 UNIVERSITY OF LEEDS School of Computing	EXPERIMENT DOCUMENTATION	Date of experiment 17/05/2017
	Experiment title: Event log creation of cancer inpu tevents_mv	Experiment code M3C-INM001
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Area of investigation

This experiment is to create an event log of cancer patient records from the **inpu**tevents_mv 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 **inpu**tevents_mv table in the MIMIC-III database. This table contains input data for patients from IMD MetaVision ICU database.

Research question

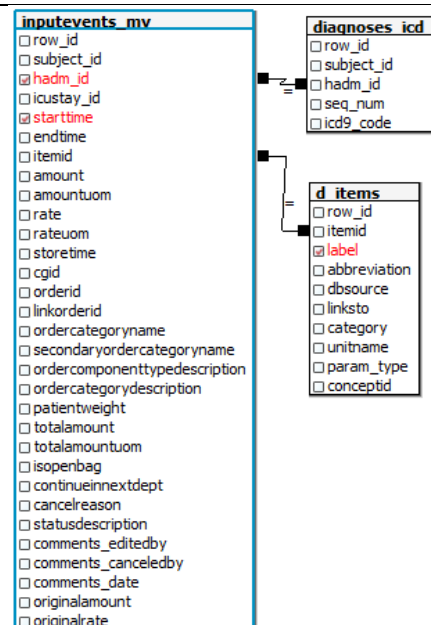
Is the **inpu**tevents_mv table in the MIMIC-III database can be used for process mining of cancer patient treatment?

Hypothesis

The **inpu**tevents_mv 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, d_item.label, charttime] of cancer patient admissions [icd9_codes 140x-239x].
case_id = subject_id/ hadm_id/icustay_id
activity = d_item.label
timestamp = starttime/ endtime/ storetime
- 2) Save as .csv file
- 3) **Load** into ProM



Results

This resulted in 789,905 rows.

	hadm_id integer	activity character varying(200)	starttime timestamp(0) without time zone
1	100010	D5LR	2109-12-10 23:04:00
2	100010	D5LR	2109-12-11 06:53:00
3	100010	Famotidine (Pepcid)	2109-12-11 08:30:00
4	100010	Famotidine (Pepcid)	2109-12-11 20:41:00
5	100010	Famotidine (Pepcid)	2109-12-12 08:00:00
6	100010	Fentanyl	2109-12-11 19:30:00
7	100010	Heparin Sodium (Prophylaxis)	2109-12-11 00:13:00
8	100010	Heparin Sodium (Prophylaxis)	2109-12-11 08:30:00
9	100010	Heparin Sodium (Prophylaxis)	2109-12-11 20:42:00
10	100010	Heparin Sodium (Prophylaxis)	2109-12-12 08:00:00
11	100010	LR	2109-12-11 01:26:00
12	100010	LR	2109-12-11 13:01:00

Discussion

The **inpu**tevents_mv 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 **inpu**tevents_mv table can be used to create event logs.