**Siva Sivani Degree College**

**FIT (B. Sc 1-A.I.M.L)**

**Debugging Questions(MS Excel,SQL)**

**MS Excel**

Q1 **: Service Center Bill Records**

| **Job ID** | **Customer** | **Service** | **Charges** | **Tax** | **Bill Date** | **Total Bill** |
| --- | --- | --- | --- | --- | --- | --- |
| J001 | Aakash | AC Repair | 1200 | 18 | 10-06-2024 | =D2+(D2\*18) |
| J002 | Bhavna | Washing M/C | 1500 | 12 | 11-06-2024 | =D3\*E3 |
| J003 | Chetan | Refrigerator | 2000 | 18 | 12-06-2024 | =D4+E4 |
| J004 | Deepa | Water Purif. | 1100 | 5 | 13-06-2024 | =D5\*(1+E5) |
| J005 | Esha | Microwave | 900 | 5 | 14-06-2024 | =D6&E6 |

**Tasks**

1. Replace hardcoded tax in Row 2 with a formula.
2. Fix logical error in tax computation Row 3 and Row 5.
3. Use formula structure D + D \* Tax% for all rows.
4. Format Total Bill as currency.
5. Format Bill Date as custom “MMMM YYYY”.

**Q2: Manufacturing Daily Output**

| **Date** | **Machine** | **Shift** | **Units Produced** | **Defects** | **Final Output** |
| --- | --- | --- | --- | --- | --- |
| 01/05/2024 | M101 | A | 1500 | 10 | =C2\*D2 |
| 02/05/2024 | M102 | B | 1600 | 12 | =D3+E3 |
| 03/05/2024 | M103 | C | 1700 | 8 | =D4-E4 |
| 04/05/2024 | M104 | A | 1550 | 15 | =D5&E5 |
| 05/05/2024 | M105 | B | 1620 | 9 | =D6\*E6 |

**Tasks**

1. Correct formula logic for Final Output in all rows.
2. Fix operator usage in Row 4.
3. Ensure Final Output = Units Produced – Defects.
4. Apply number format with no decimals.
5. Filter by Shift = A only.

**Q3: Expense Tracker**

| **Date** | **Category** | **Item** | **Amount** | **Tax (%)** | **Total Expense** |
| --- | --- | --- | --- | --- | --- |
| 01/07/2024 | Travel | Flight | 10000 | 18 | =D2+E2/100 |
| 02/07/2024 | Food | Lunch | 500 | 5 | =D3\*E3 |
| 03/07/2024 | Utilities | Electricity | 2000 | 12 | =D4+E4/100 |
| 04/07/2024 | Maintenance | AC Repair | 1500 | 18 | =D5+18% |
| 05/07/2024 | Stationery | Printing | 700 | 5 | =D6+(D6\*E6) |

**Tasks**

1. Correct percentage calculation for tax in all rows.
2. Fix multiplication used wrongly in Row 3.
3. Modify formula in Row 4 to use cell reference instead of hardcoded percentage.
4. Round total values to 2 decimal places.
5. Apply "₹" format to Total Expense column.

**Q4: Marketing Campaign Data**

| **Campaign** | **Platform** | **Reach** | **Cost per Click** | **Clicks** | **Start Date** | **Total Cost** |
| --- | --- | --- | --- | --- | --- | --- |
| SummerA | Google | 5000 | 20 | 300 | 01-06-2024 | =C2+D2 |
| SpringB | Facebook | 7000 | 15 | 400 | 03-06-2024 | =D3+E3 |
| FestiveX | Instagram | 6000 | 10 | 350 | 05-06-2024 | =E4\*D4 |
| WinterC | YouTube | 4000 | 25 | 500 | 07-06-2024 | =E5&D5 |
| MegaZ | Twitter | 8000 | 18 | 450 | 09-06-2024 | =D6\*E6 |

**Tasks**

1. Correct formula for Total Cost in Row 2.
2. Fix reference error in Row 3 and 4.
3. Replace incorrect string operator in Row 5.
4. Format Start Date column to "MMM-YYYY".
5. Sort data by Reach in descending order.

**Q5: Sales Performance**

| **Salesperson** | **Region** | **Product** | **Units Sold** | **Unit Price** | **Sale Date** | **Total Sales** |
| --- | --- | --- | --- | --- | --- | --- |
| Ankit | North | Laptop | 10 | 45000 | 01/01/2024 | =B2\*C2 |
| Sneha | East | Tablet | 15 | 25000 | 03/01/2024 | =D3+E3 |
| Rohan | South | Mobile | 20 | 30000 | 04/01/2024 | =D4\*F4 |
| Priya | West | Monitor | 25 | 10000 | 06/01/2024 | =D5\*E5 |
| Kiran | East | Desktop | 30 | 20000 | 08/01/2024 | =D6&E6 |

**Tasks**

1. Identify and correct the wrong formula in Row 2.
2. Rectify the Total Sales formula in Row 3.
3. Fix the incorrect operator used in Row 6.
4. Format Sale Date column in "DD-MMM-YYYY".
5. Apply filters on all columns.

**Q6: Inventory Management**

| **Item ID** | **Category** | **Item Name** | **Quantity** | **Unit Price** | **Purchase Date** | **Total Cost** |
| --- | --- | --- | --- | --- | --- | --- |
| I101 | Stationery | Pen | 100 | 5 | 01/04/2024 | =D2+E2 |
| I102 | Stationery | Pencil | 150 | 3 | 03/04/2024 | =D3\*E4 |
| I103 | Electronics | Calculator | 20 | 250 | 04/04/2024 | =C4\*D4 |
| I104 | Furniture | Chair | 10 | 1200 | 05/04/2024 | =D5\*F5 |
| I105 | Furniture | Table | 5 | 3500 | 06/04/2024 | =D6\*E6 |

**Tasks**

1. Fix the incorrect column used in Row 3 Total Cost formula.
2. Correct the reference error in Row 4 formula.
3. Check and fix the formula in Row 2.
4. Standardize Purchase Date column to "DD/MM/YYYY".
5. Apply conditional formatting to highlight Total Cost > 10000.

**Q7: Employee Timesheet**

| **Emp ID** | **Name** | **Dept** | **Hours Worked** | **Hourly Rate** | **Date** | **Total Pay** |
| --- | --- | --- | --- | --- | --- | --- |
| E001 | Arun | HR | 8 | 500 | 01/05/2024 | =C2\*C3 |
| E002 | Sneha | Finance | 7 | 650 | 02/05/2024 | =D3+E3 |
| E003 | Kiran | IT | 6.5 | 700 | 03/05/2024 | =D4\*E4 |
| E004 | Priya | Admin | 9 | 400 | 04/05/2024 | =D5+E5 |
| E005 | Rohan | Sales | 5.5 | 600 | 05/05/2024 | =D6&E6 |

**Tasks**

1. Correct the formula in Row 2.
2. Fix formula logic in Row 5 and 6.
3. Ensure Total Pay column has consistent formulas.
4. Apply currency format to Total Pay.
5. Apply date formatting to Date column.

**Q8: Purchase Order Records**

| **Order ID** | **Supplier** | **Product** | **Qty** | **Unit Cost** | **Order Date** | **Order Total** |
| --- | --- | --- | --- | --- | --- | --- |
| PO1001 | HP | Cartridge | 15 | 1200 | 10-01-2024 | =D2\*E2 |
| PO1002 | Dell | Keyboard | 20 | 1500 | 11-01-2024 | =D3\*E2 |
| PO1003 | Samsung | Monitor | 10 | 7500 | 12-01-2024 | =D4+E4 |
| PO1004 | Lenovo | CPU | 5 | 20000 | 13-01-2024 | =E5\*D5 |
| PO1005 | Canon | Scanner | 8 | 11000 | 14-01-2024 | =D6\*F6 |

**Tasks**

1. Fix cell references in Row 3 and 4.
2. Reverse wrong operand order in Row 5.
3. Replace addition with multiplication where required.
4. Format Order Date column as short date.
5. Set number format with comma separator for Order Total.

**Q9: Hospital Equipment Purchase**

| **Equipment** | **Vendor** | **Qty** | **Unit Price** | **GST (%)** | **Purchase Date** | **Total Amount** |
| --- | --- | --- | --- | --- | --- | --- |
| ECG | Philips | 2 | 40000 | 18 | 15/03/2024 | =C2\*D2+E2 |
| Monitor | Siemens | 4 | 25000 | 12 | 16/03/2024 | =D3+E3 |
| Syringe | MedTech | 100 | 20 | 5 | 17/03/2024 | =C4+D4 |
| Ventilator | GE | 1 | 150000 | 18 | 18/03/2024 | =C5*D5*(1+18%) |
| Wheelchair | LifeCare | 3 | 8000 | 12 | 19/03/2024 | =C6*D6*E6 |

**Tasks**

1. Correct GST calculation in all rows.
2. Use cell-based tax formulas instead of hardcoded % in Row 5.
3. Fix misused addition operator in Row 3.
4. Reapply short date format in Purchase Date.
5. Use proper number format (comma-separated) for Total Amount.

**Q10: Vehicle Rental Records**

| **Vehicle** | **Type** | **Days Rented** | **Rate per Day** | **Total Rent** | **Rent Date** |
| --- | --- | --- | --- | --- | --- |
| V001 | Sedan | 5 | 1200 | =B2\*C2 | 01-04-2024 |
| V002 | SUV | 7 | 2000 | =C3\*D3 | 02-04-2024 |
| V003 | Hatchback | 3 | 1000 | =D4+C4 | 03-04-2024 |
| V004 | Tempo | 10 | 1500 | =C5&D5 | 04-04-2024 |
| V005 | Bike | 2 | 500 | =C6\*D6 | 05-04-2024 |

**Tasks**

1. Fix the wrong formula in Row 2.
2. Identify and correct cell order in Row 4.
3. Remove text concatenation logic from Row 5.
4. Format Rent Date in “DD-MMM”.
5. Apply conditional formatting for Days Rented > 5.

**SQL**

**Q11: Insurance Policy Records**

**Buggy Script:**

CREATE Policies

PolicyId INTEGER,

HolderName INT(100);

PolicyType VCHAR50);

StartDate DATETIME;

PremiumAmount NUMBER(10 2)

INSE INTO Policies

(, 'Amit'; 'Health” '2024-03-01', 12000);

(102, 'Bhavana', 'Life' '2024-03-02', 15000),

(103, 'Chirag', 'Auto '2024-03-03”, 9000.00);

(, 'Divya', 'Home', '2024-03-04'),

(105, 'Esha', 'Travel', '2024-03-05', 7500)

ALTER Policies ADD Nominee VARCHAR(50

UPDTE Policies PremiumAmount = PremiumAmount \* 0.95 WHERE PolicyType = 'Life'

SLECT HolderName PolicyType ‘PremiumAmount FROM Policies

**Q12: Vehicle Registration Data**

**Buggy Script:**

CREATE VehicleData

(

RegNo INT;

OwnerName VARCHAR(100

VehicleType INT;

RegDate DATE,

Cost DATE

)

INSERT VehicleData

('KA01AB1234', 'Raj 'Bike'; '2024-01-01', 55000.00);

('KA02CD2345';'Maya';'Car', '2024/01/02', 700000)

('KA03EF3456', 'Karan', 'Auto', '01-01-2024', 180000.00),

('KA04GH4567', '200', 'SUV; '2024-01-05”),

('KA05IJ5678', 'Asha', '200', '2024-01-06', 900000)

UPDAT VehicleData Cost = Cost + 5000 WHERE VehicleType = Bike

ALTER VehicleData VehicleName;

SELECT FORM VehicleData WHERE RegDate > '2024-01-02'”

**Q13: Hospital Appointment Records**

**Buggy Script:**

CREATE TABLE Appointments (

ApptID TEXT,

PatientName TEXT,

Doctor VARCHAR0),

ApptDate DATETIME,

FeeAmount TEXT

)

INSERT

VALUES (1, 'Ravi', 'Dr. Singh '2024-07-01', 500)”

(2, 'Aarti', 'Dr. Khan', '2024/07/02', 600)

(3, 'Neel'Dr. Roy', 2024-07-03')

(4, 'Meena', 'Dr. Gupta', '2024-07-04', 550);

DELTE Appointments WHERE Doctor = 'Dr. Khan':

ATER Appointments FeeAmount INT;

SELECT ApptID; PatientNamee; FeeAmount FROM Appointments:

**Q14: Product Supply Records**

**Buggy Script:**

CREATE TABLE (

SupplyId INT PRIMARY KEY,

ProductName CHAR(100,

Quantity INT;

SupplyDate INT.

Supplier TEXT

;

INSERT I Supply

VALUES (401, 'Iron Rods', 100, '2024-05-01', 'Tata Steel'),

(402, 'Cement', 200 '2024-05-02', 'ACC'),

(403, 'Bricks', 150; 2024-05-03'; 'RedBrick Co'),

(404, 'Paint, ; '2024-05-04', 'Nerolac');

(405, '200', 90, '2024-05-05' 'Kajaria')”

ALTER Supply RENAME COLUMN Supplier TO SupplierName;

UPATE Supply Quantity = Quantity + 10 WHERE ProductName = 'Cement'

SELECT \* FROM Supply WHERE SupplyDate = "2024-05-03"

**Q15: Service Complaint Records**

**Buggy Script:**

CREATE Complaints (

CompId INT,

CustomerName VARCHAR(100),

Issue TEXT,

DateLogged DATE,

Status

)

INSERT Complaints

(Ravi, 'Arun', 'Login failure', '2024-04-01', 'Open'),

(602, 'Bhavya”, 'Slow system', '2024/04/02', 'Closed”);

(603, 'Chetan', 'Payment error'; '2024-04-03')

(604, '800', 'Connection lost', '2024-04-04', 'Open'),

(605, 'Ekta', 'App crash', '2024-04-05'; 'InProgress'):

UPDATE Complaints SET Status = Closed WHERE CompId = 605;

ALTER Complaints Technician VARCHAR(50;

SLECT Customer, Issue, Status FROM Complaints

**Question 16: Retail Inventory Management**

**Buggy Script:**

CREATE inventory (

Item VARCHAR(10),

itemName VARCHAR(50),

quantity INT;

price FLOAT,

purchaseDate DATE.

INSRT INTO inventory

(101, 'Mou”, 50, 350.0, '2024-04-01'),

(102, 'Keyboard', 30 750.0 '2024-04-02'),

(103, 'Monitor'; 20, 8000, '2024/04/03'),

(104, 'CPU', '15', 12000.0, '2024-04-04').

(105 'Webcam, 25, 2000.0, '2024-04-05');

ALTER inventory ADD supplierName VARCHAR(50);

UPDATE inventory price = price \* 0.9 WHERE quantity => 30;

SELECT \* FORM inventory

**Q17: Vehicle Service Booking**

**Buggy Script:**

CREATE TABLE Service\_Bookings

BookingID INT PRIMARY KE,

CustomerName CHAR(100),

VehiclType INT,

Service Date DATE,

Amount DECIMAL

)’

INSERT Service\_Bookings VALUES

(1, 'Ajay, 'Car, 2024-01-15', 1500)

(2, 'Bina', 'Scooter' '2024-01-16', 800

(3, 'Ravi', ' 1234, '2024-01-17', )

(4, 'Rita', '17-01-2024', 1200),

(5, 'Karan;'Car', '2024-01-19', 1800);

DELETE Service\_Bookings VehicleType = 'Scooter'

ALTER Service\_Bookings CHANGE CustomerName CustName VARCHAR(100);

SEECT BookingID, CustName, ServDate FROM Service\_Bookings

**Q18: Manufacturing Orders**

**Buggy Script:**

CREATE Orders (

OrderId VRCHAR)10),

Produc tName INT,

Units Orderd INT(100),

OrderDate DATETIM

INSERT Orders

VALUES (201, 'Gears, 300, '2024-02-01'),

(202, '200', 150, '2024-02-02')

(203, 'Chains', 200, '2024-02-03)

UPDATE Orders SET UnitsOrderd = UnitsOrderd + 20

WHRE OrderId = 202

ALTER Orders DROP ProductName;

SELCT \* FROM Orders WHERE Orderate = 2024/02/03

**Q19: Employee Payroll**

**Buggy Script:**

CREATETABLE payroll (

EmpId ,

Emp Name CHAR ),

BasicSalary UMERIC,

Bonus FLOAT

DOJ

)

INSERT payroll VALUE

(501 '100, 40000, 5000, '2024-05-01'

(502, 'Suman', 42000, NULL, 'Rajiv

(503, 'Tarun', , 4500, '2024\*05/03')

UPDTE payrol SET Bonus = 0.10 \* BasicSalary

WHERE BasicSalary 40000

ALTER payroll RENAME EmpName TO EmployeeName;

DELTE payroll EmpId

SELECT; EmpName, Basic Salary + Bonus AS TotalPay FROM payroll;

**Q20: Hotel Room Bookings**

**Buggy Script:**

CREATE Booking (

BookingNo INT

GuestName VACHAR(100),

RoomType DATE,

CheckIn DATE,

CheckOut DATE,

TotalCost VARCHAR(8,2)

);

INSERT INTO Booking

(301, 'Manoj', 'Suite', '2024-06-01', '2024-06-03', 12000),

(302, 'Priya', 'Deluxe', '2024-06-02, '2024-06-05' ),

(, 'Akshay', 'Standard', '2024-06-03', '2024-06-04', );

ALTER TABLE Booking RoomType (50;

UPDATE Booking TotalCost = TotalCost + 1000 WHERE RoomType = Deluxe'

SELECT \* FROM Booking WHERE CheckIn > '2024-06-01'