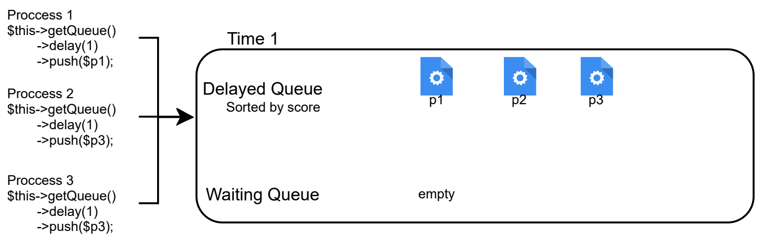
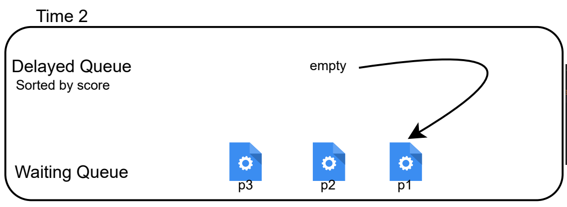
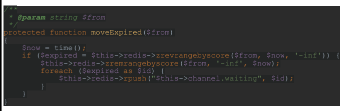
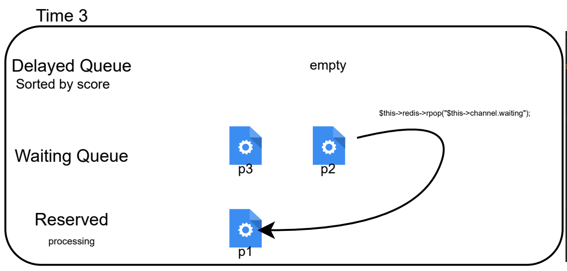


```
Proccess 1
$this->getQueue()
        ->delay(1)
        ->push($p1);

Proccess 2
$this->getQueue()
        ->delay(1)
        ->push($p3);

Proccess 3
$this->getQueue()
        ->delay(1)
        ->push($p3);
```

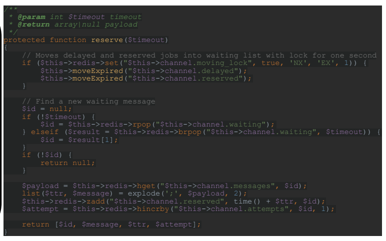




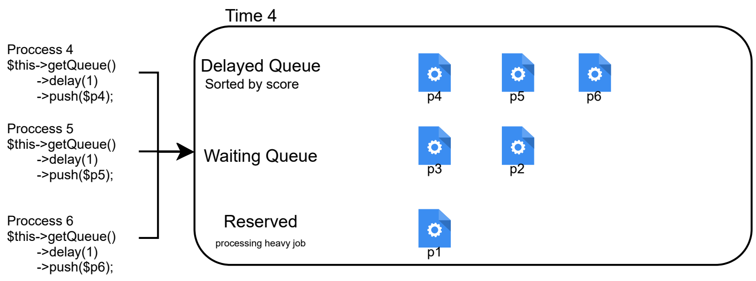
```php
/**
 * @param string $from
 */
protected function moveExpired($from)
{
    $now = time();
    if ($expired = $this->redis->zrevrangebyscore($from, $now, '-inf')) {
        $this->redis->zremrangebyscore($from, '-inf', $now);
        foreach ($expired as $id) {
            $this->redis->rpush("$this->channel.waiting", $id);
        }
    }
}
```



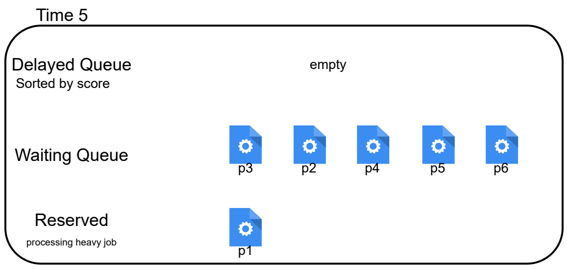
```
$this->redis->rpop("$this->channel.waiting");
```



```php
/**
 * @param int $timeout timeout
 * @return array|null payload
 */
protected function reserve($timeout)
{
    // Moves delayed and reserved jobs into waiting list with lock for one second
    if ($this->redis->set("$this->channel.moving_lock", true, 'NX', 'EX', 1)) {
        $this->moveExpired("$this->channel.delayed");
        $this->moveExpired("$this->channel.reserved");
    }

    // Find a new waiting message
    $id = null;
    if (!$timeout) {
        $id = $this->redis->rpop("$this->channel.waiting");
    } elseif ($result = $this->redis->brpop("$this->channel.waiting", $timeout)) {
        $id = $result[1];
    }
    if (!$id) {
        return null;
    }

    $payload = $this->redis->hget("$this->channel.messages", $id);
    list($ttr, $message) = explode(';', $payload, 2);
    $this->redis->zadd("$this->channel.reserved", time() + $ttr, $id);
    $attempt = $this->redis->hincrby("$this->channel.attempts", $id, 1);

    return [$id, $message, $ttr, $attempt];
}
```



```
Proccess 4
$this->getQueue()
        ->delay(1)
        ->push($p4);

Proccess 5
$this->getQueue()
        ->delay(1)
        ->push($p5);

Proccess 6
$this->getQueue()
        ->delay(1)
        ->push($p6);
```


Time 5
Delayed Queue
Sorted by score
empty
Waiting Queue
p3
p2
p4
p5
p6
Reserved
processing heavy job
p1