

INFS2200/7903 PROJECT ASSIGNMENT

Semester Two 2021

Task 1.1 **[4 marks]** Only one SQL; Answer the Question correctly.

Task 1.2 **[8 marks]** All the missing constraints are created with the correct name and semantics. The correctness of the constraints will be evaluated using several INSERT statements, e.g.,

```
INSERT INTO CATEGORY VALUES (1, 'Tragedy');
```

Task 2.1 **[4 marks]** Sequence created with the correct name and semantics.

Task 2.2 **[4 marks]** Trigger created without compilation error; The correctness of the trigger will be evaluated using several INSERT&SELECT statements, e.g.,

```
INSERT INTO FILM (TITLE, DESCRIPTION, LANGUAGE_ID) VALUES ('B  
Movie 1', 'Movie about wasps 1', 1);
```

Task 2.3 **[8 marks]** Trigger created without compilation error; The correctness of the trigger will be evaluated using several INSERT statements, e.g.,

```
INSERT INTO FILM (TITLE, DESCRIPTION, LANGUAGE_ID,  
ORIGINAL_LANGUAGE_ID, RATING) VALUES ('B Movie', 'Movie about  
wasps.', 1, 2, 'PG');
```

Task 3.1 **[5 marks]** Only one SQL; Generate the correct results.

Task 3.2 **[7 marks]** View created with the correct name and semantics. The correctness of the view will be evaluated using the following SELECT statement:

```
SELECT * FROM MIN_ACTION_ACTORS;
```

Task 3.3 **[8 marks]** View created with the correct name and semantics. The correctness of the view will be evaluated using the following SELECT statement:

```
SELECT * FROM V_ACTION_ACTORS_2012;
```

Task 3.4 **[3 marks]** Materialized view created with the correct name and semantics. The correctness of the view will be evaluated using the following SELECT statement:

```
SELECT * FROM MV_ACTION_ACTORS_2012;
```

Task 3.5 **[4 marks]** Query execution time and query plans reported for both view and materialized view; Answer the Question correctly.

Task 4.1 **[4 marks]** Only one SQL; Generate the correct results.

Task 4.2 **[3 marks]** Index created with the correct name and semantics.

Task 4.3 **[6 marks]** Query execution time and query plans reported for both before and after index; Answer the Question correctly.

Task 4.4 **[4 marks]** Only one SQL; Generate the correct result.

Task 4.5 **[2 marks]** Answer the Question correctly.

Task 5.1 **[5 marks]** Write the correct SQL statements to generate index statistics and table statistics respectively; Answer the Questions correctly.

Task 5.2 **[3 marks]** Rule-based execution plan generated; Answer the Question correctly

Task 5.3 **[5 marks]** Cost-based execution plan generated; Answer the Question correctly. (*Hint:* Calculate the number of block accesses with and without index)

Task 5.4 **[5 marks]** Cost-based execution plan generated; Answer the Question correctly. (*Hint:* Calculate the number of block accesses with and without index)

Task 5.5 **[5 marks]** Cost-based execution plan generated; Answer the Question correctly. (*Hint:* Calculate the number of block accesses with and without index)

Presentation **[3 marks]**

No query result exceeds one page in the screenshot;

No tuple is broken into many lines in the screenshot (if not many columns);

No English mistake in the report.