

Software Maintenance, ESOF 326, Spring 2020 Views and Stored Procedures, Jan. 13

Create views or stored procedure for the following:

list all semesters

As a user I may want to see a list of all semesters in the system.

```
inputs: none
```

```
outputs: list of the names of all semesters in the system
```

This can be accomplished using the view:

```
DROP VIEW IF EXISTS list_all_semesters;
```

```
CREATE VIEW list_all_semesters AS  
  SELECT name  
  FROM semesters;
```

list semesters in interval

As a developer, I need to know the semesters which fall within a semester interval. For example, when a user setting the semester interval for an object, the user will specify the begin semester, and a list of all possible end semesters needs to be displayed.

```
inputs: interval, which consists of a begin and end semester (not null)
```

```
outputs: list of the names of all semesters which fall within the interval, inclusive.
```

This requires a stored procedure:

```
DELIMITER //

DROP PROCEDURE IF EXISTS list_semesters_in_interval;

/**
 * list_semesters semesters takes the id of a semester interval
 * and returns the names of those semesters within that interval
 * inclusive. This procedure assumes that the end semester of
 * the interval is not null.
 * inputs: id of a semester interval (end semester cannot be null)
 * outputs: list of names of all semesters within that semester
 *         interval, inclusive
 */
CREATE PROCEDURE list_semesters_in_interval(
    IN interval_id INT)
BEGIN
    DECLARE begin_id INT;
    DECLARE end_id INT;

    SELECT begin, end INTO begin_id, end_id
    FROM intervals
    WHERE id = interval_id;

    SELECT name
    FROM semesters
    WHERE id between begin_id and end_id;

END //

CALL list_semesters_in_interval(1);
```