AN INTRODUCTION TO CQRS AND EVENT SOURCING

mat_mcloughlin

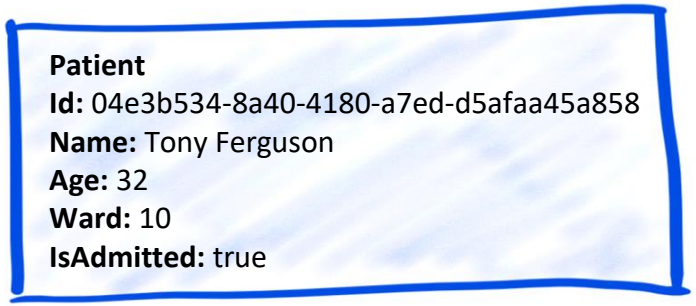
WHY THIS TALK?

WHAT ARE WE COVERING?

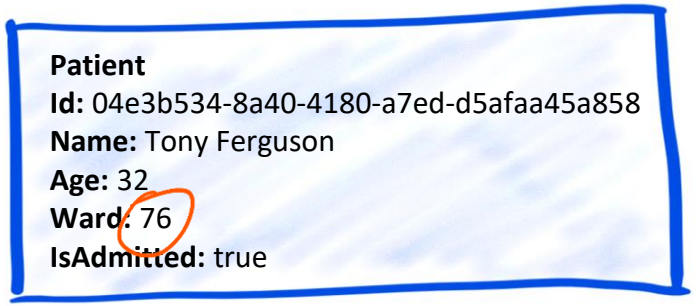
THE ENCOUNTER

EVENT SOURCING

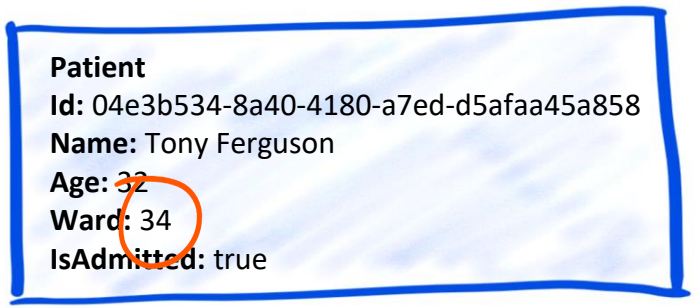
AdmitPatient()



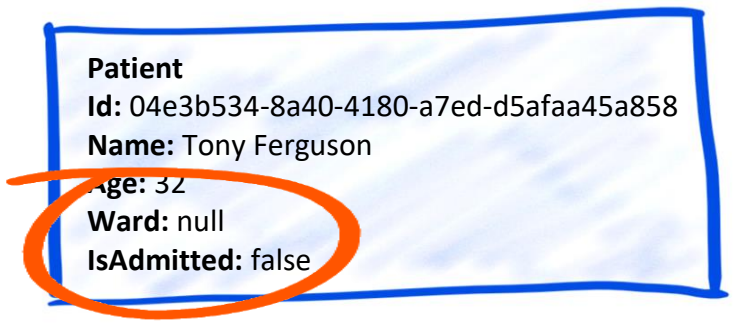
TransferPatient()



TransferPatient()



DischargePatient()



AdmitPatient()

Patient
Id: 04e3b534-8a40-4180-a7ed-d5afaa45a858
Name: Tony Ferguson
Age: 32
Ward: 10
IsAdmitted: true

PatientAdmitted
Id: 04e3b534-8a40-41…
Name: Tony Ferguson
Age: 32
Ward: 10

TransferPatient()

Patient
Id: 04e3b534-8a40-4180-a7ed-d5afaa45a858
Name: Tony Ferguson
Age: 32
Ward: 76
IsAdmitted: true

PatientTransferred
Id: 04e3b534-8a40-41…
ToWard: 76

TransferPatient()

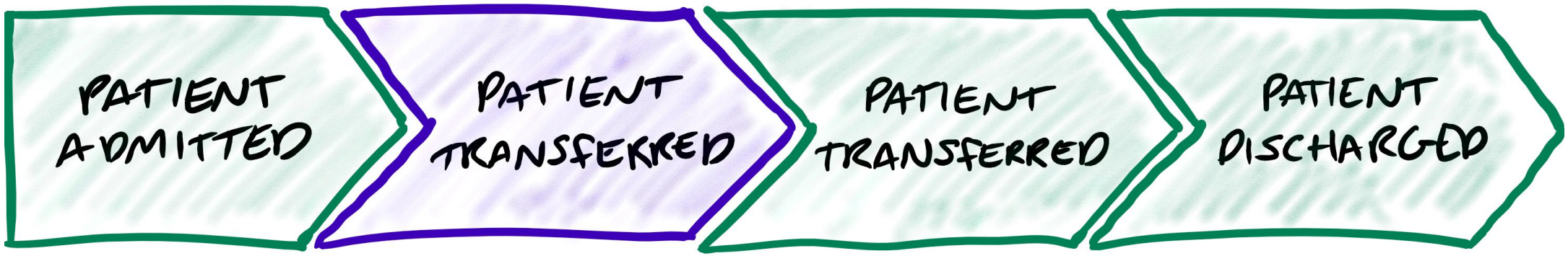
Patient
Id: 04e3b534-8a40-4180-a7ed-d5afaa45a858
Name: Tony Ferguson
Age: 32
Ward: 34
IsAdmitted: true

PatientTransferred
Id: 04e3b534-8a40-41…
ToWard: 34

DischargePatient()

Patient
Id: 04e3b534-8a40-4180-a7ed-d5afaa45a858
Name: Tony Ferguson
Age: 32
Ward: null
IsAdmitted: false

PatientDischarged
Id: 04e3b534-8a4a…

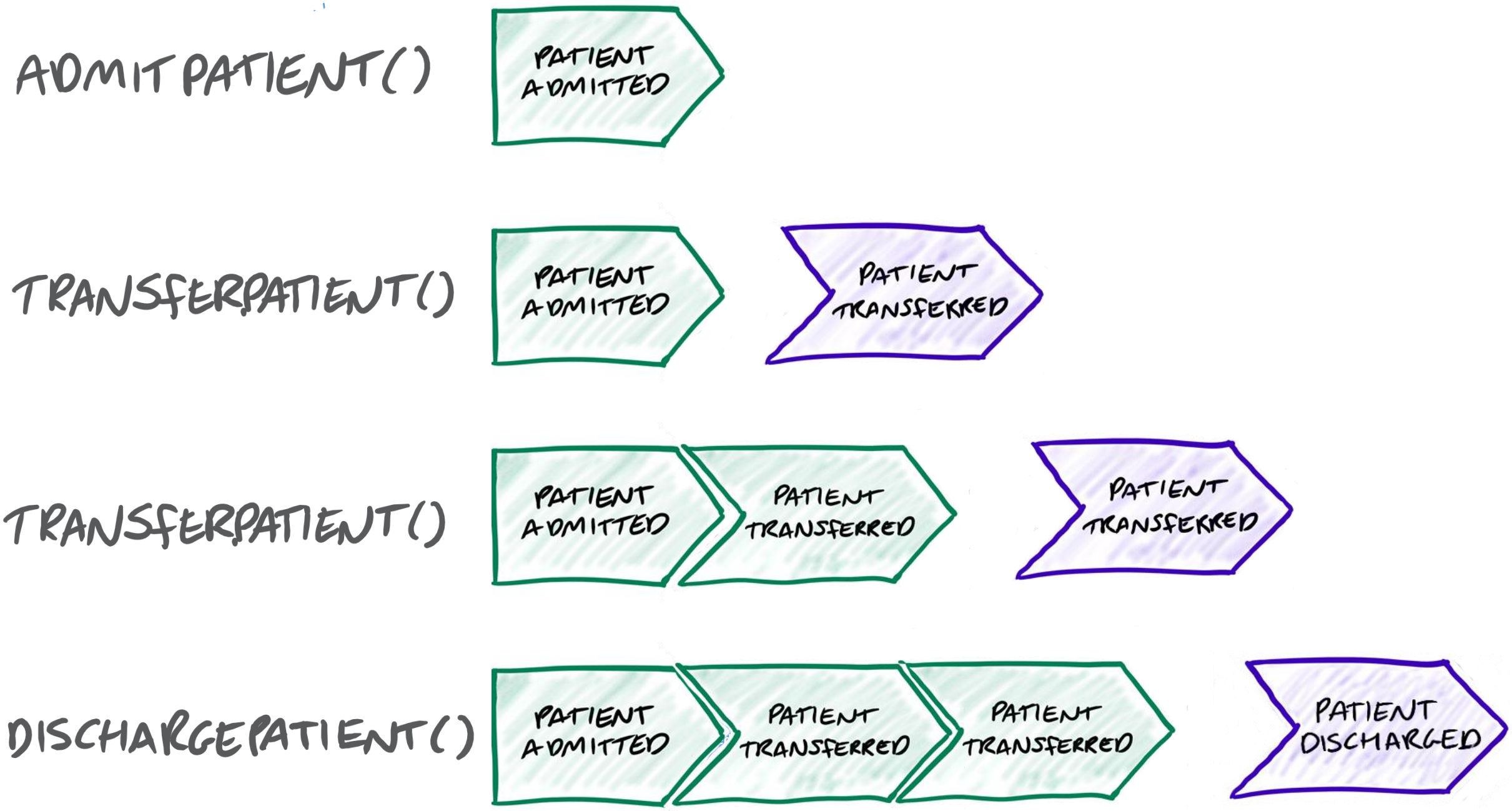

PATIENT ADMITTED
PATIENT TRANSFERRED
PATIENT TRANSFERRED
PATIENT DISCHARGED

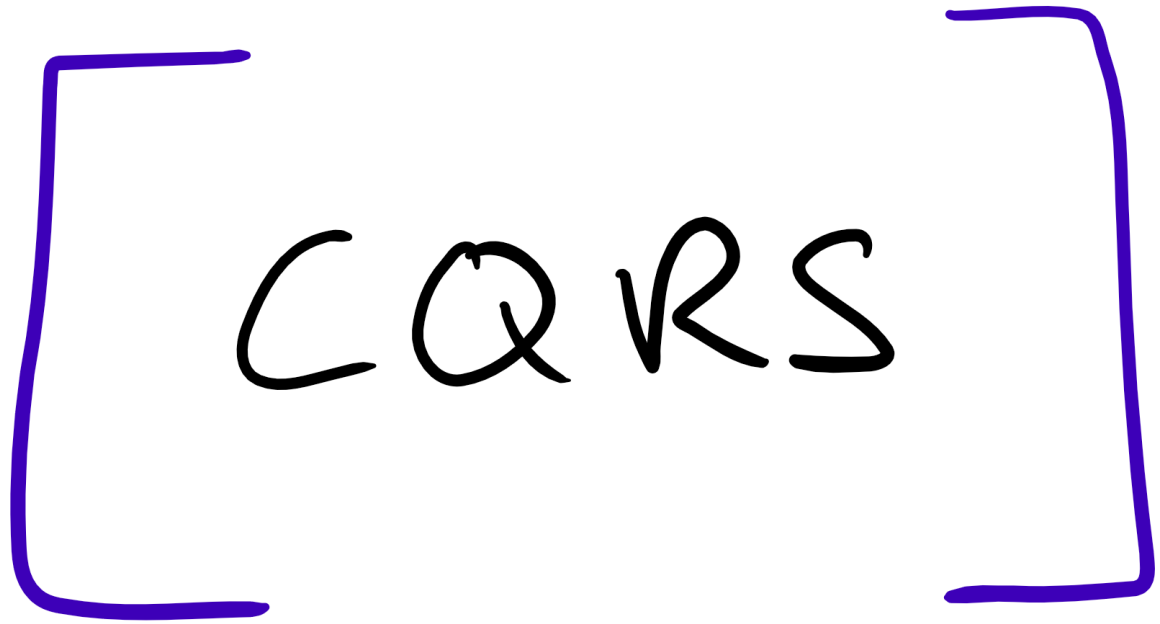
PATIENTS

ID	NAME	AGE	WARD	IS ADMITTED
04e3b534-8a40…	Tony Ferguson	32	NULL	false

PATIENTS AUDIT

04e3b534-8a40…	Tony Ferguson	32	34	true
04e3b534-8a40…	Tony Ferguson	32	76	true
04e3b534-8a40…	Tony Ferguson	32	10	true


ADMITPATIENT()
PATIENT ADMITTED
TRANSFERPATIENT()
PATIENT ADMITTED
PATIENT TRANSFERRED
TRANSFERPATIENT()
PATIENT ADMITTED
PATIENT TRANSFERRED
PATIENT TRANSFERRED
DISCHARGEPATIENT()
PATIENT ADMITTED
PATIENT TRANSFERRED
PATIENT TRANSFERRED
PATIENT DISCHARGED


CQRS

PatientAdmitted
Id: 04e3b534-8a40-41…
Name: Tony Ferguson
Age: 32
Ward: 10

PatientTransferred
Id: 04e3b534-8a40-41…
ToWard: 76

PatientTransferred
Id: 04e3b534-8a40-41…
ToWard: 34

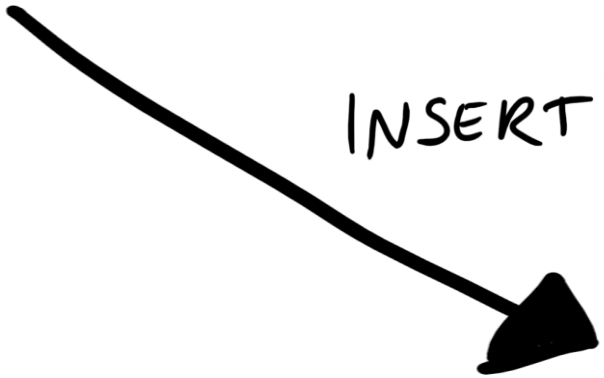
PatientDischarged
Id: 04e3b534-8a4a…

PatientAdmitted
Id: 04e3b534-8a40-41…
Name: Tony Ferguson
Age: 32
Ward: 10

PatientTransferred
Id: 04e3b534-8a40-41…
ToWard: 76

PatientTransferred
Id: 04e3b534-8a40-41…
ToWard: 34

PatientDischarged
Id: 04e3b534-8a4a…



ID	NAME	AGE	WARD
04e3b534-8a40…	Tony Ferguson	32	34

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Id: 04e3b534-8a40-41…
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PatientTransferred
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PatientDischarged
Id: 04e3b534-8a4a…

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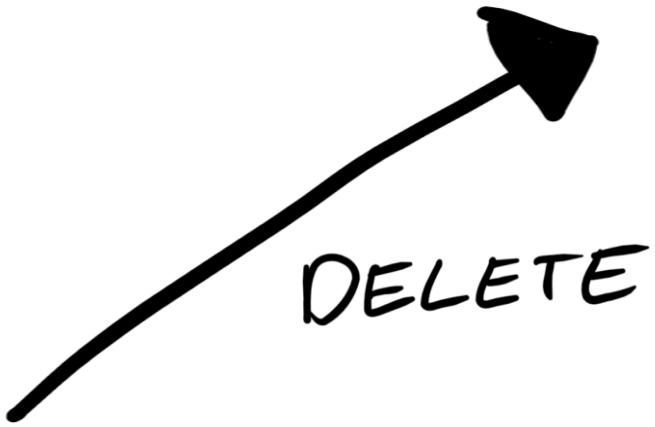
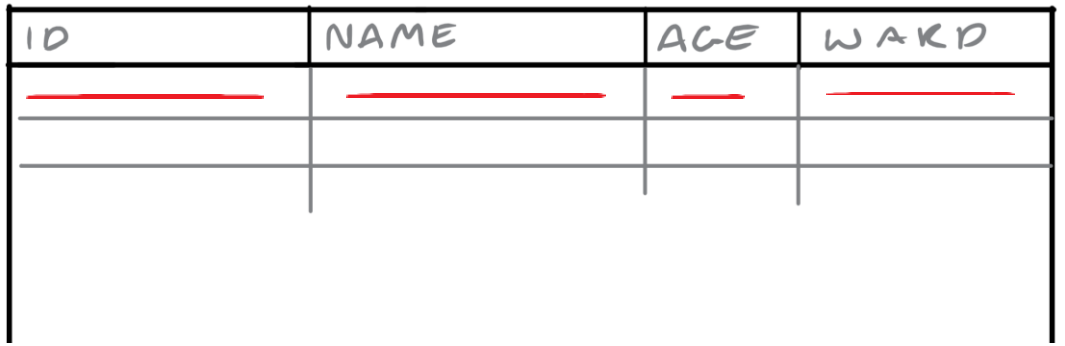
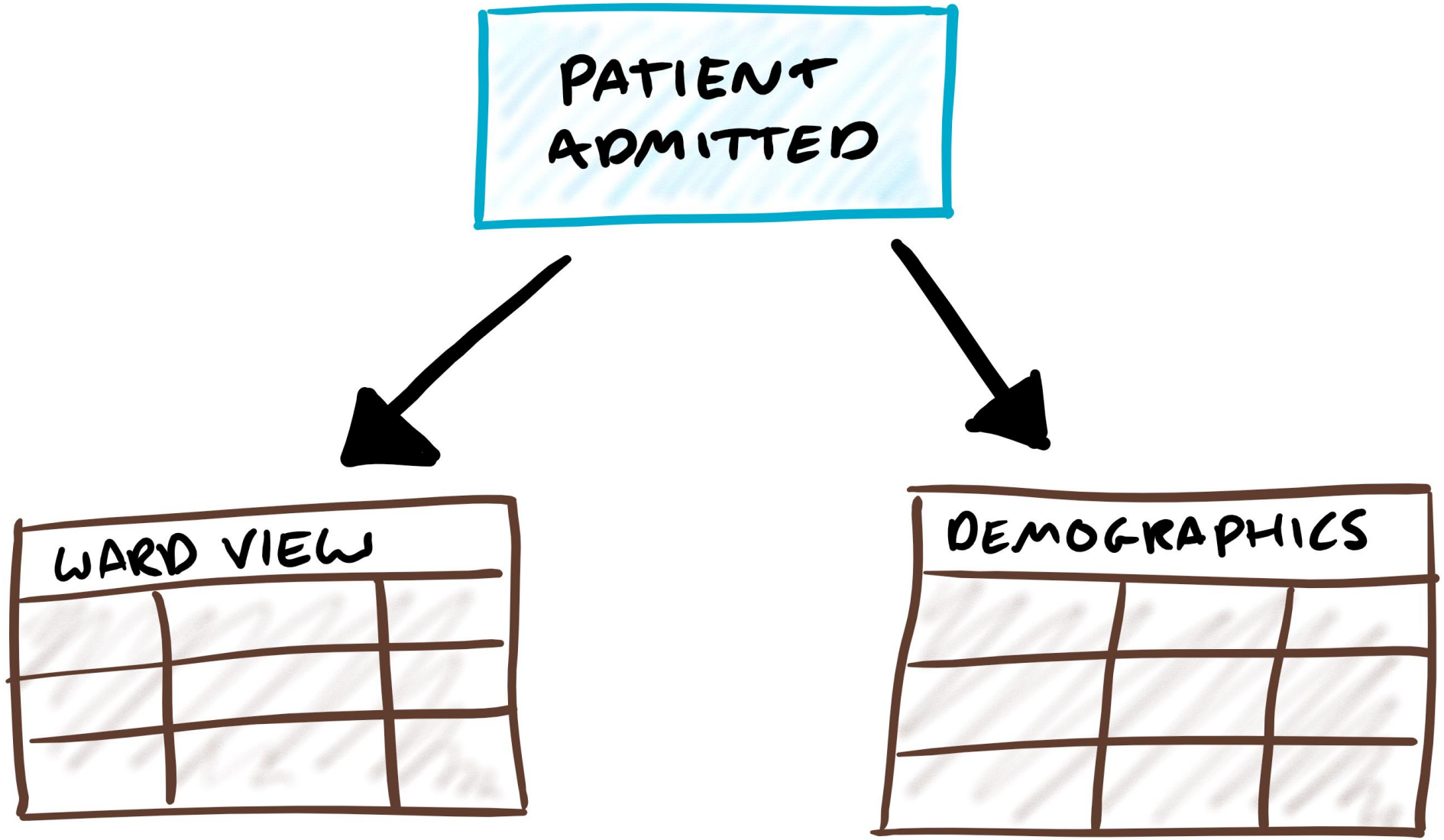
ToWard: 76

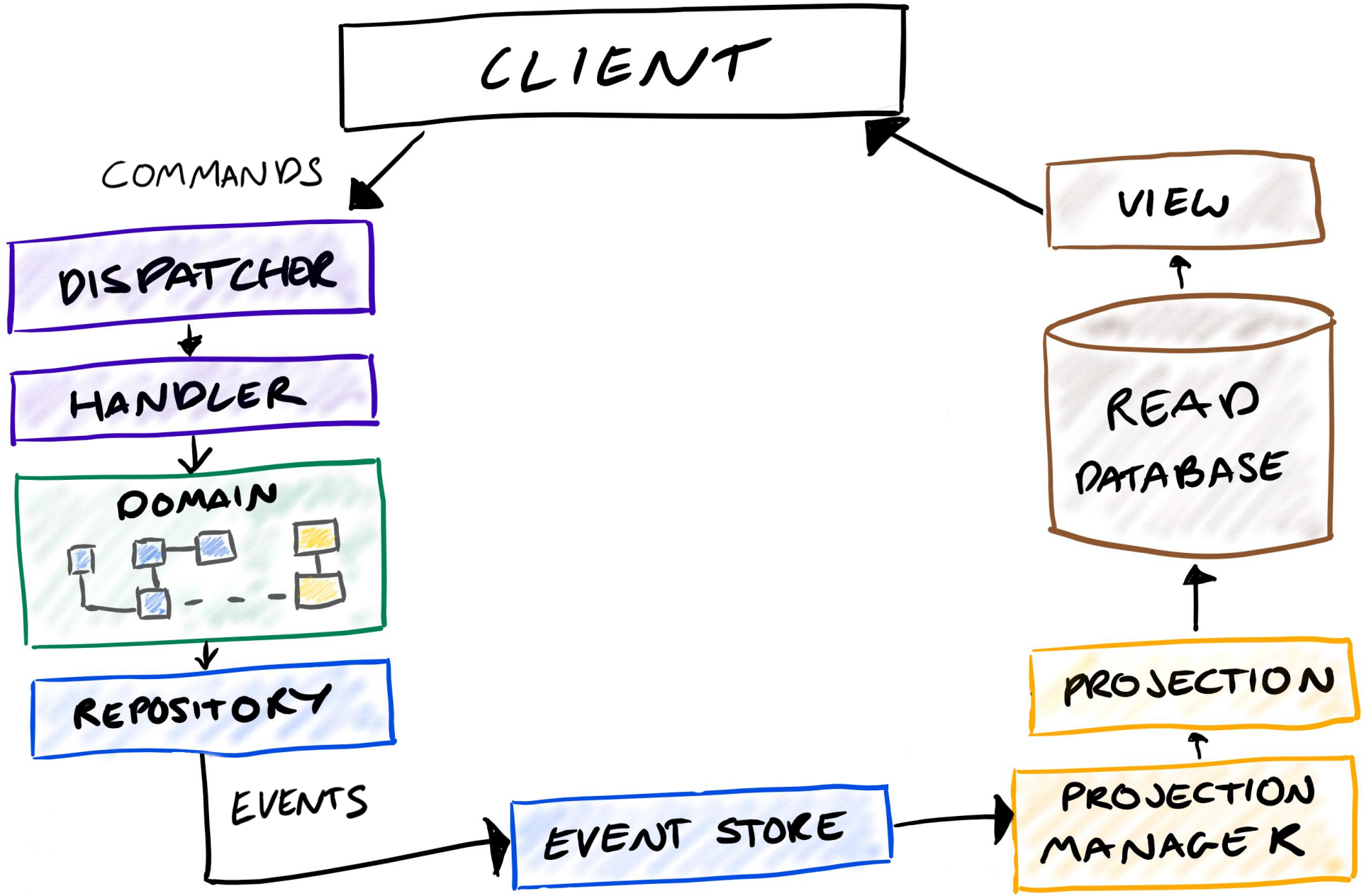
PatientTransferred
Id: 04e3b534-8a40-41…
ToWard: 34

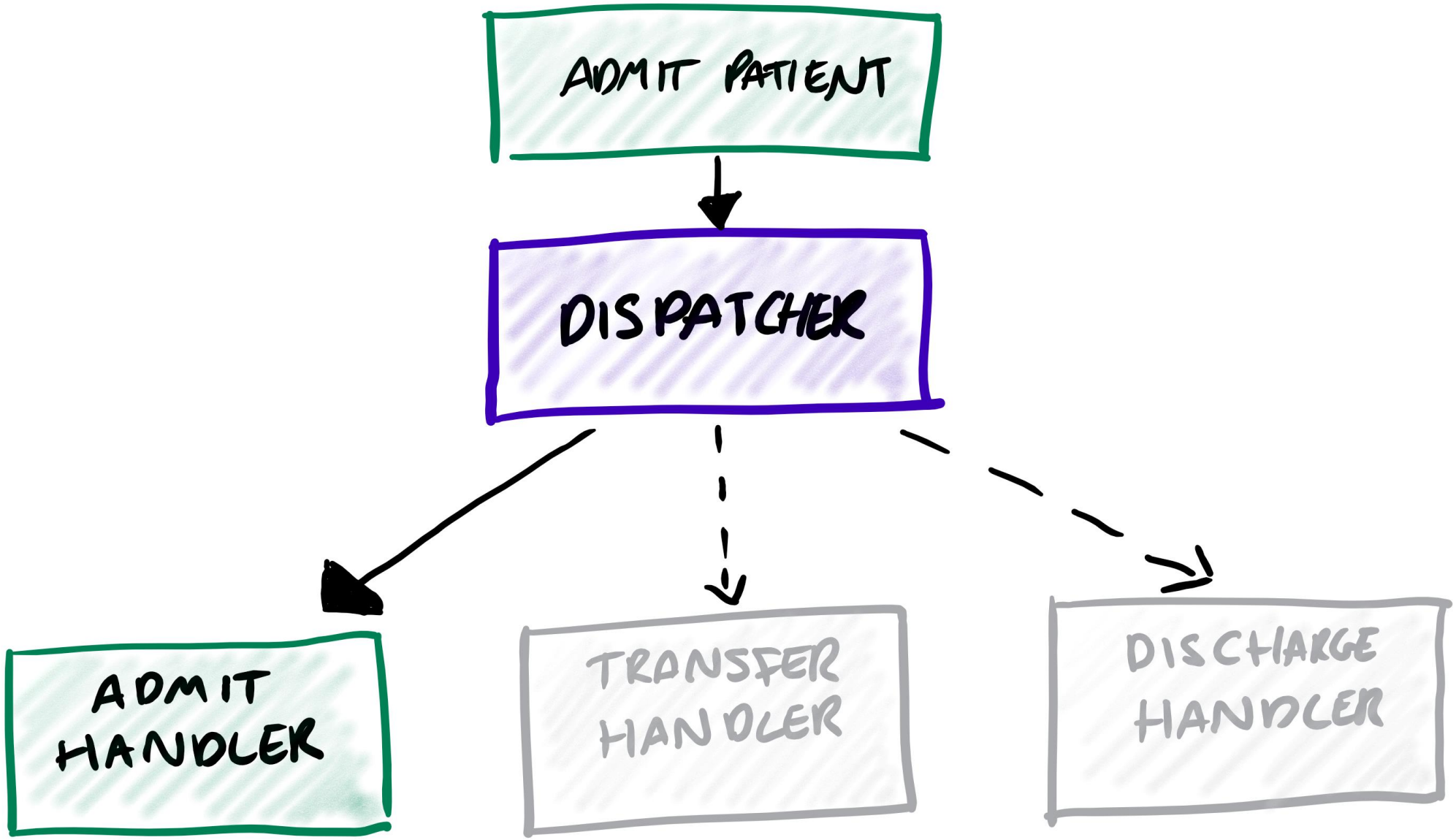
PatientDischarged
Id: 04e3b534-8a4a…

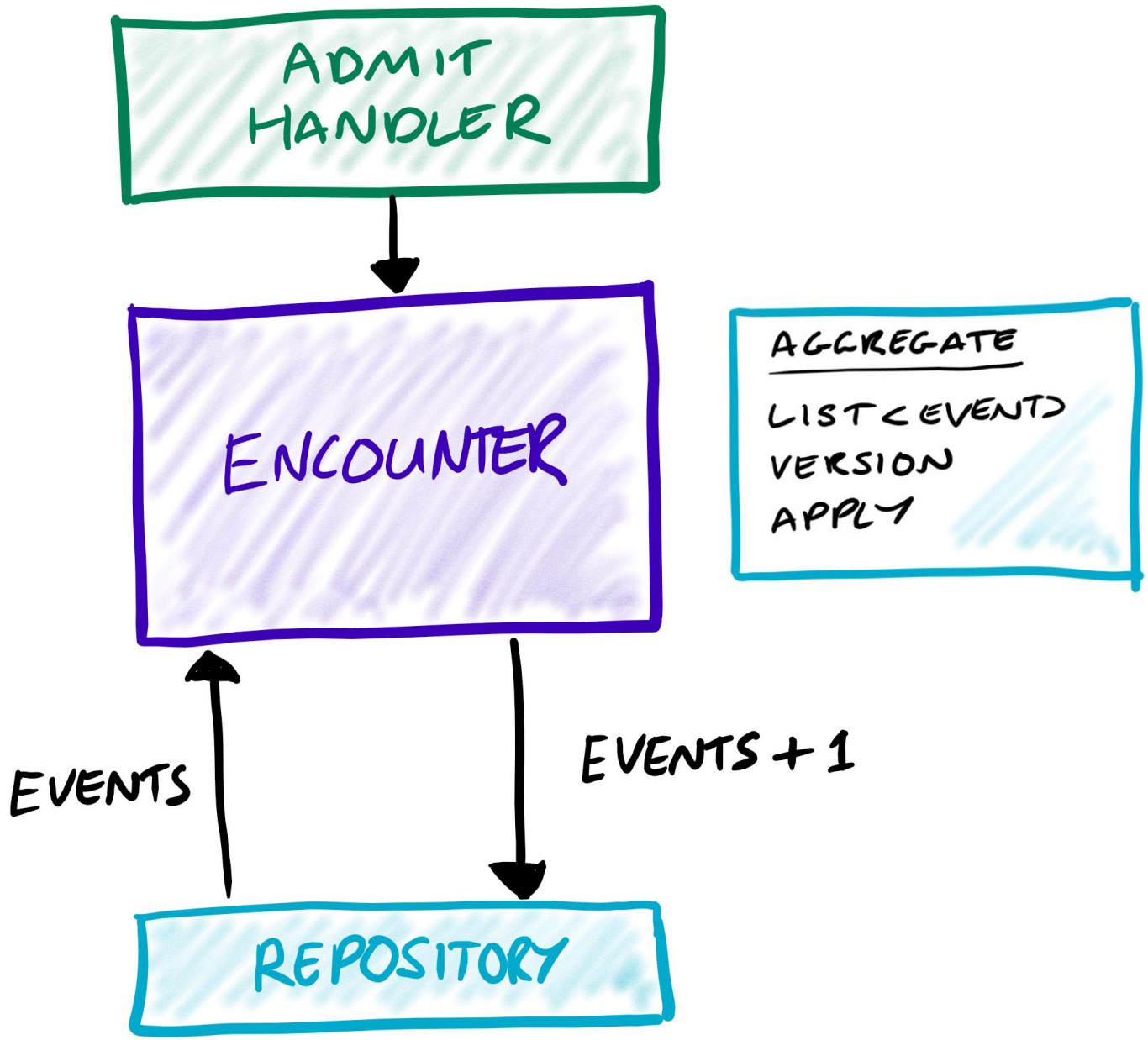


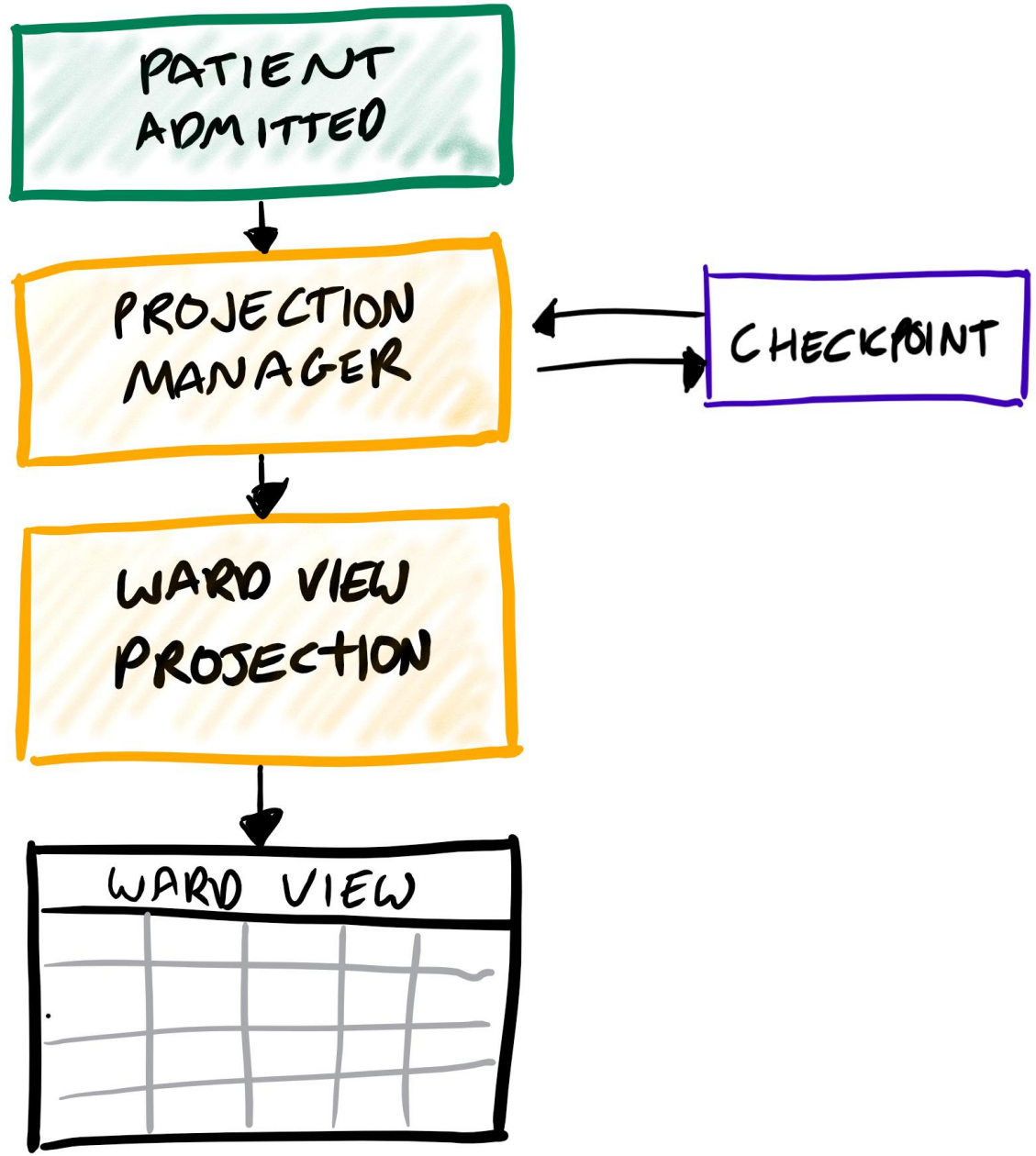



PATIENT ADMITTED
WARD VIEW
DEMOGRAPHICS


CLIENT
COMMANDS
DISPATCHER
HANDLER
DOMAIN
REPOSITORY
EVENTS
EVENT STORE
PROJECTION MANAGER
PROJECTION
READ DATABASE
VIEW


ADMIT PATIENT
DISPATCHER
ADMIT HANDLER
TRANSFER HANDLER
DISCHARGE HANDLER


ADMIT HANDLER
ENCOUNTER
AGGREGATE
LIST<EVENT>
VERSION
APPLY
EVENTS
EVENTS + 1
REPOSITORY


PATIENT ADMITTED
PROJECTION MANAGER
CHECKPOINT
WARD VIEW PROJECTION
WARD VIEW

EVENTUAL CONSISTENCY

DEMO

SO WHEN SHOULD I USE IT?

LINKS

- DDD-ES-CQRS Google Group
  https://groups.google.com/forum/#!forum/dddcqrs
- DDD-ES-CQRS Slack Channel
  http://ddd-cqrs-es.herokuapp.com/
- Greg Young, Event Sourcing
  https://www.youtube.com/watch?v=JHGkaShoyNs

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