

In the Book class:

context Book

inv TitleNotBlank: not title.isBlank()

inv ImageUrlFormat: image_url.matches('^((http|https)://.*\$)')

inv BookLinkNotBlank: not book_link.isBlank()

inv BookLinkFormat: book_link.matches('^((http|https)://.*\$)')

inv AuthorsNotBlank: not authors.isBlank()

inv RatingRange: rating >= 0 and rating <= 5

inv PriceNonNegative: price >= 0

inv DiscountRange: discount >= 0 and discount <= 1

inv ReviewCountNonNegative: review_count >= 0

inv RatingCountNonNegative: rating_count >= 0

inv NumPagesNonNegative: num_pages >= 0

inv DescriptionNotBlank: not description.isBlank()

inv CategoryNotBlank: not category.isBlank()

In the CartItem class:

context CartItem

inv CartNotNull: cart <> null

inv BookNotNull: book <> null

inv QuantityPositive: quantity >= 1

In the Suggestion class:

context Suggestion

()inv EmailNotBlank: not email.isBlank

inv EmailFormat: email.matches('^([A-Za-z0-9._%+-]+@[A-Za-z0-9.-]+\.[A-Za-z]{2,4})\$')

inv MessageNotBlank: not message.isBlank()

In the Cart class:

context Cart

inv UserNotNull: user <> null