Database model documentation

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1. Model details

Model name:

Trading Stocks and Cryptocurrencies Data Model

Version:

2.3

Database engine:

MySQL

Description:

2. Tables

2.1. Table trader

2.1.1. Columns

Column name	Type	Properties	Description
id	int	PK	
first_name	varchar(64)		
last_name	varchar(64)		
user_name	varchar(64)		
password	varchar(64)		
email	varchar(128)		
confirmation_code	varchar(128)		
time_registered	timestamp		
time_confirmed	timestamp		
country_id	int		
preferred_currency_id	int		

2.1.2. Alternate keys

Key name	Columns	Description
trader_ak_1	user_name, email	

2.2. Table currency

2.2.1. Columns

Column name	Type	Properties	Description
id	int	PK	
code	varchar(8)		e.g. iso code for currencies
name	varchar(128)		
is_active	bool		
is_base_currency	bool		

2.2.2. Alternate keys

Key name	Columns	Description
currency_ak_1	code	
currency_ak_2	name	

2.3. Table item

Description:

   list of all items we'l have available for trade - share, fund, currency

2.3.1. Columns

Column name	Type	Properties	Description
id	int	PK	
code	varchar(64)		
name	varchar(255)		
is_active	bool		
currency_id	int		
details	text	null	

2.3.2. Alternate keys

Key name	Columns	Description
item_ak_1	code	

2.4. Table trade

2.4.1. Columns

Column name	Type	Properties	Description
id	int	PK	
item_id	int		
seller_id	int	null	
buyer_id	int		
qunatity	decimal(16,6)		
unit_price	decimal(16,6)		
description	text		
offer_id	int		

2.5. Table current_inventory

2.5.1. Columns

Column name	Type	Properties	Description
id	int	PK	
trader_id	int		
item_id	int		
quantity	decimal(16,6)		

2.5.2. Alternate keys

Key name	Columns	Description
current_inventory_ak_1	trader_id, item_id	

2.6. Table offer

Description:

　　　list of all offers avaliable to buy/sell

2.6.1. Columns

Column name	Type	Properties	Description
id	int	PK	
trader_id	int		
item_id	int		
quantity	decimal(16,6)		
buy	bool		
sell	bool		
price	decimal(16,6)	null	
ts	timestamp		
is_active	bool		

2.7. Table price

Description:

　　　list of history prices (buy & sell)

2.7.1. Columns

Column name	Type	Properties	Description

id	int	PK	
item_id	int		
currency_id	int		
buy	decimal(16,6)		
sell	decimal(16,6)		
ts	timestamp		

2.8. Table currency_rate

Description:

history rates between currencies (base currency and others)

2.8.1. Columns

Column name	Type	Properties	Description
id	int	PK	
currency_id	int		
base_currency_id	int		
rate	decimal(16,6)		
ts	timestamp		

2.9. Table report

2.9.1. Columns

Column name	Type	Properties	Description
id	int	PK	
trading_date	date		
item_id	int		
currency_id	int		
first_price	decimal(16,6)	null	
last_price	decimal(16,6)	null	
min_price	decimal(16,6)	null	
max_price	decimal(16,6)	null	
avg_price	decimal(16,6)	null	
total_amount	decimal(16,6)	null	
quantity	decimal(16,6)	null	

2.9.2. Alternate keys

Key name	Columns	Description
report_ak_1	trading_date, item_id, currency_id	

2.10. Table country

2.10.1. Columns

Column name	Type	Properties	Description
id	int	PK	
name	varchar(128)		

2.10.2. Alternate keys

Key name	Columns	Description
country_ak_1	name	

2.11. Table currency_used

2.11.1. Columns

Column name	Type	Properties	Description
id	int	PK	
country_id	int		
currency_id	int		
date_from	date		
date_to	date	null	

3. References

3.1. Reference trade_item

item	0..*	trade
id	<->	`item_id`

3.2. Reference trade_seller

trader	0..*	trade
id	<->	`seller_id`

3.3. Reference trade_buyer

trader	0..*	trade
id	<->	`buyer_id`

3.4. Reference item_currency

currency	0..*	item
id	<->	`currency_id`

3.5. Reference current_inventory_trader

trader	0..*	current_inventory
id	<->	`trader_id`

3.6. Reference current_inventory_item

item	0..*	current_inventory
id	<->	`item_id`

3.7. Reference offer_trader

trader	0..*	offer
id	<->	`trader_id`

3.8. Reference offer_item

item	0..*	offer
id	<->	item_id

3.9. Reference trade_offer

offer	0..*	trade
id	<->	offer_id

3.10. Reference price_item

item	0..*	price
id	<->	item_id

3.11. Reference price_currency

currency	0..*	price
id	<->	currency_id

3.12. Reference currency_rate_currency

currency	0..*	currency_rate
id	<->	currency_id

3.13. Reference currency_rate_base_currency

currency	0..*	currency_rate
id	<->	base_currency_id

3.14. Reference report_item

item	0..*	report
id	<->	item_id

3.15. Reference report_currency

currency	0..*	report
id	<->	currency_id

3.16. Reference currency_used_country

country	0..*	currency_used
id	<->	country_id

3.17. Reference currency_used_currency

currency	0..*	currency_used
id	<->	currency_id

3.18. Reference trader_country

country	0..*	trader
id	<->	country_id

3.19. Reference trader_currency

currency	0..*	trader
id	<->	preferred_currency_id

4. Areas

4.1. Currencies subject area

4.1.1. Tables

- currency
- currency_rate
- country
- currency_used

4.1.2. References

- trade_item
- trade_seller
- trade_buyer
- item_currency
- current_inventory_trader
- current_inventory_item
- offer_trader
- offer_item
- trade_offer
- price_item
- price_currency
- currency_rate_currency
- currency_rate_base_currency
- report_item
- report_currency
- currency_used_country
- currency_used_currency
- trader_country
- trader_currency

4.2. Items subject area

4.2.1. Tables

- item
- price
- report
- currency

4.2.2. References

- trade_item
- trade_seller

4.3. Traders subject area

4.3.1. Tables

4.3.2. References

- report_item
- report_currency
- currency_used_country
- currency_used_currency
- trader_country
- trader_currency