

## CS660 PA3

### 1.Description

#### `Filter.java`

- do the selection in `open()` method;
- use a `arraylist` to store all passed data;

#### `Join.java`

- implement 'block Nested Loop Join';
- choose the block size as 131072 Bytes;

#### `IntegerAggregator.java`

- use a `hash map` to store all passed integer fields;
- the result of AVG is integer number;

#### `StringAggregator.java`

- use a `hash map` to store counts of each group-by field ;

#### `Aggregate.java`

- pre-calculate the results of aggregator, and store them in a `DbIterator`;

#### `insertTuple()`

- get the page from `Bufferpool`, if the page has empty slot, insert the tuple;
- if the page is full, then insert the tuple to a new blank page;
- store the affected pages in an `arraylist`, and return the `arraylist`;

#### `deleteTuple()`

- find the affected page according to tuple's page Id;
- store the affected pages in an `arraylist`, and return the `arraylist`;

2. No change to the API.

3. Complete all requirements of PA3.

4. Totally spend about 9 hours on this lab.