



## Tutorial 6- Information Systems 3A Tutorials for SQL

Information Systems 3A (University of Johannesburg)

## **TUTORIAL 6**

**DUE DATE: 28 APRIL 2021**

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***WE ARE UNSTOPABLE!!!!***

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## BACKGROUND INFORMATION

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This tutorial is based on a set of relations that has been set up for a group of music stores. The database contains information about the CDs, Stores, and Availability. The relationships between the tables must be derived from the data in each of the tables. The tables and the information is as follows:

CDs (CD Code, Title, Artist, Number of Tracks, Release Date, Price)

STORES (Store Code, Store Name, Address, City)

AVAILABILITY (CD Code, Store Code, Available Stock)

The data is shown below:

### CDs

CD_CODE	TITLE	ARTIST	TRACKS	RELEASE_DATE	PRICE
CD001	Awesome 80s Collection	Various	24	1991-01-01	R99
CD002	Anti	Rihanna	13	2016-02-01	R183
CD003	Now 75	Various	22	2017-03-01	R140
CD004	The Afterlove	James Blunt	10	2017-04-01	R170
CD005	Oh My My	One Republic	16	2016-10-01	R151

### STORES

STORE_CODE	STORE_NAME	ADDRESS	CITY
ST001	Musica	Victoria Wharf Shopping Centre	Cape Town
ST002	Game	City View Shopping Centre	Durban
ST003	Musica	Blue Route Mall	Cape Town
ST004	Makro	Ascot Road	Johannesburg
ST005	Musica	Rooihuiskraal Road	Pretoria

### AVAILABILITY

CD_CODE	STORE_CODE	AVAILABLE_STOCK
CD002	ST001	13
CD002	ST004	9
CD003	ST005	8
CD004	ST003	5
CD004	ST001	9

## INSTRUCTIONS

CREATE A DATABASE named **LockdownTutorialDB** using MS SQL server

The script file will create all the necessary tables and populate the tables in this database with data.

Provide the appropriate SQL formulation and the result that would be produced for each query given below. Ensure to copy the SQL statements as well as the results into the MS Word document that you have created. Save this file as StudentNumber\_ILS3A01\_Tutorial\_7. The link to upload the zipped folder will be provided.

**10 marks for creating the databases, tables and inserting data**

**Question 1****(Marks: 15)**

Create a view named 'LatestRelease' that contains the CD title, artist, and price for all CDs that were released between the years 2016 and 2017, and the price is less than R160.

Sample Results:

TITLE	ARTIST	PRICE
Now 75	Various	140
Oh My My	One Republic	151

Requirement	Mark	Examiner
Correct View, Select, and From statements	5	
Correct Where clause	9	
Correct result obtained	1	
TOTAL	15	

**Question 2****(Marks: 15)**

Create a stored procedure named 'FindStock' that will display the store name, address, and city of all stores that have stock of a specific CD. When executing the stored procedure make use of the cd code 'CD004'.

Sample Results:

STORE_CODE	STORE_NAME	ADDRESS	CITY
ST001	Musica	Victoria Wharf Shopping Centre	Cape Town
ST003	Musica	Blue Route Mall	Cape Town

Requirement	Mark	Examiner
Stored procedure created correctly	5	
Correct Select, From, and Where statements used	8	
Correct result obtained	2	
TOTAL	15	

**Question 3****(Marks: 10)**

The price of all CDs has increased by 10% rounded up to the nearest Rand. Implement this increase in the database.

Sample Results:

CD_CODE	TITLE	ARTIST	TRACKS	RELEASE_DATE	PRICE
CD001	Awesome 80s Collection	Various	24	01.01.1991	109
CD002	Anti	Rihanna	13	01.02.2016	201
CD003	Now 75	Various	22	01.03.2017	154
CD004	The Afterlove	James Blunt	10	01.04.2017	187
CD005	Oh My My	One Republic	16	01.10.2016	166

Requirement	Mark	Examiner
Correct Update statement	1	
Price increase calculated and implemented correctly	8	
Correct results obtained	1	
TOTAL	10	

**Question 4****(Marks: 10)**

Which two CDs have the most stock available (in total)? Display a new column named 'Stock Available' in your results.

Sample Results:

CD_CODE	TITLE	ARTIST	PRICE	STOCK AVAILABLE
CD002	Anti	Rihanna	201	22
CD004	The Afterlove	James Blunt	187	14

Requirement	Mark	Examiner
Correct Select, From and Where statement	4	
Correct use of functions	6	
TOTAL	10	

**Question 5****(Marks: 10)**

Which stores stock the same CDs? Write the necessary query to answer this question.

Sample Results:

CD_CODE	STORE_CODE	CD_CODE	STORE_CODE
CD002	ST001	CD002	ST004
CD002	ST004	CD002	ST001
CD004	ST001	CD004	ST003
CD004	ST003	CD004	ST001

Requirement	Mark	Examiner
Correct Select and From statements	6	
Correct Where statements	4	
TOTAL	10	

**Question 6****(Marks: 15)**

Write a query that will create a new table named 'RecentReleases' with CD code, title, artist, and release date as columns and its data, for CDs that were launched in 2017, else a message gets printed that reads: 'No recent releases available'.

Sample Results:

CD_CODE	TITLE	ARTIST	RELEASE_DATE
CD003	Now 75	Various	01.03.2017
CD004	The Afterlove	James Blunt	01.04.2017

Requirement	Mark	Examiner
Correct action based on whether 2017 releases are available or not	8	
Correct statements to create and populate new table	7	
TOTAL	15	

**Question 7****(Marks: 10)**

Create a query that calculates the number of years that a CD has been on the market. Display the CD title, artist, release date, and number of years in market in a new column named 'Years Available'. Sort results according to the years in market in descending order.

Sample Results (this was run in July 2017):

TITLE	ARTIST	RELEASE_DATE	YEARS AVAILABLE
Awesome 80s Collection	Various	01.01.1991	26
Anti	Rihanna	01.02.2016	1
Oh My My	One Republic	01.10.2016	1
Now 75	Various	01.03.2017	0
The Afterlove	James Blunt	01.04.2017	0

Requirement	Mark	Examiner
Correct Select statement	5	
Correct From and Order By statements	5	
TOTAL	10	



**Question 8****(Marks: 15)**

Create a query that displays the CD code, title, artist and whether there is stock of the CD available or not. If there is stock available it must display 'In stock' or 'Out of stock' if there is no stock available. Name the new column 'Status'.

Sample Results:

CD_CODE	TITLE	ARTIST	STATUS
CD001	Awesome 80s Collection	Various	Out of Stock
CD002	Anti	Rihanna	In Stock
CD003	Now 75	Various	In Stock
CD004	The Afterlove	James Blunt	In Stock
CD005	Oh My My	One Republic	Out of Stock

Requirement	Mark	Examiner
Correct Select statement	4	
Correct statement to determine if in/ out of stock should be displayed	5	
Correct From and Where statements	6	
TOTAL	15	

**Question 9****(Marks: 10)**

Display a list of all CD titles, artist, and price, but only if the price is not R109 or R154. Sort the results in descending order according to price.

Sample Results:

TITLE	ARTIST	PRICE
Anti	Rihanna	201,0000
The Afterlove	James Blunt	187,0000
Oh My My	One Republic	166,0000

Requirement	Mark	Examiner
Correct Select and From statement	4	
Correct statements to exclude CDs with specified prices and order results	6	
TOTAL	10	