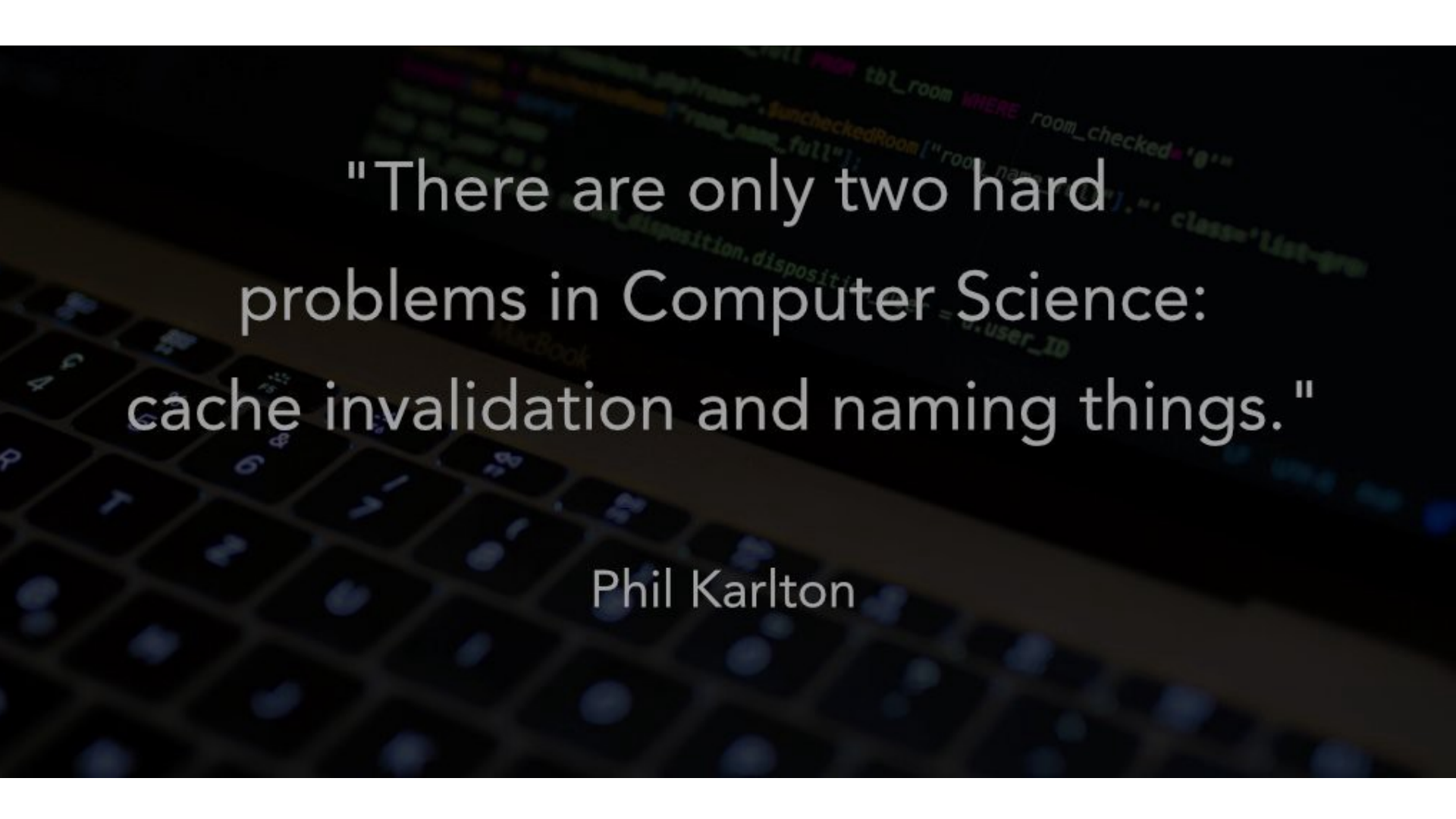


Cache strategies

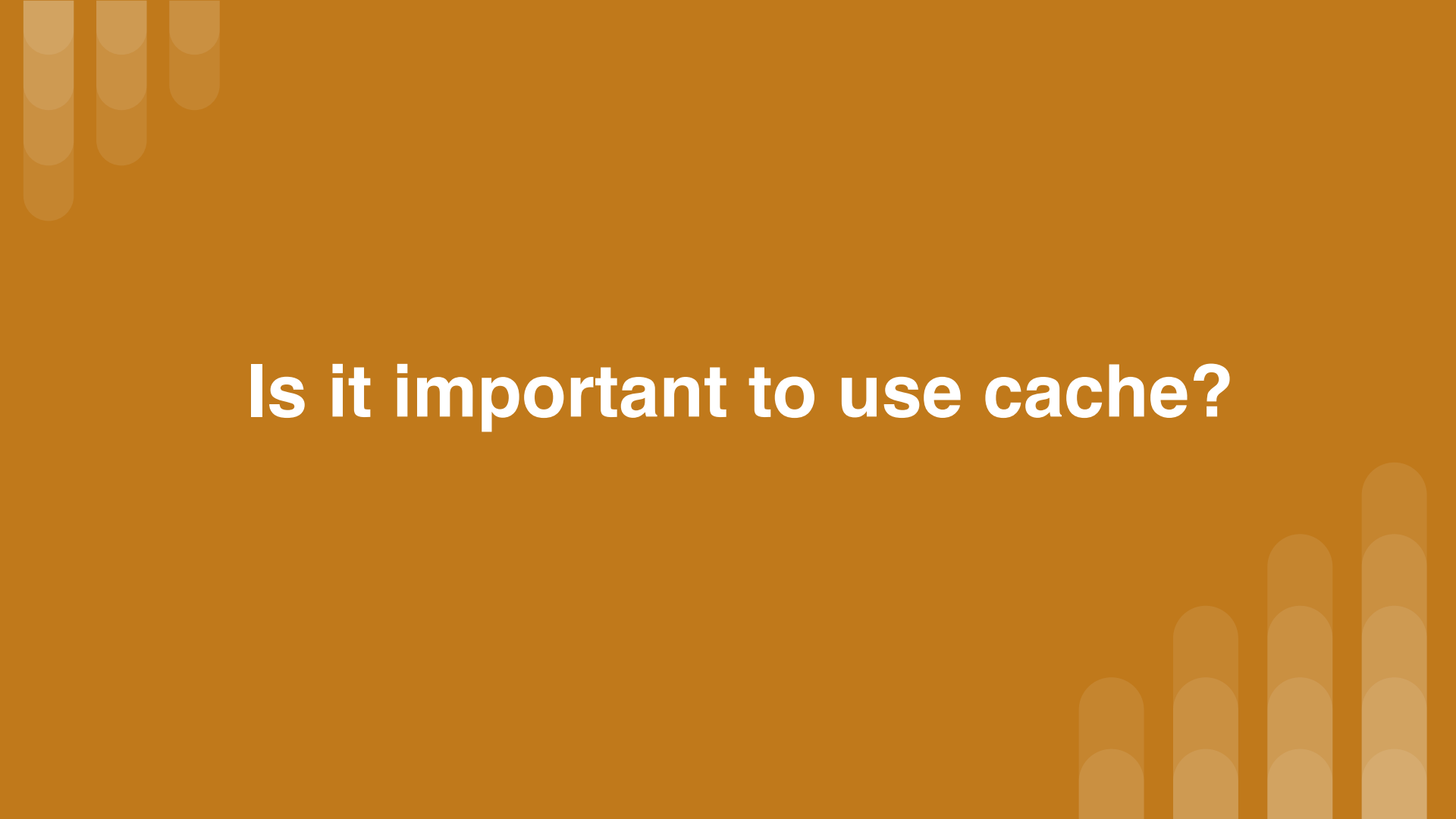
Vitalii Melnychuk



The background is a dark, out-of-focus image of a laptop. The keyboard is visible in the lower half, with keys like '4', '5', '6', '7', '8', '9', '0', and function keys like 'F1', 'F2', 'F3' visible. The screen in the upper half shows lines of code in a light color against a dark background. Some legible code includes SQL queries like 'SELECT FROM tbl_room WHERE room_checked = 0' and PHP-like code like 'function checkedRoom' and 'class="list-group"'.

"There are only two hard
problems in Computer Science:
cache invalidation and naming things."

Phil Karlton

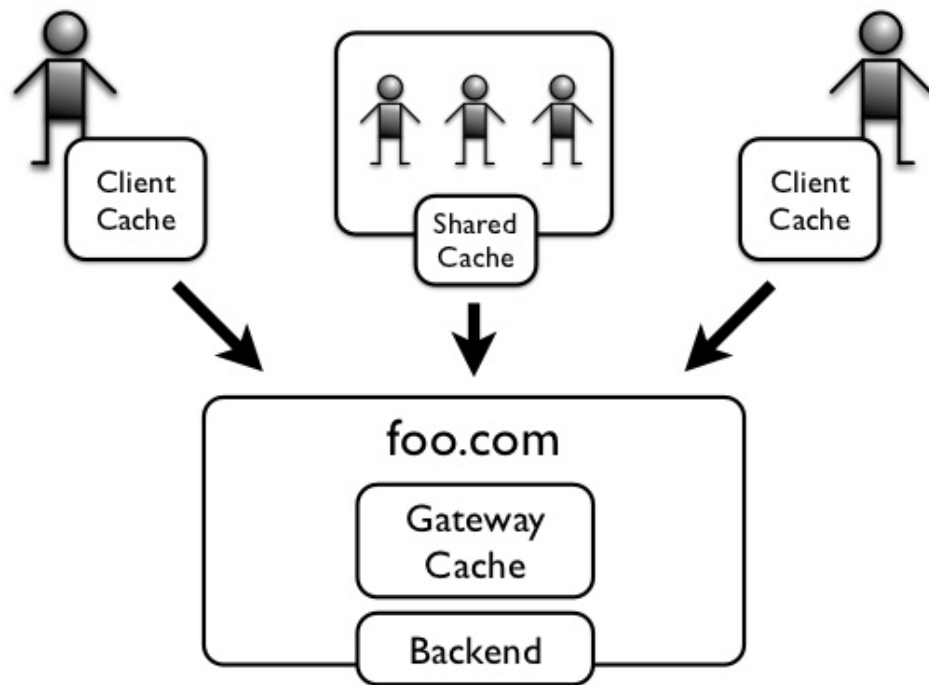
The background is a solid orange color. In the top-left corner, there are three vertical bars of varying heights, each composed of four overlapping circles. In the bottom-right corner, there are four vertical bars of increasing height from left to right, each composed of four overlapping circles.

Is it important to use cache?

A still from the movie Toy Story showing Woody and Buzz Lightyear. Woody is on the left, looking concerned. Buzz is on the right, wearing his green and white space suit, looking excited with his arms outstretched. The background is a simple room with a door and some toys on the floor.

CACHE

CACHE EVERYWHERE



- decorative
- information
- text can be instead



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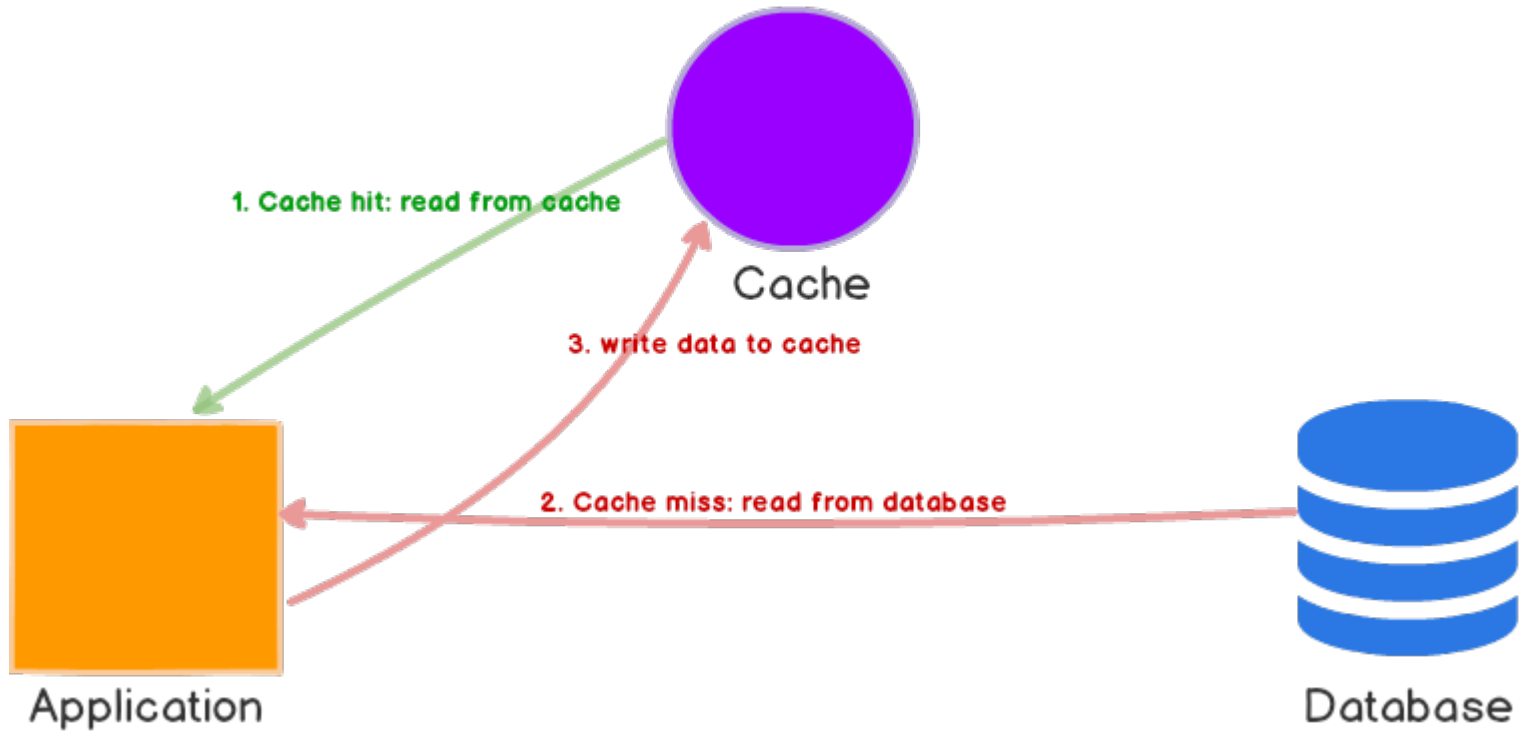
INDUSTRIES

ASSISTANCE
& LICENSING

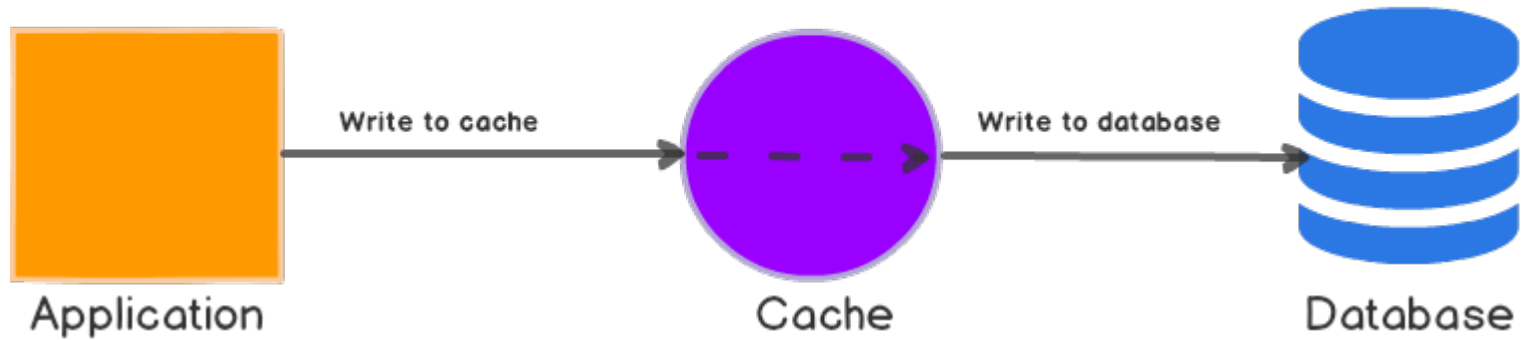
TRADE EVENTS &
RESOURCES



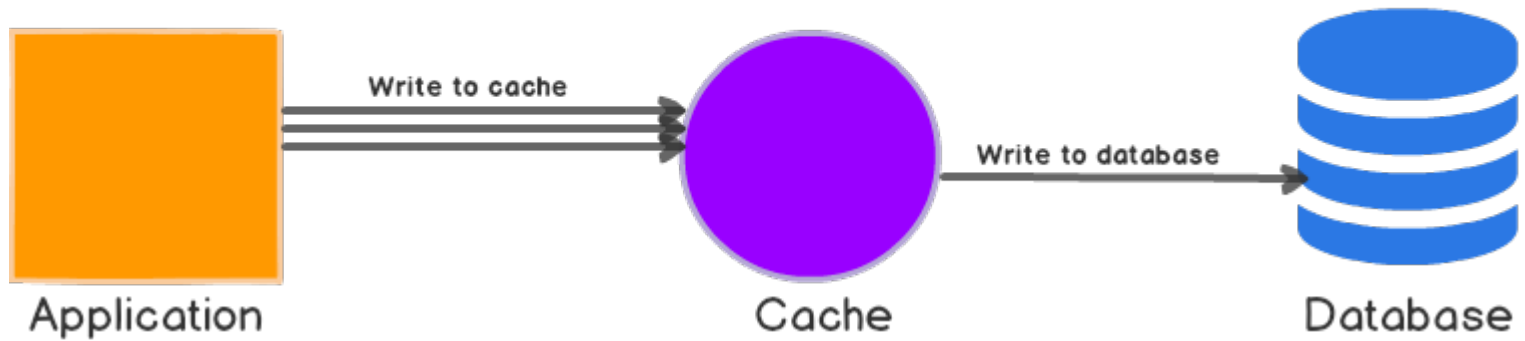
Cache-Aside



Write-Through Cache



Write-Back





Cache invalidation



Cache Lifetime



Advantages:

- Easy to implement
- Easy to manage
- Without additional data

- Data is not persistent

Disadvantages:

HELLO, FRONTEND

**HAVE YOU TRIED CLEARING
YOUR CACHE**

```
#crontabfi
```

```
*/5 * * * * ./bin/clear-cache.sh
```

~~~~~





**HELLO IT**

**HAVE YOU TRIED TURNING IT OFF  
AND ON AGAIN?**

**By using Tags**



# Advantages:

- Data is persistent

- Tags management

Disadvantages:



# Naming things



user-1: {"auth":true}

monitoring: {"dates":["1-05-2017"]}

dashboard-data:  
{"some-key":12345}

account-35: {"settings-  
resources":["mails"]}

beta: true

users-count: 5000

duke::guest

duke::guest::register

duke::guest::register::show-register-button

duke::guest::login

uke::users-count

duke::account-1

duke::account-1::user-500

duke::account-1::user-500-log-data

duke::account-1::user-234

```
$ redis-cli --raw keys "$PATTERN" | xargs redis-cli del
```





You can't do this with one request only.

1

But you can loop on every keys using the same prefix to delete all of them like so :



```
$cache = new Memcached();  
$keys = $cache->getAllKeys();  
$prefix = "always_this_one_";  
$prefixLength = strlen($prefix);  
  
foreach ($keys as $key) {  
    if (substr_compare($key, $prefix, 0, $prefixLength) === 0) {  
        $cache->delete(substr($key, 0, -1));  
    }  
}
```

... ..



**Questions?**

