RELATIONSHIP

Exchange **have access** to cryptocurrencies

Marketcap **varies from** Prices

Wallets **are mandatory for** Users

Describe each relationship among your entities. Describe the cardinality as well as the participation of each entity involved in each relationship.

In the cryptocurrency entity, we are using name, date\_created, crypto\_id, and symbol as attributes. The crypto\_id is the id. The name is the name of the cryptocurrency. The date created is when the cryptocurrency was first launched. The symbol shows the cryptocurrencies’ abbreviation.

In the users entity, the attributes are name, user\_id, user\_name which is a composite attribute and is divided into first and last name.The name shows the name of the cryptocurrency. The user\_id is the id.

In the exchange entity, the attributes are exchange\_id, country, name, and date created. The exchange\_id is the id. Name is the name of the crypto exchange. Country is where the company is based. The date is when the company was created.

In the prices entity, the attributes are price\_id, price, name, and value\_date. The price\_id is the id. Name contains the names of the cryptocurrency. Price shows how much the cryptocurrency was worth that day. Value\_date is the date the price was taken.

In the wallets entity, the attributes are wallet\_id, address, name, and name\_tag. Wallet\_id is the id. Address is for the cryptocurrency wallet address. The name\_tag is for how the crypto has been deposited to the address.

In the market cap entity, the attributes are market\_id, marketcap\_value, name, and ATH(all time high). The market\_id is the id. The marketcap\_value shows the price of the market cap. The name is the name of the cryptocurrency. The ATH(all time high) shows the highest price a cryptocurrency has reached.

CARDINALITY

1:1 = **Users** are required to have at least one **wallet** per user

**Marketcap** values vary from the **Prices**

1:N = Many (N) **cryptocurrencies** are traded in one of the crypto **exchanges**

PARTICIPATION

Cryptocurrencies (partical participation) and Exchange (total participation) – Some of the cryptocurrencies are not required to be in a specific exchange. For example, Bitcoin is not tradeable through crypto.com. On the other hand, the exchange would not exist if there’s no cryptocurrency.

Prices (partial participation) and Marketcap (total participation) – Prices vary from different marketcap. For example, Bitcoin’s marketcap is 500 million and Ethereum is 214 million. On the other hand, marketcap would not exist if people were not trading and prices are at 0.

Users (partial participation) and Wallets (total participation) – Users have different wallets in order to differentiate between users. At the same time, wallets would not be present or created if there’s no user.