UNIVERSITY OF LEEDS School of Computing	EXPERIMENT DOCUMENTATION	Date of experiment 17/05/2017
	Experiment title: Event log creation of cancer in chartevents table	**Experiment code** M3C-CHA001
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Area of investigation

This experiment is to create an event log of cancer patient records from the chartevents table of the MIMIC-III database. The format is [case_id, activity, timestamp].

All patients who diagnosed with cancer-related diagnose code, at least once, will be included.

Data source

The chartevents table in the MIMIC-III database.

Research question

Is the chartevents table in the MIMIC-III database can be used for process mining of cancer patients?

Hypothesis

The chartevents table can be used as it provides at least minimum requirements for process mining, which are case_id, activity, and timestamp.

Method

1) **Extract** the MIMIC-III database in PostgreSQL by selecting [hadm_id, label, charttime] of cancer patient chartevents [icd9_codes 140x-239x].
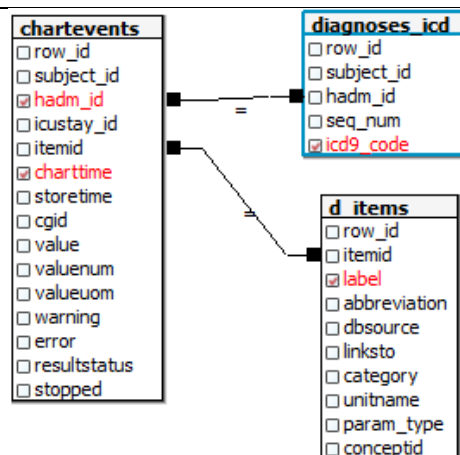
   case_id = subject_id/ hadm_id/ icustay_id

   activity = d_items.label

   timestamp = charttime/ storetime

2) Save as .csv file

3) **Load** into ProM

Results

This resulted in 38,864,300 rows.

	hadm_id integer	activity character varying(200)	charttime timestamp(0) without time zone
1	100006	Abdominal Assessment	2108-04-06 16:30:00
2	100006	Abdominal Assessment	2108-04-06 20:00:00
3	100006	Abdominal Assessment	2108-04-07 00:00:00
4	100006	Abdominal Assessment	2108-04-07 04:00:00
5	100006	Abdominal Assessment	2108-04-07 08:00:00
6	100006	Abdominal Assessment	2108-04-07 12:00:00
7	100006	Abdominal Assessment	2108-04-07 16:00:00
8	100006	Abdominal Assessment	2108-04-07 20:00:00
9	100006	Abdominal Assessment	2108-04-08 00:00:00
10	100006	Abdominal Assessment	2108-04-08 04:00:00
11	100006	Abdominal Assessment	2108-04-08 08:00:00
12	100006	Abdominal Assessment	2108-04-08 12:00:00

Discussion

The **chartevents** table contains minimum required columns for process mining. The resulted event log would be loaded into ProM in the Stage 2.

Conclusion

Hypothesis proved. The **chartevents** table can be used to create event logs.