UNIVERSITY OF LEEDS School of Computing	**EXPERIMENT DOCUMENTATION**	**Date of experiment** 17/05/2017
	Experiment title: Event log creation of cancer patient **callout**	**Experiment code** M3C-CAL001
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Area of investigation

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

Data source

The **callout** table in the MIMIC-III database. This table provides information when a patient was READY for discharge from the ICU, and when the patient was actually discharged from the ICU.

Research question

Is the **callout** table in the MIMIC-III database can be used for process mining of cancer patient admissions?

Hypothesis

The **callout** 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
   [createtime, updatetime, acknowledgetime, outcometime,
   firstreservationtime, currentreservationtime]
    of cancer patient admissions [icd9_codes 140x-239x].
2) **Tranform** into event log with [case_id, activity,
   timestamp] format.
    case_id = hadm_id
    activity = { create, update, acknowledge, outcome,
              firstreservation, currentreservation }
    timestamp = { createtime, updatetime, acknowledgetime,
               outcometime, firstreservationtime,
               currentreservationtime }
2) Save as .csv file
3) **Load** into ProM
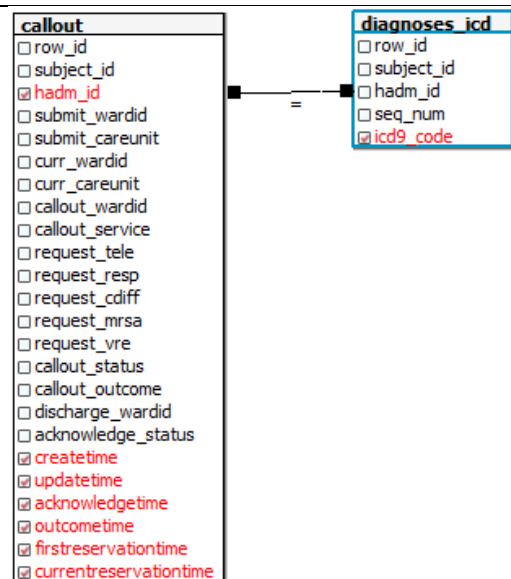
Results

This resulted in 27402 rows.

	subject_id integer	hadm_id integer	activity character varying(200)	charttime timestamp(0) without time zone
1	11	194540	create	2178-04-17 10:09:40
2	11	194540	update	2178-04-17 10:09:40
3	11	194540	acknowledge	2178-04-17 10:56:58
4	11	194540	outcome	2178-04-17 20:40:02
5	21	111970	create	2135-02-07 12:18:34
6	21	111970	update	2135-02-07 12:31:57
7	21	111970	acknowledge	2135-02-07 12:41:17
8	21	111970	outcome	2135-02-08 05:55:01
9	23	124321	create	2157-10-22 10:42:44

OK.   DOS   Ln 1, Col 1, Ch 1   27402 rows.   1.0 secs

Discussion

The **callout** table contains minimum required columns for process mining, with additional step of creating transactional table. The resulted event log would be loaded into ProM in the Stage 2.

Conclusion

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