

# Event Sourcing



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Event Sourcing is  
a way of persisting  
your application's state

In traditional systems  
we persist the current state  
of an object

<b>Date</b>	<b>Balance</b>
01.09.2016	50 000
05.09.2016	38 000
10.09.2016	88 000
15.09.2016	86 000
25.09.2016	85 000

In Event Sourced systems  
we persist all changes  
that lead to the current state  
of an object

Every change is an event

Event is  
something that happened  
in the past  
and has a business  
meaning

Event is immutable



Events are persisted  
in event streams

Event stream  
is a time ordered sequence  
of events in time

Conceptually  
it's append only

Object state is restored  
by replaying  
the entire  
stream of events

<b>Date</b>	<b>Description</b>	<b>Debit</b>	<b>Credit</b>
01.09.2016	Account opened		50 000
05.09.2016	Display (Alza)	12 000	
10.09.2016	Salary		50 000
15.09.2016	Dinner (Café Imperial)	2 000	
25.09.2016	Food (Tesco)	1 000	

# Benefits

**Additional business value**

Integration with other systems



Flexibility

Perfect Audit log

# Debugging

Testing

# Concerns

Performance

# Versioning

Querying



**Don't use it in...**

# Simple domains

Domains where historical information  
has no business value