

### Q2.1

```
CREATE DATABASE StudentNumber_DATA6212_ExamQ2;  
USE StudentNumber_DATA6212_ExamQ2;
```

```
CREATE TABLE DVDS (  
    DVD_CODE VARCHAR(5) NOT NULL PRIMARY KEY,  
    DVD_TITLE VARCHAR(40) NOT NULL,  
    DIRECTOR VARCHAR(40) NOT NULL,  
    RELEASE_DATE SMALLDATETIME NOT NULL,  
    RUNNING_TIME SMALLINT NOT NULL  
);
```

```
CREATE TABLE STORES (  
    STORE_CODE VARCHAR(5) NOT NULL PRIMARY KEY,  
    STORE_NAME VARCHAR(20) NOT NULL,  
    ADDRESS VARCHAR(50) NOT NULL,  
    CITY VARCHAR(20) NOT NULL  
);
```

```
CREATE TABLE AVAILABILITY (  
    DVD_CODE VARCHAR(5) NOT NULL,  
    STORE_CODE VARCHAR(5) NOT NULL,  
    AVAILABLE_STOCK SMALLINT NOT NULL,  
    PRIMARY KEY (DVD_CODE, STORE_CODE),  
    FOREIGN KEY (DVD_CODE) REFERENCES DVDS(DVD_CODE),  
    FOREIGN KEY (STORE_CODE) REFERENCES STORES(STORE_CODE)  
);
```

### Q2.2

```
INSERT INTO DVDS VALUES  
( 'D001', 'Joker', 'Todd Phillips', '2019-08-15', 122),  
( 'D002', 'Booksmart', 'Olivia Wilde', '2019-03-10', 105),  
( 'D003', 'Gemini Man', 'Ang Lee', '2019-10-01', 117),  
( 'D004', 'Atlantics', 'Mati Diop', '2019-05-16', 104),  
( 'D005', 'The Farewell', 'Lulu Wang', '2019-01-25', 100);
```

```
INSERT INTO STORES VALUES  
( 'ST001', 'DVD Express', '167 Pert Road', 'Johannesburg'),  
( 'ST002', 'DVD Rentals', '5 Second Avenue', 'Port Elizabeth'),  
( 'ST003', 'Movies R Us', '33 Bertha Mkhize Street', 'Durban'),  
( 'ST004', 'Pro Visions DVDs', '27 Bram Fischer Road', 'Durban'),  
( 'ST005', 'Protea DVD Shop', '210 Du Toit Street', 'Pretoria');
```

```
INSERT INTO AVAILABILITY VALUES  
( 'D002', 'ST001', 13),  
( 'D002', 'ST004', 9),  
( 'D003', 'ST005', 8),  
( 'D004', 'ST003', 5),  
( 'D004', 'ST001', 9);
```

### Q2.3

```
ALTER TABLE AVAILABILITY  
ADD STOCK_ORDERED SMALLINT;
```

### Q2.4

```
UPDATE AVAILABILITY
SET STOCK_ORDERED = 3
WHERE DVD_CODE = 'D004' AND STORE_CODE = 'ST003';
```

Q2.5

```
SELECT D.DVD_TITLE, D.DIRECTOR
FROM DVDS D
LEFT JOIN AVAILABILITY A ON D.DVD_CODE = A.DVD_CODE
WHERE A.DVD_CODE IS NULL;
```

```
SELECT D.DVD_TITLE, D.DIRECTOR, SUM(A.AVAILABLE_STOCK) AS
TOTAL_AVAILABLE
FROM DVDS D
LEFT JOIN AVAILABILITY A ON D.DVD_CODE = A.DVD_CODE
GROUP BY D.DVD_TITLE, D.DIRECTOR
ORDER BY D.DVD_TITLE;
```