|  |  |  |
| --- | --- | --- |
|  | Faculty of Computing, Engineering and Science |  |

**Assessment Cover Sheet and Feedback Form** 2020-21

|  |  |  |  |
| --- | --- | --- | --- |
| Module Code:  IS4S761 | Module Title:  Principles of Computing | | Module Team:  Gaylor Boobyer |
| Assessment Title and Tasks:  Portfolio 1 Element 2 | | | Assessment No.  2 |
| Date Set:  **13-Nov-20** | | Submission Date:  **11-Dec-20** | Return Date:  **22-Jan-21** |

|  |  |
| --- | --- |
| ***Part A: Record of Submission (to be completed by Student)*** | |
| **Extenuating Circumstances**  If there are any exceptional circumstances that may have affected your ability to undertake or submit this assignment, make sure you contact the Advice Centre on your campus prior to your submission deadline. | |
| **Fit to sit policy**:  The University operates a fit to sit policy whereby you, in submitting or presenting yourself for an assessment, are declaring that you are fit to sit the assessment. You cannot subsequently claim that your performance in this assessment was affected by extenuating factors. | |
| **Plagiarism and Unfair Practice Declaration:**  By submitting this assessment, you declare that it is your own work and that the sources of information and material you have used (including the internet) have been fully identified and properly acknowledged as required[[1]](#footnote-2). Additionally, the work presented has not been submitted for any other assessment. You also understand that the Faculty reserves the right to investigate allegations of plagiarism or unfair practice which, if proven, could result in a fail in this assessment and may affect your progress. | |
| **Details of Submission:**  Note that all work handed in after the submission date and within 5 working days will be capped at 40%[[2]](#footnote-3). No marks will be awarded if the assessment is submitted after the late submission date unless extenuating circumstances are applied for and accepted (Advice Centre to be consulted).  **Work should be submitted to Blackboard on the submission date above but this will be treated as your submission receipt and you need to provide one printed copy on Monday 10th December 2018 before noon.**  You are responsible for checking the method of submission. This is an INDIVIDUAL coursework. | |
| **You are required to acknowledge that you have read the above statements by writing your student number (s) in the box:** | Student Number(s): |

**IT IS YOUR RESPONSIBILITY TO KEEP RECORDS OF ALL WORK SUBMITTED**

SQL Assignment

# Create Tables

**-- 0.1-DELETE ALL TABLES**

DROP TABLE CENTRE;

DROP TABLE SALESMAN;

DROP TABLE CARSALE;

DROP TABLE CUSTOMER;

**-- 0.2-CREATE THE TABLES & INSERT DATA**

-- CENTRE

CREATE TABLE CENTRE(

CENTRENO CHAR(4) NOT NULL,

ADDRESS CHAR(50),

CONTACTNO VARCHAR(15), -- COULD BE NUMBER OR NUMERIC

CONSTRAINT CENTRE\_CENTRENO\_PK PRIMARY KEY(CENTRENO)

);

**-- CENTRE**

INSERT INTO CENTRE (CENTRENO, ADDRESS, CONTACTNO) VALUES ('001', 'TREFF', '01443 875456');

INSERT INTO CENTRE (CENTRENO, ADDRESS, CONTACTNO) VALUES ('002', 'NEWPORT', '01495 789456');

INSERT INTO CENTRE (CENTRENO, ADDRESS, CONTACTNO) VALUES ('003', 'PONTYPRIDD', '01443 123546');

**-- SALESMAN**

CREATE TABLE SALESMAN(

SALESMANNO CHAR(4) NOT NULL,

SPNAME CHAR(35),

CONTACTNO VARCHAR(15), --COULD BE NUMBER OR NUMERIC

DOB DATE,

CENTRENO CHAR(4),

CONSTRAINT SALESMAN\_SALESMANNO\_PK PRIMARY KEY(SALESMANNO)

);

**-- SALESMAN**

**-- CENTRE 1**

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('001', 'MARK BABER', '07415467895', '31-MAY-92', '001');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('003', 'HANNAH EVANS', '07412541263', '18-DEC-92', '001');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('004', 'ISA LARA', '07497517987', '31-MAY-92', '001');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('006', 'KEZIAH MELTON', '07700053700', '18-DEC-92', '001');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('010', 'ELIZA ELLIOTT', '07663075294', '18-AUG-65', '001');

**-- CENTRE 2**

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('002', 'LLOYD JAMES', '08456321254', '28-MAR-92', '002');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('005', 'YVETTE NAIRN', '07508307983', '28-MAR-92', '002');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('007', 'LOGAN WILLIAMSON', '07533580223', '25-AUG-63', '002');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('008', 'SARA THOMSON', '07669035741', ' 25-OCT-99', '002');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('009', 'ELLIS MCDONALD', '07894572067','08-FEB-50', '002');

**-- CENTRE 3**

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('011', 'AUBREY GILL','07571065769','09-APR-77','003');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('013', 'MYA BARRETT','07933920980','14-MAY-93','003');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('012', 'SEAN MORGAN','07565335159','25-DEC-56','003');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('014', 'SKYLER BYRNE','07663075294','30-JUL-77','003');

INSERT INTO SALESMAN (SALESMANNO, SPNAME, CONTACTNO, DOB, CENTRENO) VALUES ('015', 'ELOISE MURRAY','07552451436','14-MAY-87','003');

**-- CUSTOMER**

CREATE TABLE CUSTOMER(

CUSTOMERNO CHAR(4) NOT NULL,

CNAME CHAR(35),

CONTACTNO VARCHAR(15), -- COULD BE NUMBER OR NUMERIC

CADDRESS VARCHAR(60),

DOB DATE,

DRIVERSLICENCENO VARCHAR(16),

ONCREDIT CHAR(3),

BADDEBTOR CHAR(3),

CONSTRAINT CUSTOMER\_CUSTOMERNO\_PK PRIMARY KEY(CUSTOMERNO)

);

**-- CUSTOMER**

INSERT INTO CUSTOMER (CUSTOMERNO, CNAME, CONTACTNO, CADDRESS, DOB, DRIVERSLICENCENO, ONCREDIT, BADDEBTOR) VALUES ('001', 'DARNELL MCCALLUM', '07457491253', '13 BROADWAY, TORQUAY, TQ63 1AM', '16-DEC-92', 'QSW3BSRYY6UBMF3S', 'N', 'N');

INSERT INTO CUSTOMER (CUSTOMERNO, CNAME, CONTACTNO, CADDRESS, DOB, DRIVERSLICENCENO, ONCREDIT, BADDEBTOR) VALUES ('002', 'JAMES HETFIELD', '07456321458', '73 NEW ROAD, EAST CENTRAL LONDON, EC98 4HM', '05-JAN-59', 'FVGUEPVRHBWF69R8', 'Y', 'Y');

INSERT INTO CUSTOMER (CUSTOMERNO, CNAME, CONTACTNO, CADDRESS, DOB, DRIVERSLICENCENO, ONCREDIT, BADDEBTOR) VALUES ('003', 'ROSITA JONES', '07457897895', '78 STANLEY ROAD, WATFORD, WD77 8IA', '24-JAN-68', 'TDF9MPY2RGS2CKMV', 'Y', 'N');

INSERT INTO CUSTOMER (CUSTOMERNO, CNAME, CONTACTNO, CADDRESS, DOB, DRIVERSLICENCENO, ONCREDIT, BADDEBTOR) VALUES ('004', 'MAC POWELL', '07451234520', '87 THE DRIVE, READING, RG89 7EY', '20-FEB-88', 'GD55QSU3TH4MZD7F', 'N', 'Y');

INSERT INTO CUSTOMER (CUSTOMERNO, CNAME, CONTACTNO, CADDRESS, DOB, DRIVERSLICENCENO, ONCREDIT, BADDEBTOR) VALUES ('005', 'BETHANY MILLS', '07580879651', '1 CHURCH LANE, BATH, BA33 3MA', '18-FEB-69', 'GUH0IYWXFT2A8KTS', 'N', 'N');

INSERT INTO CUSTOMER (CUSTOMERNO, CNAME, CONTACTNO, CADDRESS, DOB, DRIVERSLICENCENO, ONCREDIT, BADDEBTOR) VALUES ('006', 'ZAC HART', '07831826626', '198 HIGHFIELD ROAD, REDHILL, RH98 3HF', '01-SEP-70', 'KJHA7WH5H8LXKM4Z', 'Y', 'Y');

INSERT INTO CUSTOMER (CUSTOMERNO, CNAME, CONTACTNO, CADDRESS, DOB, DRIVERSLICENCENO, ONCREDIT, BADDEBTOR) VALUES ('007', 'HARLEY CLARK', '07559418033', '78 GROVE ROAD, DUDLEY, DY25 4VR', '12-APR-75', '6ZVMYV7TH8DG9EQU', 'Y', 'N');

INSERT INTO CUSTOMER (CUSTOMERNO, CNAME, CONTACTNO, CADDRESS, DOB, DRIVERSLICENCENO, ONCREDIT, BADDEBTOR) VALUES ('008', 'LILLY HOLMES', '07822525536', '84 ALEXANDER ROAD, CREWE, CW96 2ZO', '02-APR-87', '91Y0FIHPPPE4GQKS', 'N', 'Y');

INSERT INTO CUSTOMER (CUSTOMERNO, CNAME, CONTACTNO, CADDRESS, DOB, DRIVERSLICENCENO, ONCREDIT, BADDEBTOR) VALUES ('009', 'DANE WEBB', '07574181372', '9405 KING STREET, HUDDERSFIELD, HD47 7EJ', '05-OCT-91', 'ZICQOMVYNZ1VIOW9', 'N', 'Y');

INSERT INTO CUSTOMER (CUSTOMERNO, CNAME, CONTACTNO, CADDRESS, DOB, DRIVERSLICENCENO, ONCREDIT, BADDEBTOR) VALUES ('010', 'ADAM RICHARDS', '07899845624', '1 MILL ROAD, NORTH LONDON, N82 3UJ', '09-FEB-97', 'QYOWZOISQ0OABORV', 'N', 'Y');

**-- CARSALE**

CREATE TABLE CARSALE(

CARSALENO CHAR(4) NOT NULL,

CUSTOMERNO CHAR(4),

SALESMANNO CHAR(4),

CARSALEDATE DATE,

CARPRICE NUMBER(6), --NUMBER FOR ORACLE

ISINVOICE CHAR,

MILESDRIVEN NUMBER(3),

CONSTRAINT CARSALE\_CARSALENO\_PK PRIMARY KEY(CARSALENO)

);

**-- CARSALE**

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('001', '010', '002', '06-JUN-19', 2132, 'Y', '168');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('002', '009', '002', '30-JUN-19', 1210, 'Y', '250');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('003', '008', '006', '13-AUG-19', 15424, 'Y', '120');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('004', '004', '005', '28-SEP-19', 1210, 'Y', '250');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('005', '002', '003', '01-NOV-19', 10101, 'N', '303');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('006', '005', '015', '25-NOV-19', 7495, 'Y', '957');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('007', '006', '014', '24-MAR-20', 3999, 'Y', '148');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('008', '008', '010', '03-APR-20', 12995, 'Y', '737');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('009', '006', '005', '08-MAY-20', 10350, 'Y', '655');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('010', '003', '007', '18-MAY-20', 9789, 'N', '285');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('011', '002', '009', '11-JUN-20', 12500, 'N', '802');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('012', '001', '009', '09-JUL-20', 11909, 'N', '981');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('013', '001', '009', '13-JUL-20', 5095, 'N', '382');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('014', '002', '009', '24-AUG-20', 10000, 'N', '940');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('015', '008', '015', '29-SEP-20', 9000, 'N', '183');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('016', '008', '008', '01-DEC-20', 1023, 'N', '25');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('017', '001', '001', '02-DEC-20', 7895, 'Y', '50');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('018', '008', '008', '06-DEC-20', 10235, 'Y', '150');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('019', '002', '001', '15-DEC-20', 15000, 'N', '95');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('020', '002', '002', '12-DEC-20', 10000, 'Y', '50');

INSERT INTO CARSALE (CARSALENO, CUSTOMERNO, SALESMANNO, CARSALEDATE, CARPRICE, ISINVOICE, MILESDRIVEN) VALUES ('021', '003', '003', '23-DEC-20', 6545, 'Y', '150');

**-- ADD FOREIGN KEYS**

ALTER TABLE SALESMAN ADD FOREIGN KEY (CENTRENO) REFERENCES CENTRE(CENTRENO);

ALTER TABLE CARSALE ADD FOREIGN KEY (SALESMANNO) REFERENCES SALESMAN(SALESMANNO);

ALTER TABLE CARSALE ADD FOREIGN KEY (CUSTOMERNO) REFERENCES CUSTOMER(CUSTOMERNO);

# 2 - SQL QUERIES

### 2.1-PRODUCE A LIST OF CUSTOMERS IN CUSTOMER NUMBER ORDER. (2 MARKS)

-- Create a View

Create View QuestionOne AS

SELECT \* FROM CUSTOMER;

-- Select from view 1

SELECT \*

FROM QuestionOne

ORDER BY CUSTOMERNO ASC; -- ASC JUST TO BE SAFE

### 2.2-PRODUCE A LIST OF SALES STAFF ORDERED BY CENTRE NUMBER THEN SALESPERSON NUMBER. (THIS SHOULD BE ONE QUERY ONLY) - (3 MARKS)

-- Create a View

Create View QuestionTwo

AS SELECT CENTRENO, SALESMANNO, SPNAME, CONTACTNO

FROM SALESMAN;

-- Select from view 2

SELECT \* FROM QuestionTwo

ORDER BY CENTRENO, SALESMANNO;

### 2.3-PRODUCE A LIST OF CAR SALES ORDERED BY SALESPERSON NUMBER THEN CAR PRICE. (THIS SHOULD BE ONE QUERY ONLY) - (4 MARKS)

-- Create a View

Create View QuestionThree

AS SELECT CARSALENO, SALESMANNO, CARSALEDATE, CUSTOMERNO, CARPRICE

FROM CARSALE;

-- Select from view 3

SELECT \*

FROM QuestionThree

ORDER BY SALESMANNO, CARPRICE;

### 2.4-PRODUCE OUTPUT WHICH LISTS THE NUMBER OF CARS SOLD BY EACH SALESPERSON FOR THE PAST 6 MONTHS (I.E. S1: 5 CARS , S2: 3 CARS ETC.) - (7 MARKS)

-- Couldn't figure out how to create a view for this one.

SELECT SALESMANNO AS SALESMAN, COUNT(CARPRICE) AS TOTALCARS

FROM CARSALE

WHERE CARSALEDATE >= ADD\_MONTHS(SYSDATE, -6) -- Check last 6 months

GROUP BY SALESMANNO;

### 2.5-A-PRODUCE OUTPUT WHICH LISTS THE TOTAL COST OF THE CARS SOLD BY EACH SALESMAN IN THE PAST MONTH. FOR EXAMPLE: S1 HAS SOLD CA12 JKN £8,500 CF59 JMK £10,100 - THEREFORE THE OUTPUT WOULD BE S1 18,600. (7 MARKS)

-- Couldn't figure out how to create a view for this one.

SELECT SALESMANNO, SUM(CARPRICE) AS TOTALCARSSOLDPRICE

FROM CARSALE

WHERE CARSALEDATE >= ADD\_MONTHS(SYSDATE, -1) -- Check last 1 month

GROUP BY SALESMANNO;

### 2.5-B-FOR FOUR EXTRA MARKS, ADD THE COMMISSION EARNED BY EACH SALESMAN TO THE ABOVE REPORT. (4 MARKS)

-- Create a view

SELECT SALESMANNO, SUM(CARPRICE) AS TOTALCARSSOLDPRICE,

CASE

WHEN ROUND(SUM(CARPRICE), 2) < 5000 THEN ROUND((SUM(CARPRICE) \* 2) / 100, 2)

WHEN ROUND(SUM(CARPRICE), 2) < 10000 THEN ROUND((SUM(CARPRICE) \* 3) / 100, 2)

WHEN ROUND(SUM(CARPRICE), 2) < 15000 THEN ROUND((SUM(CARPRICE) \* 4 ) / 100, 2)

WHEN ROUND(SUM(CARPRICE), 2) > 15000 THEN ROUND((SUM(CARPRICE) \* 5 ) / 100, 2)

--ELSE 'No Commission Worked Out' (ELSE DIDN'T WORK FOR SOME REASON)

END

AS COMMISSION

FROM CARSALE

WHERE CARSALEDATE >= ADD\_MONTHS(SYSDATE, -1) -- Check last 1 month

GROUP BY SALESMANNO;

### 2.6-PRODUCE OUTPUT WHICH LISTS DETAILS OF THE MOST EXPENSIVE CAR SOLD IN THE PAST MONTH. (7 MARKS)

-- Create a view

Create view QuestionSix

AS SELECT \*

FROM CARSALE

WHERE CARPRICE IN (

SELECT MAX(CARPRICE)

FROM CARSALE

WHERE CARSALEDATE >= ADD\_MONTHS(SYSDATE, -1) -- Check last 1 month

);

-- select from view six

SELECT \*

FROM QuestionSix

ORDER BY CARPRICE;

### 2.7-PRODUCE OUTPUT WHICH LIST ALL CAR SALES IN THE PAST MONTH. INCLUDE SALESPERSON NUMBER, SALESPERSON NAME, CUSTOMER NUMBER, CUSTOMER NAME AND CUSTOMER ADDRESS IN YOUR OUTPUT. ORDER BY SALESPERSON NUMBER. (9 MARKS)

-- Create a view

SELECT

CARSALE.CARSALENO as CarSale,

CARSALE.SALESMANNO as SalesmanNo,

SPNAME as SalesPerson,

CUSTOMER.CUSTOMERNO as CustomerNo,

CUSTOMER.CNAME as Customer,

CUSTOMER.CADDRESS as CustomerAddress

FROM CARSALE

WHERE

CARSALEDATE >= ADD\_MONTHS(SYSDATE, -1) -- Check last 1 month (Doesn't work in Microsoft SQLServer)

INNER JOIN

CUSTOMER ON

CARSALE.CUSTOMERNO = CUSTOMER.CUSTOMERNO

INNER JOIN

SALESMAN ON

CARSALE.SALESMANNO = SALESMAN.SALESMANNO

ORDER BY SALESMANNO ASC;

### 2.8-PRODUCE A LIST OF CUSTOMERS THAT DO NOT CURRENTLY HAVE ANY CAR SALES IN THE CAR SALE TABLE. (MAKE SURE THAT YOUR DATA CONTAINS CUSTOMERS WITHOUT ANY CURRENT CAR SALES)

-- Create a view

Create View QuestionEight

AS SELECT \*

FROM CUSTOMER

WHERE CUSTOMERNO NOT IN (

SELECT CUSTOMERNO

FROM CARSALE

GROUP BY CUSTOMERNO

);

-- Select from view 8

SELECT \*

FROM QuestionEight;

1. University Academic Integrity Regulations [↑](#footnote-ref-2)
2. Information on exclusions to this rule is availablefrom Campus Advice Shops [↑](#footnote-ref-3)