

## Structured Query Language (SQL) Practical

- Open Microsoft Access and create a blank database and then work through the SLQ commands below.

### CREATE Table Query

1. **CREATE TABLE** – Using the SQL command create a table called DVD by creating and running the following SQL query:

```
CREATE Table DVD
(catalogNo long not null,
title varchar(50) not null,
genre varchar(20) not null,
rating varchar(6) not null,
PRIMARY KEY (catalogNo));
```

### Modifying columns and rows

1. **INSERT ROW** - Using the SQL command populate your table with data shown in the table

```
INSERT INTO DVD
(catalogNo, title, genre, rating)
Values (207132, 'Casino Royale', 'Action', "PG-13");
```

catalogNo	title	genre	rating
207132	Casino Royale	Action	PG-13
902355	Harry Potter and the GOF	Children	PG
330553	Lord of the Ring III	Action	PG-13
781132	Shrek 2	Children	PG
445624	Mission Impossible	Action	PG-13
634817	Patington Bear	Children	U

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- 2. INSERT COLUMN** - Using the SLQ command insert another column into the table and populate your table with data shown in the table

```
ALTER TABLE DVD
ADD COLUMN RentalCost Currency;
```

catalogNo	title	genre	rating	rentalCost
207132	Casino Royale	Action	PG-13	£5.00
902355	Harry Potter and the GOF	Children	PG	£4.99
330553	Lord of the Ring III	Action	PG-13	£2.50
781132	Shrek 2	Children	PG	£6.32
445624	Mission Impossible	Action	PG-13	£7.14
634817	Paddington Bear	Children	U	£10.00

- 3. UPDATE COLUMN** - Using the SLQ command update alter the rental cost for the film Casino Royale to £1.00

```
UPDATE DVD
SET rentalcost=1.00
WHERE catalogNO=207132;
```

- 4. DELETE ROW** – using the SQL command delete a row of data from a table

```
DELETE *
FROM DVD
WHERE title ='War of the Worlds';
```

## Viewing columns and rows

- 1. SELECT** - Using the SQL command list full details of all DVD's

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```
SELECT catalogNo, title, genre, rating, rentalcost  
FROM DVD;
```

Or

```
SELECT *  
FROM DVD;
```

### 2. **SELECT** - Using the SQL command list all DVD genres

```
SELECT genres  
FROM DVD;
```

### 3. **SELECT** - Using the SQL command list all DVD genres, but remove duplicate results from the result.

```
SELECT DISTINCT genres  
FROM DVD;
```

### 4. **SELECT** - Using the SQL command list all DVDs, and sort in order of genre.

```
SELECT *  
FROM DVD  
ORDER BY genre DESC;
```

```
SELECT *  
FROM DVD  
ORDER BY genre ASC;
```

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### 1. **Calculated Fields** - List the combined rental values for Casino Royale and Shrek

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```
SELECT sum(rentalcost) as 'RentalCost'  
  
FROM DVD  
  
WHERE title like 'Shrek' or title like 'casino royale';
```

- 2. Comparison Search Condition** - List all rental values which are greater than £5.00

```
SELECT catalogNo, title, rentalcost  
  
FROM DVD  
  
WHERE rentalcost > 5.00;
```

- 3. Range Search Condition AND** - List all rentals within the between £5.00 and £10.00.

```
SELECT catalogNo, title, rentalcost  
  
FROM DVD  
  
WHERE rentalcost > £5.00 AND rentalcost < £10.00;
```

- 4. Range Search Condition BETWEEN** - List all rentals within the between £5.00 and £10.00.

```
SELECT catalogNo, title, rentalcost  
  
FROM DVD  
  
WHERE rentalcost BETWEEN 2.00 and 10.00;
```

- 5. Set Membership Condition OR** - List all DVDs in the Sci-Fi or Children genres.

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```
SELECT catalogNo, title, genres  
FROM DVD  
WHERE genre="Sci-Fi" OR genre="Children";
```