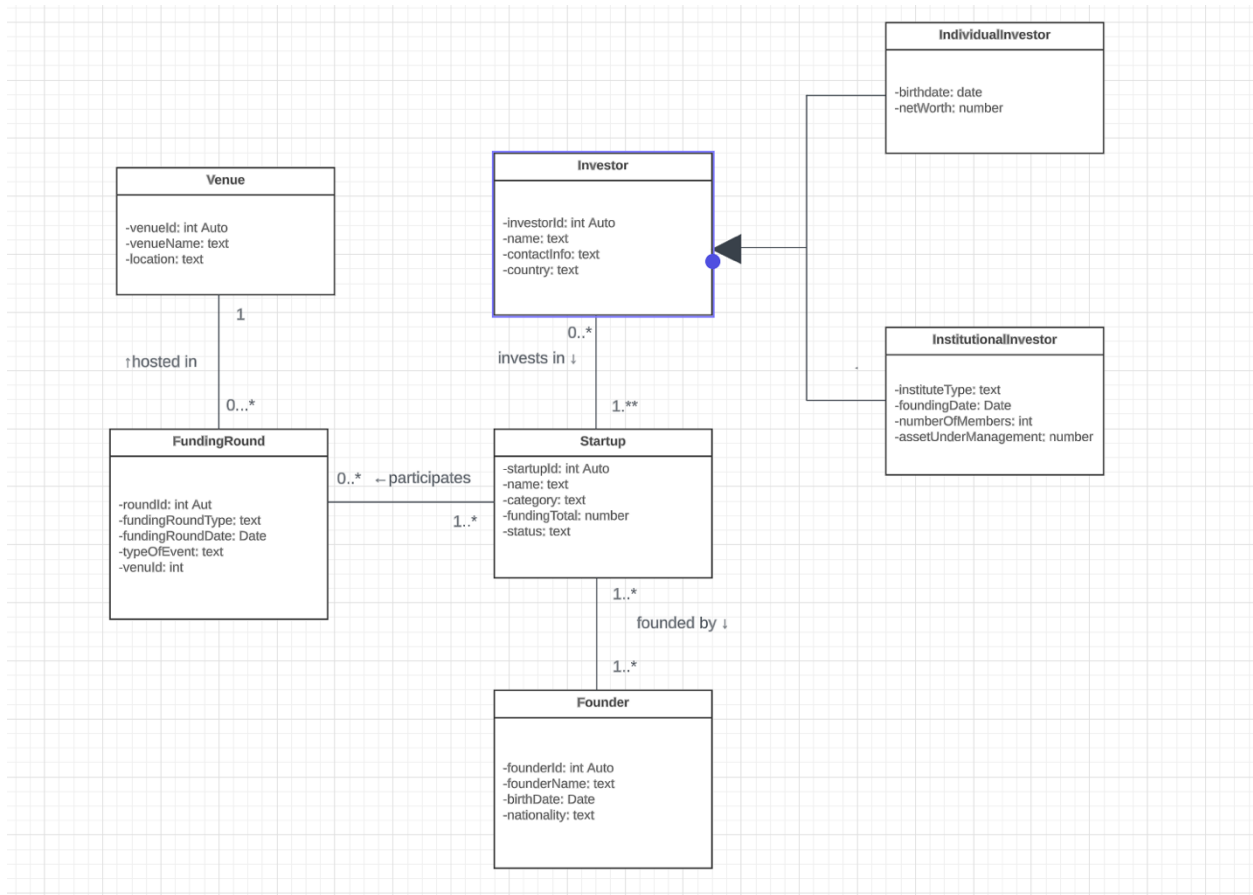- Institutional Investor
- Founder

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
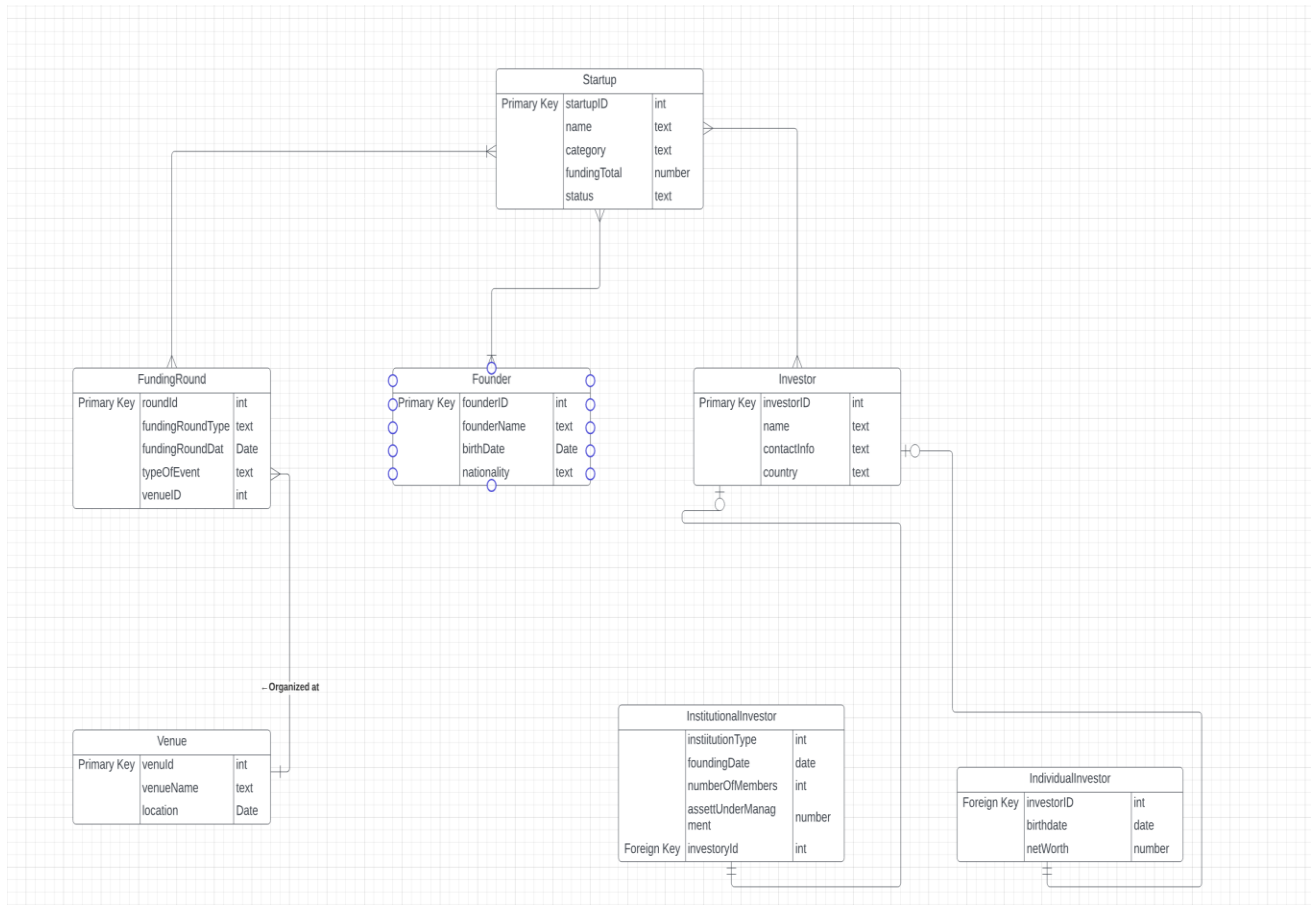- Determine the type of startups receiving the most number amount of funding.

UML Diagram

ERD Diagram

[Link to ERD Diagram](#)

Startup
Primary Key	startupID	int
	name	text
	category	text
	fundingTotal	number
	status	text

FundingRound
Primary Key	roundId	int
	fundingRoundType	text
	fundingRoundDat	Date
	typeOfEvent	text
	venueID	int

Founder
Primary Key	founderID	int
	founderName	text
	birthDate	Date
	nationality	text

Investor
Primary Key	investorID	int
	name	text
	contactInfo	text
	country	text

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Venue
Primary Key	venuId	int
	venueName	text
	location	Date

InstitutionalInvestor
	instiitutionType	int
	foundingDate	date
	numberOfMembers	int
	assettUnderManagment	number
Foreign Key	investoryId	int

IndividualInvestor
Foreign Key	investorID	int
	birthdate	date
	netWorth	number

Mongo Documents

1. Startup Collection

Contains startup details.

An array of founderIDs references the Founder collection.

An array of investorIDs references the Investor collection.

An array of fundingRoundIDs references the FundingRound collection.

Example JSON

```
{
  "startupDetails": { /* ... */ },
  "founders": [/* array of ObjectIds referencing Founder documents */],
  "investors": [/* array of ObjectIds referencing Investor documents */],
  "fundingRounds": [/* array of ObjectIds referencing FundingRound documents */]
}
```

2.Investor Collection

Stores common details for all investors, using a discriminator field to distinguish between individual and institutional investors.

An array of startupIDs to represent the many-to-many relationship with startups.

Example JSON

```
{
  "commonDetails": { /* ... */ },
  "investorType": "Individual" | "Institutional",
  "individualDetails": { /* ... */ }, // Exists only if investorType is "Individual"
  "institutionalDetails": { /* ... */ }, // Exists only if investorType is "Institutional"
  "startups": [/* array of ObjectIds referencing Startup documents */]
```

}

3.FundingRound Collection

Contains details specific to each funding round.

An object for venue details, potentially a subdocument if the venue data is small and not frequently updated on its own.

An array of participatingStartupIDs references the Startup collection.

Example JSON

```
{
  "fundingRoundDetails": { /* ... */ },
  "venue": { /* subdocument with venue details */ },
  "participatingStartups": [/* array of ObjectIds referencing Startup documents */]
}
```

4.Founder Collection

Founder details are stored in this collection.

Could be referenced by founderIDs within the Startup collection.

json

Copy code

```
{
  "founderDetails": { /* ... */ }
}
```

Note: For the Investor collection, which is a generalization of individual and institutional investors, the discriminator field (investorType) helps to manage this generalization by indicating the type of investor each document represents.