

Magic: The Gathering Database Documentation

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1 Philosophy of Design

write something about why we did the things we did.

2 Tables

2.1 CARD

The MTG wiki had the following to say about what a card is.

In Magic: The Gathering, a card is the standard component of the game. The word card usually refers to a Magic card with a Magic card front and a Magic card back, or to double-faced cards.

2.1.1 Attributes

- card_name
 - **description:** The name of the card.
 - **data type:** String
 - **domain:** Any valid card name.
- text
 - **description:** Everything in the text area of the card.
 - **data type:** String
 - **domain:** Any valid card text.
- type
 - **description:** The type of the card (creature, artifact, etc).
 - **data type:** String
 - **domain:** Any valid magic card type.
- supertype
 - **description:** The super type of the card (legendary, snow, etc).
 - **data type:** String
 - **domain:** Any valid magic card supertype.
- power
 - **description:** The card's power.
 - **data type:** Integer
 - **domain:** Any non-negative integer.

- toughness
 - **description:** The card's toughness.
 - **data type:** Integer
 - **domain:** Any non-negative integer.
- loyalty
 - **description:** The card's loyalty.
 - **data type:** Integer
 - **domain:** Any non-negative integer.

2.2 SET

The MTG wiki had the following to say about what a set is.

A set in Magic: The Gathering is a pool of cards released together and designed for the same play environment. Cards in a set can be obtained either randomly through booster packs, or in box sets that have a fixed selection of cards. An expansion symbol and, more recently, a three-character abbreviation is printed on each card to identify the set it belongs to.

2.2.1 Attributes

- set_code
 - **description:** The alphanumeric code associated with a set.
 - **data type:** String
 - **domain:** Combinations of letters and digits.
- set_name
 - **description:** The name of the set.
 - **data type:** String
 - **domain:** Any valid set name.
- year
 - **description:** The year the set was released.
 - **data type:** Integer
 - **domain:** Any valid year.
- set_type
 - **description:** The type of set it is (Core, expansion, etc).
 - **data type:** String
 - **domain:** Any valid set type.

2.3 FORMAT

The MTG wiki had the following to say about what a format is.

Formats are different modes in which the Magic: The Gathering collectible card game can be played. Each format provides rules for deck construction and gameplay.

2.3.1 Attributes

- `format_name`
 - **description:** The name of the format.
 - **data type:** String
 - **domain:** Any valid format name.
- `min_deck_size`
 - **description:** The minimum number of cards allowed in a deck.
 - **data type:** Integer
 - **domain:** Any non-negative integer.
- `max_deck_size`
 - **description:** The maximum number of cards allowed in a deck.
 - **data type:** Integer.
 - **domain:** Any integer, negative integers are interpreted as infinity.
- `copies_allowed`
 - **description:** The maximum number of copies of a card allowed in a deck.
 - **data type:** Integer
 - **domain:** Any non-negative integer.

2.4 IS_ALLOWED

description

2.4.1 Attributes

- `set_code`
 - **description:** A foreign key from SET.
 - **data type:** String
 - **domain:** Combinations of letters and digits.

- `format_name`
 - **description:** A foreign key from FORMAT.
 - **data type:** String
 - **domain:** Any valid format name.

2.5 CONTAINS

description

2.5.1 Attributes

- `set_code`
 - **description:** A foreign key from SET.
 - **data type:** String
 - **domain:** Combinations of letters and digits.
- `card_name`
 - **description:** A foreign key from CARD.
 - **data type:** String
 - **domain:** Any valid card name.
- `rarity`
 - **description:** The rarity of the card (common, uncommon, etc).
 - **data type:** String
 - **domain:** Any valid magic card rarity.

2.6 LIMITATION

description

2.6.1 Attributes

- `format_name`
 - **description:** A foreign key from FORMAT.
 - **data type:** String
 - **domain:** Any valid format name.
- `card_name`
 - **description:** A foreign key from CARD.
 - **data type:** String

- **domain:** Any valid card name.
- limitation_type
 - **description:** The way in which a card is limited (banned, restricted, etc).
 - **data type:** String
 - **domain:** Any valid limitation.

2.7 COLOR

MTG wiki had the following to say about color.

Color is a basic property of cards in Magic: The Gathering, forming the core of the game's mana system and overall strategy.

2.7.1 Attributes

- card_name
 - **description:** A foreign key from CARD.
 - **data type:** String
 - **domain:** Any valid card name.
- color
 - **description:** The color a card is associated with, usually indicated by the physical color of the card.
 - **data type:** String
 - **domain:** Any valid magic card color.

2.8 COLOR_COST

description

2.8.1 Attributes

- card_name
 - **description:** A foreign key from CARD.
 - **data type:** String
 - **domain:** Any valid card name.
- cost_string
 - **description:** An alphanumeric representation of a cards mana cost.
 - **data type:** String

- **domain:** Strings over the alphabet $\Sigma = \{R, U, G, B, W, X, \phi\}$ where $\phi \in \mathbb{Z}_{>0}$ and each string that contains ϕ begins with ϕ .
- **converted_cost**
 - **description:** The sum over a cards mana cost. Each occurrence of

Table 1: How to sum a cost_string.

Σ	value
R	1
U	1
G	1
B	1
W	1
X	0
ϕ	ϕ

a character in a cost_string is summed according to the above table.

- **data type:** Integer
- **domain:** Any non-negative integer.

2.9 DOUBLE_CARD

description

2.9.1 Attributes

- **side_a**
 - **description:** A foreign key from CARD, specifically a card_name.
 - **data type:** String
 - **domain:** Any valid card name.
- **side_b**
 - **description:** A foreign key from CARD, specifically a card_name.
 - **data type:** String
 - **domain:** Any valid card name.
- **set_code**
 - **description:** A foreign key from SET.
 - **data type:** String
 - **domain:** Combinations of letters and digits.

2.10 SUBTYPE

description

2.10.1 Attributes

- `card_name`
 - **description:** A foreign key from CARD.
 - **data type:** String
 - **domain:** Any valid card name.
- `subtype`
 - **description:** The subtype of the card (equipment, curse, etc).
 - **data type:** String
 - **domain:** Any valid magic card subtype.

2.11 COLOR_IDENTITY

description

2.11.1 Attributes

- `card_name`
 - **description:** A foreign key from CARD.
 - **data type:** String
 - **domain:** Any valid card name.
- `red`
 - **description:** A flag to indicate the cards alignment with red.
 - **data type:** Boolean
 - **domain:** Any valid boolean.
- `blue`
 - **description:** A flag to indicate the cards alignment with blue.
 - **data type:** Boolean
 - **domain:** Any valid boolean.
- `green`
 - **description:** A flag to indicate the cards alignment with green.
 - **data type:** Boolean

- **domain:** Any valid boolean.
- white
 - **description:** A flag to indicate the cards alignment with white.
 - **data type:** Boolean
 - **domain:** Any valid boolean.
- black
 - **description:** A flag to indicate the cards alignment with black.
 - **data type:** Boolean
 - **domain:** Any valid boolean.
- colorless
 - **description:** A flag to indicate the cards alignment with colorless.
 - **data type:** Boolean
 - **domain:** Any valid boolean.