

```
1
2  /*
3  MICROSOFT SQL - CAPSTONE PROJECT
4  -----
5
6  INVENTORY MANAGEMENT
7
8  DATABASE:
9      - INVENTORY
10
11 TABLES: (in an Order)
12     - SUPPLIER
13     - PRODUCT
14     - STOCK
15     - CUST
16     - ORDERS
17
18 Parent-Child Relationship among Tables:
19     - SUPPLIER (Parent) -> PRODUCT (Child)
20     - PRODUCT (Parent) -> STOCK (Child), ORDERS (Child)
21     - CUST (Parent) -> ORDERS (Child)
22
23 Names of PROCEDURES:
24     - SUPPLIER => Add_Sup
25     - PRODUCT  => Add_Prod
26     - STOCK    => Add_Stk
27     - CUST     => Add_Cust
28     - ORDERS   => Add_Ord
29
30
31
32
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36
37 - PROCEDURES, FUNCTIONS, SEQUENCES, TRANSACTIONS and TRIGGERS are used in this Project.
38
39 1. Insert the Data into the Tables using PROCEDURES.
40   - PROCEDURES are used to INSERT the Data & Display the Newly added Record.
41   - In PROCEDURES, the ID should be generated automatically using SEQUENCES & USER DEFINED FUNCTIONS (UDF).
    (Without Insertion)
42
43 2. In "ORDERS" PROCEDURE (i.e, Add_Ord),
44   It should add the Order Details to the ORDERS Table.
45   The Order_ID should be generated automatically.
46   The Order_Date should be generated automatically which is the "Current Date" using GetDate() Function.
47   So, The "Add_Ord" PROCEDURE will take 3 things. (i.e, Product_ID, Customer_ID, Order_Quantity).
48
49 3. Implement TRIGGERS.
50   - Whenever the ORDER is placed the STOCK should be Updated.
51   - The Acceptability of the ORDER depends on the Availability of STOCK.
52
53 4. Reports:
54   Reports are some PROCEDURES.
55   - CUSTOMER LEASURE => Create a PROCEDURE which will display all the Transactions done by a particular
    Customer.
56   - SUPPLIER REPORT  => Create a PROCEDURE which will display all the Products that are Procured by a
    particular Supplier.
57   - DAILY REPORT     => Create a PROCEDURE which will display all the Transactions done on a particular
    Day.
58   - BILL             => Create a PROCEDURE which will display the Bill for a particular ORDER ID.
59                       (Procedure gives Order ID, Order Date, Customer Name, Order Quantity, Price
    Amount, etc.)
60   - PRODUCT REPORT   => Create a PROCEDURE which will display the Details of a particular Order.
61
62
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66 -----
67 |      5-10 (Records)      |
68 -----
69 | SUPPLIER  (Add_Sup)      |
70 -----
71 | SID       | S0001      |
72 | SNAME     | Not Null   |
73 | SADD      | Not Null   |
74 | SCITY     | DELHI      |
75 | SPHONE    | Unique     |
76 | EMAIL     |            |
77 -----
78
79 -----
80 |      15-20 (Records)      |
81 -----
82 | PRODUCT   (Add_Prod)      |
83 -----
84 | PID       | P0001      |
85 | PDESC     | Not Null   |
86 | PRICE     | >0         |
87 | CATEGORY  | IT,HA,HC   |
88 | SID       | FK         |
89 -----
90
91 -----
92 |      10 (Records)         |
93 -----
94 | STOCK     (Add_Stk)       |
95 -----
96 | PID       | FK         |
97 | SQTY      | >=0        |
98 | ROL       | >0         |
99 | MOQ       | >=5        |
100 -----
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101
102 -----
103 |      5-10 (Records)      |
104 -----
105 | CUST      (Add_Cust)    |
106 -----
107 | CID      | C0001      |
108 | CNAME    | Not Null   |
109 | ADDRESS  | Not Null   |
110 | CITY     | Not Null   |
111 | PHONE    | Not Null   |
112 | EMAIL    | Not Null   |
113 | DOB      | <1-JAN-2000 |
114 -----
115
116 -----
117 |      5 (Records)      |
118 -----
119 | ORDERS    (Add_Ord)    |
120 -----
121 | OID      | 00001      |
122 | ODATE    |            |
123 | PID      | FK         |
124 | CID      | FK         |
125 | OQTY     | >=1        |
126 -----
127
128 IT   - Information Technology
129 HA   - Home Appliances
130 HC   - Health Care
131 ROL  - ReOrder Level
132 MOQ  - Minimum Order Quantity
133 SQTY - Stock Quantity
134
135
```

```
136
137 * CREATE THE PROCEDURES AND SEQUENCES SEPARATELY FOR ALL THE TABLES.
138 * In this Project, We can use INSERT Statement (or) PROCEDURE for the Insertions of Records (Data) into the Tables.
139 * In this Project, The Range of IDs is from 0000 to 9999 in all the Tables.
140
141 NOTE:
142     A Table can have 1 PRIMARY KEY and Multiple FOREIGN KEYS.
143 */
144
145 -----
146 /* CREATION OF DATABASE: */
147 -----
148
149 CREATE DATABASE INVENTORY;
150 -- O/P: Commands completed successfully.
151
152 USE INVENTORY;
153 -- O/P: Commands completed successfully.
154
155 -----
156 /* CREATION OF TABLES: */
157 -----
158
159 CREATE TABLE SUPPLIERS
160 (
161     SID CHAR(5) PRIMARY KEY,          -- Supplier ID    (Ex: S0001)  (PRIMARY KEY)
162     SNAME VARCHAR(50) NOT NULL,        -- Supplier Name      (NOT NULL)
163     SADDRESS VARCHAR(50) NOT NULL,     -- Supplier Address   (NOT NULL)
164     SCITY VARCHAR(50) DEFAULT 'DELHI', -- Supplier City      (DELHI)    (DEFAULT)
165     SPHONE VARCHAR(15) UNIQUE,         -- Supplier Phone     (UNIQUE)
166     EMAIL VARCHAR(50)
167 );
168 -- O/P: Commands completed successfully.
169 -----
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170
171 CREATE TABLE PRODUCTS
172 (
173     PID CHAR(5),          -- Product ID (Ex: P0001) (PRIMARY KEY)
174     PDESC VARCHAR(50),    -- Product Description (NOT NULL)
175     PRICE INT,            -- Price (> 0) (CHECK)
176     CATEGORY CHAR(2),     -- Category (IT, HA, HC) (CHECK IN)
177     SID CHAR(5)           -- Supplier ID (FOREIGN KEY)
178 );
179 -- O/P: Commands completed successfully.
180
181 ALTER TABLE PRODUCTS
182 ALTER COLUMN PID CHAR(5) NOT NULL;          -- O/P: Commands completed successfully.
183
184 ALTER TABLE PRODUCTS
185 ADD CONSTRAINT PKPID PRIMARY KEY (PID);      -- O/P: Commands completed successfully.
186
187 ALTER TABLE PRODUCTS
188 ALTER COLUMN PDESC VARCHAR(50) NOT NULL;    -- O/P: Commands completed successfully.
189
190 ALTER TABLE PRODUCTS
191 ADD CONSTRAINT CHKPRICE CHECK (PRICE > 0);   -- O/P: Commands completed successfully.
192
193 ALTER TABLE PRODUCTS
194 ADD CONSTRAINT CHKINCATEGORY CHECK (CATEGORY IN ('IT', 'HA', 'HC')); -- O/P: Commands completed successfully.
195
196 ALTER TABLE PRODUCTS
197 ADD CONSTRAINT FKSID FOREIGN KEY (SID) REFERENCES SUPPLIERS (SID); -- O/P: Commands completed successfully.
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205
206 CREATE TABLE STOCK
207 (
208     PID CHAR(5) REFERENCES PRODUCTS (PID),    -- Product ID                (FOREIGN KEY)
209     SQTY INT CHECK (SQTY >= 0),                -- Stock Quantity            (>= 0)  (CHECK)
210     ROL INT CHECK (ROL > 0),                   -- Reorder Level             (> 0)  (CHECK)
211     MOQ INT CHECK (MOQ >= 5),                  -- Minimum Order Quantity    (>= 5)  (CHECK)
212 );
213 -- O/P: Commands completed successfully.
214 -----
215 CREATE TABLE CUSTOMERS
216 (
217     CID CHAR(5) PRIMARY KEY,                   -- Customer ID      (Ex: C0001)  (PRIMARY KEY)
218     CNAME VARCHAR(20) NOT NULL,                 -- Customer Name      (NOT NULL)
219     ADDRESS VARCHAR(100) NOT NULL,               -- Address            (NOT NULL)
220     CITY VARCHAR(50) NOT NULL,                   -- City               (NOT NULL)
221     PHONE VARCHAR(15) NOT NULL,                  -- Phone              (NOT NULL)
222     EMAIL VARCHAR(50) NOT NULL,                  -- Email              (NOT NULL)
223     DOB DATE CHECK (DOB < '1-JAN-2000')         -- Date of Birth     (< 1-JAN-2000) (CHECK)
224     -- DOB DATE CHECK (DOB < '2000-01-01')      -- Date of Birth must be before January 1, 2000
225 );
226 -- O/P: Commands completed successfully.
227 -----
228 CREATE TABLE ORDERS
229 (
230     OID CHAR(5) PRIMARY KEY,                   -- Order ID          (Ex: 00001)  (PRIMARY KEY)
231     ODATE DATE,                                -- Order Date
232     PID CHAR(5) REFERENCES PRODUCTS (PID),     -- Product ID        (FOREIGN KEY)
233     CID CHAR(5) REFERENCES CUSTOMERS (CID),     -- Customer ID       (FOREIGN KEY)
234     OQTY INT CHECK (OQTY >= 1),                 -- Order Quantity    (>= 1)    (CHECK)
235 );
236 -- O/P: Commands completed successfully.
237 -----
238
239
```

```
240
241  /* FETCHING DATA FROM TABLES: */
242
243  SELECT * FROM SUPPLIERS;      -- 0 ROWS
244  SELECT * FROM PRODUCTS;      -- 0 ROWS
245  SELECT * FROM STOCK;         -- 0 ROWS
246  SELECT * FROM CUSTOMERS;     -- 0 ROWS
247  SELECT * FROM ORDERS;        -- 0 ROWS
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275
276 /* CREATION OF FUNCTION FOR ALL TABLES: */
277 -----
278
279 -- Create a FUNCTION to Generate Alpha-Numeric IDs
280 CREATE FUNCTION GenerateID (@CH AS CHAR(1), @I AS INT)
281 RETURNS CHAR(5)
282 AS
283 BEGIN
284     DECLARE @ID AS CHAR(5);
285
286     IF @I < 10
287         SET @ID = CONCAT(@CH, '000', @I)
288     ELSE IF @I < 100
289         SET @ID = CONCAT(@CH, '00', @I)
290     ELSE IF @I < 1000
291         SET @ID = CONCAT(@CH, '0', @I)
292     ELSE IF @I < 10000
293         SET @ID = CONCAT(@CH, @I)
294     ELSE
295         SET @ID = 'NA'      -- Handling case if the number exceeds the limit
296
297     RETURN @ID;
298 END;
299 -- O/P: Commands completed successfully.
300
301 -- DROP FUNCTION GenerateID;
302
303
304 SELECT DBO.GenerateID('S', 6);      -- S0006
305 SELECT DBO.GenerateID('P', 15);    -- P0015
306 SELECT DBO.GenerateID('C', 325);   -- C0325
307 SELECT DBO.GenerateID('O', 2547);  -- O2547
308
309 -----
```

```
310
311 /* CREATION OF SEQUENCES, PROCEDURES FOR ALL TABLES: */
312 -----
313
314 -- 1.1. SEQUENCE for SUPPLIERS Table:
315
316 -- Create a SEQUENCE to generate Numbers automatically for IDs
317 CREATE SEQUENCE SID_SEQ    -- (SupplierSeq)
318 AS INT
319 START WITH 1
320 INCREMENT BY 1;
321 -- O/P: Commands completed successfully.
322
323 -- DROP SEQUENCE SID_SEQ;
324
325
326 -- 1.2. PROCEDURE for SUPPLIERS Table:
327
328 -- Create a PROCEDURE to INSERT the Data into the SUPPLIERS Table
329 CREATE PROCEDURE Add_Supplier
330     @SNAME AS VARCHAR(30),
331     @SADDRESS AS VARCHAR(30),
332     @SCITY AS VARCHAR(30),
333     @SPHONE AS CHAR(15),
334     @EMAIL AS VARCHAR(50)
335 AS
336 BEGIN
337     DECLARE @ID AS CHAR(5);
338     DECLARE @I AS INT;
339
340     -- Get the next value from the Sequence
341     SET @I = (NEXT VALUE FOR SID_SEQ);
342
343     -- Generate the Supplier ID using the Function "GenerateID"
344     SET @ID = DBO.GenerateID('S', @I);
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345
346     -- Insert the provided values into the STOCK Table
347     INSERT INTO SUPPLIERS
348     VALUES (@ID, @SNAME, @SADDRESS, @SCITY, @SPHONE, @EMAIL);
349
350     -- Select the Inserted Record for confirmation
351     SELECT * FROM SUPPLIERS WHERE SID = @ID;
352 END;
353 -- O/P: Commands completed successfully.
354
355 -- DROP PROCEDURE Add_Supplier;
356
357
358 -- 1.3. Inserting Data into the SUPPLIERS Table:
359
360 Add_Supplier 'ACME CORP', '123 STREET A', 'DELHI', '9876543210', 'ACME@SUPPLIER.COM';
361 /*
362 -----
363 | SID   | SNAME           | SADDRESS   | SCITY   | SPHONE     | EMAIL           |
364 -----
365 | S0001 | ACME CORP 123   | STREET A   | DELHI   | 9876543210 | ACME@SUPPLIER.COM |
366 -----
367 */
368 Add_Supplier 'GLOBAL SUPPLIES', '456 STREET B', 'MUMBAI', '9123456789', 'GLOBAL@SUPPLIER.COM';
369 /*
370 -----
371 | SID   | SNAME           | SADDRESS   | SCITY   | SPHONE     | EMAIL           |
372 -----
373 | S0002 | GLOBAL SUPPLIES | 456 STREET B | MUMBAI   | 9123456789 | GLOBAL@SUPPLIER.COM |
374 -----
375 */
376
377
378
379

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```

380 Add_Supplier 'XYZ TRADERS', '789 STREET C', 'DELHI', '9988776655', 'XYZ@SUPPLIER.COM';
381 /*
382 -----
383 | SID   | SNAME           | SADDRESS       | SCITY   | SPHONE    | EMAIL           |
384 -----
385 | S0003 | XYZ TRADERS     | 789 STREET C   | DELHI   | 9988776655 | XYZ@SUPPLIER.COM |
386 -----
387 */
388 Add_Supplier 'TECH SOLUTIONS', '321 AVENUE D', 'BANGALORE', '8765432190', 'TECH@SOLUTIONS.COM';
389 /*
390 -----
391 | SID   | SNAME           | SADDRESS       | SCITY   | SPHONE    | EMAIL           |
392 -----
393 | S0004 | TECH SOLUTIONS  | 321 AVENUE D   | BANGALORE | 8765432190 | TECH@SOLUTIONS.COM |
394 -----
395 */
396 Add_Supplier 'DELTA DISTRIBUTORS', '654 ROAD E', 'HYDERABAD', '7654321987', 'DELTA@DISTRIBUTORS.COM';
397 /*
398 -----
399 | SID   | SNAME           | SADDRESS       | SCITY   | SPHONE    | EMAIL           |
400 -----
401 | S0005 | DELTA DISTRIBUTORS | 654 ROAD E   | HYDERABAD | 7654321987 | DELTA@DISTRIBUTORS.COM |
402 -----
403 */
404 Add_Supplier 'ALPHA GOODS', '987 STREET F', 'CHENNAI', '9987654321', 'ALPHA@GOODS.COM';
405 /*
406 -----
407 | SID   | SNAME           | SADDRESS       | SCITY   | SPHONE    | EMAIL           |
408 -----
409 | S0006 | ALPHA GOODS     | 987 STREET F   | CHENNAI | 9987654321 | ALPHA@GOODS.COM |
410 -----
411 */
412
413
414

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```
415 Add_Supplier 'BETA IMPORTS', '112 ROAD G', 'KOLKATA', '9867543210', 'BETA@IMPORTS.COM';
416 /*
417 -----
418 | SID   | SNAME           | SADDRESS   | SCITY      | SPHONE     | EMAIL           |
419 -----
420 | S0007 | BETA IMPORTS    | 112 ROAD G | KOLKATA    | 9867543210 | BETA@IMPORTS.COM |
421 -----
422 */
423
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450
451 -- 2.1. SEQUENCE for PRODUCTS Table:
452
453 -- Create a SEQUENCE to generate Numbers automatically for IDs
454 CREATE SEQUENCE PID_SEQ      -- (ProductSeq)
455 AS INT
456 START WITH 1
457 INCREMENT BY 1;
458 -- O/P: Commands completed successfully.
459
460 -- DROP SEQUENCE PID_SEQ;
461
462
463 -- 2.2. PROCEDURE for PRODUCTS Table:
464
465 -- Create a PROCEDURE to INSERT the Data into the PRODUCTS Table
466 CREATE PROCEDURE Add_Product
467     @PDESC AS VARCHAR(50),
468     @PRICE AS INT,
469     @CATEGORY AS CHAR(2),
470     @SID AS CHAR(5)
471 AS
472 BEGIN
473     DECLARE @ID AS CHAR(5);
474     DECLARE @I AS INT;
475
476     -- Get the next value from the Sequence
477     SET @I = (NEXT VALUE FOR PID_SEQ);
478
479     -- Generate the Product ID using the Function "GenerateID"
480     SET @ID = DBO.GenerateID('P', @I);
481
482     -- Insert the provided values into the PRODUCTS Table
483     INSERT INTO PRODUCTS (PID, PDESC, PRICE, CATEGORY, SID)
484     VALUES (@ID, @PDESC, @PRICE, @CATEGORY, @SID);
```

```

485
486     -- Select the Inserted Record for confirmation
487     SELECT * FROM PRODUCTS WHERE PID = @ID;
488 END;
489 -- O/P: Commands completed successfully.
490
491 -- DROP PROCEDURE Add_Product;
492
493
494 -- 2.3. Inserting Data into the PRODUCTS Table:
495
496 Add_Product 'LAPTOP', 1200.50, 'IT', 'S0001';
497 /*
498 -----
499 | PID   | PDESC   | PRICE | CATEGORY | SID   |
500 -----
501 | P0001 | LAPTOP  | 1200  | IT       | S0001 |
502 -----
503 */
504 Add_Product 'REFRIGERATOR', 700.00, 'HA', 'S0002';
505 /*
506 -----
507 | PID   | PDESC           | PRICE | CATEGORY | SID   |
508 -----
509 | P0002 | REFRIGERATOR   | 700   | HA       | S0002 |
510 -----
511 */
512 Add_Product 'THERMOMETER', 50.99, 'HC', 'S0003';
513 /*
514 -----
515 | PID   | PDESC           | PRICE | CATEGORY | SID   |
516 -----
517 | P0003 | THERMOMETER    | 50    | HC       | S0003 |
518 -----
519 */

```

```
520 Add_Product 'PRINTER', 200.75, 'IT', 'S0001';
521 /*
522 -----
523 | PID   | PDESC      | PRICE | CATEGORY | SID   |
524 -----
525 | P0004 | PRINTER    | 200   | IT        | S0001 |
526 -----
527 */
528 Add_Product 'WASHING MACHINE', 500.50, 'HA', 'S0002';
529 /*
530 -----
531 | PID   | PDESC      | PRICE | CATEGORY | SID   |
532 -----
533 | P0005 | WASHING MACHINE | 500   | HA        | S0002 |
534 -----
535 */
536 Add_Product 'BLOOD PRESSURE MONITOR', 120.00, 'HC', 'S0003';
537 /*
538 -----
539 | PID   | PDESC      | PRICE | CATEGORY | SID   |
540 -----
541 | P0006 | BLOOD PRESSURE MONITOR | 120   | HC        | S0003 |
542 -----
543 */
544 Add_Product 'SMARTPHONE', 950.00, 'IT', 'S0004';
545 /*
546 -----
547 | PID   | PDESC      | PRICE | CATEGORY | SID   |
548 -----
549 | P0007 | SMARTPHONE | 950   | IT        | S0004 |
550 -----
551 */
552
553
554
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```
555 Add_Product 'AIR CONDITIONER', 1200.00, 'HA', 'S0005';
556 /*
557 -----
558 | PID   | PDESC           | PRICE | CATEGORY | SID   |
559 -----
560 | P0008 | AIR CONDITIONER | 1200  | HA       | S0005 |
561 -----
562 */
563 Add_Product 'PULSE OXIMETER', 30.75, 'HC', 'S0003';
564 /*
565 -----
566 | PID   | PDESC           | PRICE | CATEGORY | SID   |
567 -----
568 | P0009 | PULSE OXIMETER | 30    | HC       | S0003 |
569 -----
570 */
571 Add_Product 'DESKTOP COMPUTER', 800.00, 'IT', 'S0006';
572 /*
573 -----
574 | PID   | PDESC           | PRICE | CATEGORY | SID   |
575 -----
576 | P0010 | DESKTOP COMPUTER | 800   | IT       | S0006 |
577 -----
578 */
579 Add_Product 'MICROWAVE', 150.25, 'HA', 'S0002';
580 /*
581 -----
582 | PID   | PDESC           | PRICE | CATEGORY | SID   |
583 -----
584 | P0011 | MICROWAVE       | 150   | HA       | S0002 |
585 -----
586 */
587
588
589
```

```
590 Add_Product 'SMART WATCH', 350.00, 'IT', 'S0004';
591 /*
592 -----
593 | PID   | PDESC           | PRICE | CATEGORY | SID   |
594 -----
595 | P0012 | SMART WATCH   | 350   | IT       | S0004 |
596 -----
597 */
598 Add_Product 'JUICER', 90.50, 'HA', 'S0005';
599 /*
600 -----
601 | PID   | PDESC          | PRICE | CATEGORY | SID   |
602 -----
603 | P0013 | JUICER         | 90    | HA       | S0005 |
604 -----
605 */
606 Add_Product 'FITNESS TRACKER', 100.99, 'HC', 'S0007';
607 /*
608 -----
609 | PID   | PDESC           | PRICE | CATEGORY | SID   |
610 -----
611 | P0014 | FITNESS TRACKER | 100   | HC       | S0007 |
612 -----
613 */
614 Add_Product 'GAMING CONSOLE', 400.00, 'IT', 'S0001';
615 /*
616 -----
617 | PID   | PDESC           | PRICE | CATEGORY | SID   |
618 -----
619 | P0015 | GAMING CONSOLE  | 400   | IT       | S0001 |
620 -----
621 */
622
623
624
```

```
625 Add_Product 'BLENDER', 80.25, 'HA', 'S0006';
626 /*
627 -----
628 | PID   | PDESC      | PRICE | CATEGORY | SID   |
629 -----
630 | P0016 | BLENDER    | 80     | HA       | S0006 |
631 -----
632 */
633 Add_Product 'VACUUM CLEANER', 250.00, 'HA', 'S0007';
634 /*
635 -----
636 | PID   | PDESC      | PRICE | CATEGORY | SID   |
637 -----
638 | P0017 | VACUUM CLEANER | 250   | HA       | S0007 |
639 -----
640 */
641
642 -----
643
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646
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```

660
661 -- 3.1. No SEQUENCE for STOCK Table:
662
663
664 -- 3.2. PROCEDURE for STOCK Table:
665
666 -- Create a PROCEDURE to INSERT the Data into the STOCK Table
667 CREATE PROCEDURE Add_Stock
668     @PID AS CHAR(5),      -- Product ID
669     @SQTY AS INT,         -- Stock Quantity
670     @ROL AS INT,          -- Reorder Level
671     @MOQ AS INT           -- Minimum Order Quantity
672 AS
673 BEGIN
674     -- Insert the provided values into the STOCK Table
675     INSERT INTO STOCK (PID, SQTY, ROL, MOQ)
676     VALUES (@PID, @SQTY, @ROL, @MOQ);
677
678     -- Select the Inserted Record for confirmation
679     SELECT * FROM STOCK WHERE PID = @PID;
680 END;
681 -- O/P: Commands completed successfully.
682
683 -- DROP PROCEDURE Add_Stock;
684
685
686 -- 3.3. Inserting Data into the STOCK Table:
687
688 Add_Stock 'P0001', 50, 10, 5;
689 /*
690 -----
691 | PID    | SQTY | ROL | MOQ |
692 -----
693 | P0001  | 50   | 10  | 5   |
694 -----

```

```
695 */
696 Add_Stock 'P0002', 30, 8, 5;
697 /*
698 -----
699 | PID    | SQTY | ROL | MOQ |
700 -----
701 | P0002  | 30   | 8   | 5   |
702 -----
703 */
704 Add_Stock 'P0003', 100, 20, 10;
705 /*
706 -----
707 | PID    | SQTY | ROL | MOQ |
708 -----
709 | P0003  | 100  | 20  | 10  |
710 -----
711 */
712 Add_Stock 'P0004', 25, 5, 5;
713 /*
714 -----
715 | PID    | SQTY | ROL | MOQ |
716 -----
717 | P0004  | 25   | 5   | 5   |
718 -----
719 */
720 Add_Stock 'P0005', 15, 3, 5;
721 /*
722 -----
723 | PID    | SQTY | ROL | MOQ |
724 -----
725 | P0005  | 15   | 3   | 5   |
726 -----
727 */
728
729
```

```
730 Add_Stock 'P0006', 60, 15, 10;
731 /*
732 -----
733 | PID    | SQTY | ROL  | MOQ  |
734 -----
735 | P0006  | 60   | 15   | 10   |
736 -----
737 */
738 Add_Stock 'P0007', 45, 10, 5;
739 /*
740 -----
741 | PID    | SQTY | ROL  | MOQ  |
742 -----
743 | P0007  | 45   | 10   | 5    |
744 -----
745 */
746 Add_Stock 'P0008', 20, 8, 5;
747 /*
748 -----
749 | PID    | SQTY | ROL  | MOQ  |
750 -----
751 | P0008  | 20   | 8    | 5    |
752 -----
753 */
754 Add_Stock 'P0009', 75, 15, 10;
755 /*
756 -----
757 | PID    | SQTY | ROL  | MOQ  |
758 -----
759 | P0009  | 75   | 15   | 10   |
760 -----
761 */
762
763
764
```

```
765 Add_Stock 'P0010', 12, 4, 5;
```

```
766 /*
```

```
767 -----
```

```
768 | PID    | SQTY  | ROL  | MOQ  |
```

```
769 -----
```

```
770 | P0010  | 12    | 4    | 5    |
```

```
771 -----
```

```
772 */
```

```
773
```

```
774 -----
```

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775
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799
```

```
800
801 -- 4.1. SEQUENCE for CUSTOMERS Table:
802
803 -- Create a SEQUENCE to generate Numbers automatically for IDs
804 CREATE SEQUENCE CID_SEQ      -- (CustomerSeq)
805 AS INT
806 START WITH 1
807 INCREMENT BY 1;
808 -- O/P: Commands completed successfully.
809
810 -- DROP SEQUENCE CID_SEQ;
811
812
813 -- 4.2. PROCEDURE for CUSTOMERS Table:
814
815 -- Create a PROCEDURE to INSERT the Data into the CUSTOMERS Table
816 CREATE PROCEDURE Add_Customer
817     @CNAME AS VARCHAR(50),    -- Customer Name
818     @ADDRESS AS VARCHAR(100), -- Address
819     @CITY AS VARCHAR(50),      -- City
820     @PHONE AS VARCHAR(15),     -- Phone
821     @EMAIL AS VARCHAR(50),     -- Email
822     @DOB AS DATE               -- Date of Birth
823 AS
824 BEGIN
825     DECLARE @ID AS CHAR(5); -- Customer ID
826     DECLARE @I AS INT;      -- Sequence number
827
828     -- Get the next value from the Sequence
829     SET @I = (NEXT VALUE FOR CID_SEQ);
830
831     -- Generate the Customer ID using the Function "GenerateID"
832     SET @ID = DBO.GenerateID('C', @I);
833
834     -- Insert the data into the CUSTOMERS Table
```



```

835     INSERT INTO CUSTOMERS (CID, CNAME, ADDRESS, CITY, PHONE, EMAIL, DOB)
836     VALUES (@ID, @CNAME, @ADDRESS, @CITY, @PHONE, @EMAIL, @DOB);
837
838     -- Select the Inserted Record for confirmation
839     SELECT * FROM CUSTOMERS WHERE CID = @ID;
840 END;
841 -- O/P: Commands completed successfully.
842
843 -- DROP PROCEDURE Add_Customer;
844
845
846 -- 4.3. Inserting Data into the CUSTOMERS Table:
847
848 Add_Customer 'RAHUL SHARMA', '12 GANDHI ROAD', 'DELHI', '9876543210', 'RAHUL.SHARMA@GMAIL.COM', '1985-06-15';
849 /*
850 -----
851 | CID   | CNAME          | ADDRESS          | CITY   | PHONE          | EMAIL                      | DOB          |
852 -----
853 | C0001 | RAHUL SHARMA  | 12 GANDHI ROAD  | DELHI  | 9876543210     | RAHUL.SHARMA@GMAIL.COM    | 1985-06-15   |
854 -----
855 */
856 Add_Customer 'PRIYA SINGH', '45 MG ROAD', 'MUMBAI', '9123456789', 'PRIYA.SINGH@YAHOO.COM', '1995-08-20';
857 /*
858 -----
859 | CID   | CNAME          | ADDRESS          | CITY   | PHONE          | EMAIL                      | DOB          |
860 -----
861 | C0002 | PRIYA SINGH    | 45 MG ROAD      | MUMBAI | 9123456789     | PRIYA.SINGH@YAHOO.COM     | 1995-08-20   |
862 -----
863 */
864
865
866
867
868
869

```

```
870 Add_Customer 'AMIT KUMAR', '78 BRIGADE ROAD', 'BANGALORE', '9988776655', 'AMIT.KUMAR@REDIFFMAIL.COM',  
      '1989-03-12';
```

```
871 /*
```

```
872 -----  
873 | CID   | CNAME          | ADDRESS          | CITY          | PHONE          | EMAIL                                | DOB          |  
874 -----
```

```
875 | C0003 | AMIT KUMAR    | 78 BRIGADE ROAD | BANGALORE    | 9988776655    | AMIT.KUMAR@REDIFFMAIL.COM          | 1989-03-12   |  
876 -----
```

```
877 */
```

```
878 Add_Customer 'SNEHA PATEL', '22 NEHRU AVENUE', 'AHMEDABAD', '9876549876', 'SNEHA.PATEL@GMAIL.COM',  
      '1990-12-25';
```

```
879 /*
```

```
880 -----  
881 | CID   | CNAME          | ADDRESS          | CITY          | PHONE          | EMAIL                                | DOB          |  
882 -----
```

```
883 | C0004 | SNEHA PATEL   | 22 NEHRU AVENUE | AHMEDABAD    | 9876549876    | SNEHA.PATEL@GMAIL.COM              | 1990-12-25   |  
884 -----
```

```
885 */
```

```
886 Add_Customer 'VIKRAM VERMA', '33 PARK STREET', 'KOLKATA', '9234567890', 'VIKRAM.VERMA@OUTLOOK.COM',  
      '1988-04-15';
```

```
887 /*
```

```
888 -----  
889 | CID   | CNAME          | ADDRESS          | CITY          | PHONE          | EMAIL                                | DOB          |  
890 -----
```

```
891 | C0005 | VIKRAM VERMA  | 33 PARK STREET  | KOLKATA      | 9234567890    | VIKRAM.VERMA@OUTLOOK.COM           | 1988-04-15   |  
892 -----
```

```
893 */
```

```
894 Add_Customer 'ANITA NAIR', '89 MARINE DRIVE', 'CHENNAI', '9987654321', 'ANITA.NAIR@GMAIL.COM', '1997-11-15';
```

```
895 /*
```

```
896 -----  
897 | CID   | CNAME          | ADDRESS          | CITY          | PHONE          | EMAIL                                | DOB          |  
898 -----
```

```
899 | C0006 | ANITA NAIR    | 89 MARINE DRIVE | CHENNAI      | 9987654321    | ANITA.NAIR@GMAIL.COM               | 1997-11-15   |  
900 -----
```

```
901 */
```

```
902 Add_Customer 'ROHIT DESAI', '14 RESIDENCY ROAD', 'PUNE', '9876543212', 'ROHIT.DESAI@GMAIL.COM', '1992-01-05';
```

```
903 /*
```

```
904 -----
```

```
905 | CID   | CNAME          | ADDRESS          | CITY | PHONE      | EMAIL                      | DOB      |
```

```
906 -----
```

```
907 | C0007 | ROHIT DESAI    | 14 RESIDENCY ROAD | PUNE | 9876543212 | ROHIT.DESAI@GMAIL.COM     | 1992-01-05 |
```

```
908 -----
```

```
909 */
```

```
910
```

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911 -----
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934
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935
```

```
936
```

```
937
938 -- 5.1. SEQUENCE for ORDERS Table:
939
940 -- Create a SEQUENCE to generate Numbers automatically for IDs
941 CREATE SEQUENCE OID_SEQ
942 AS INT
943 START WITH 1
944 INCREMENT BY 1;
945 -- O/P: Commands completed successfully.
946
947 -- DROP SEQUENCE OID_SEQ;
948
949
950 -- 5.2. PROCEDURE for ORDERS Table:
951
952 -- Create a PROCEDURE to INSERT the Data into the ORDERS Table
953 CREATE PROCEDURE Add_Order
954     @PID AS CHAR(5),
955     @CID AS CHAR(5),
956     @OQTY AS INT
957 AS
958 BEGIN
959     DECLARE @I AS INT;
960     DECLARE @ID AS CHAR(5);
961
962     -- Get the next value from the Sequence
963     SET @I = (NEXT VALUE FOR OID_SEQ);
964
965     -- Generate the Order ID using the Function "GenerateID"
966     SET @ID = DBO.GenerateID('O', @I);
967
968     -- Insert the provided values into the ORDERS table
969     INSERT INTO ORDERS (OID, ODATE, PID, CID, OQTY)
970     VALUES (@ID, GETDATE(), @PID, @CID, @OQTY);
971
```

```
972     -- Select the Inserted Record for confirmation
973     SELECT * FROM ORDERS WHERE OID = @ID;
974     SELECT * FROM STOCK WHERE PID = @PID;
975 END;
976 -- O/P: Commands completed successfully.
977
978 -- DROP PROCEDURE Add_Order;
979
980
981 -- 5.3. TRIGGER for STOCK Updation
982
983 -- Create a TRIGGER to Update the Stock of each Product after every Order
984 CREATE TRIGGER TR_IN_ORD
985 ON ORDERS
986 FOR INSERT
987 AS
988 BEGIN
989     SET NOCOUNT ON;
990
991     DECLARE @QR AS INT;
992     DECLARE @QS AS INT;
993
994     -- Retrieve Values from INSERTED Row
995     SET @QR = (SELECT OQTY FROM INSERTED);
996     SET @QS = (SELECT SQTY FROM STOCK WHERE PID = (SELECT PID FROM INSERTED));
997
998     -- Create a Transaction to Check the Stock Availability. If Order is Accepted then Update the Stock .
999     BEGIN TRANSACTION;
1000
1001     -- Checking if the Stock available is more than or equals to the Order Requirement
1002     IF @QS >= @QR
1003     BEGIN
1004         -- Sufficient Stock, Proceed with UPDATE
1005         UPDATE STOCK SET SQTY = SQTY - (SELECT OQTY FROM INSERTED)
1006         WHERE PID = (SELECT PID FROM INSERTED);
```

```

1007
1008         -- Commit the transaction
1009         COMMIT TRANSACTION;
1010         PRINT('ORDER ACCEPTED');
1011     END;
1012 ELSE
1013     BEGIN
1014         -- Insufficient Stock, Roll Back the TRANSACTION
1015         ROLLBACK TRANSACTION;
1016         PRINT('INSUFFICIENT QUANTITY ORDER REJECTED');
1017     END;
1018 END;
1019 -- O/P: Commands completed successfully.
1020
1021
1022 -- 5.4. Inserting Data into the ORDERS Table:
1023
1024 Add_Order 'P0001', 'C0001', 20;
1025 /*
1026 ORDERS TABLE:
1027 -----
1028 | OID   | ODATE       | PID   | CID   | OQTY |
1029 -----
1030 | 00001 | 2024-10-26  | P0001 | C0001 | 20    |
1031 -----
1032
1033 STOCK TABLE:
1034 -----
1035 | PID   | SQTY  | ROL  | MOQ  |
1036 -----
1037 | P0001 | 30    | 10   | 5    |
1038 -----
1039 */
1040
1041

```

```
1042 Add_Order 'P0002', 'C0002', 10;
1043 /*
1044 ORDERS TABLE:
1045 -----
1046 | OID   | ODATE       | PID   | CID   | OQTY |
1047 -----
1048 | 00002 | 2024-10-26  | P0002 | C0002 | 10   |
1049 -----
1050
1051 STOCK TABLE:
1052 -----
1053 | PID   | SQTY | ROL | MOQ |
1054 -----
1055 | P0002 | 20   | 8   | 5   |
1056 -----
1057 */
1058 Add_Order 'P0002', 'C0003', 30;
1059 /*
1060 INSUFFICIENT QUANTITY ORDER REJECTED
1061 Msg 3609, Level 16, State 1, Procedure Add_Order, Line 17 [Batch Start Line 876]
1062 The transaction ended in the trigger. The batch has been aborted.
1063
1064 Completion time: 2024-10-26T03:13:57.3616287+05:30
1065 */
1066 Add_Order 'P0004', 'C0001', 10;
1067 /*
1068 ORDERS TABLE:
1069 -----
1070 | OID   | ODATE       | PID   | CID   | OQTY |
1071 -----
1072 | 00004 | 2024-10-26  | P0004 | C0001 | 10   |
1073 -----
1074
1075
1076
```

1077 STOCK TABLE:

```
1078 -----
1079 | PID   | SQTY | ROL   | MOQ   |
1080 -----
1081 | P0004 | 15   | 5     | 5     |
1082 -----
```

1083 */

1084 Add_Order 'P0007', 'C0004', 20;

1085 /*

1086 ORDERS TABLE:

```
1087 -----
1088 | OID   | ODATE      | PID   | CID   | OQTY |
1089 -----
1090 | 00005 | 2024-10-26 | P0007 | C0004 | 20   |
1091 -----
```

1092

1093 STOCK TABLE:

```
1094 -----
1095 | PID   | SQTY | ROL   | MOQ   |
1096 -----
1097 | P0007 | 25   | 10    | 5     |
1098 -----
```

1099 */

1100

1101 -----

1102

1103 /* FETCHING DATA FROM TABLES: */

1104

1105 SELECT * FROM SUPPLIERS; -- 7 ROWS

1106 SELECT * FROM PRODUCTS; -- 17 ROWS

1107 SELECT * FROM STOCK; -- 10 ROWS

1108 SELECT * FROM CUSTOMERS; -- 7 ROWS

1109 SELECT * FROM ORDERS; -- 4 ROWS

1110

1111 -----

1112

1113 SELECT * FROM SUPPLIERS; -- 7 ROWS

1114 /*

1115 -----

SID	SNAME	SADDRESS	SCITY	SPHONE	EMAIL
-----	-------	----------	-------	--------	-------

1117 -----

S0001	ACME CORP	123 STREET A	DELHI	9876543210	ACME@SUPPLIER.COM
-------	-----------	--------------	-------	------------	-------------------

S0002	GLOBAL SUPPLIES	456 STREET B	MUMBAI	9123456789	GLOBAL@SUPPLIER.COM
-------	-----------------	--------------	--------	------------	---------------------

S0003	XYZ TRADERS	789 STREET C	DELHI	9988776655	XYZ@SUPPLIER.COM
-------	-------------	--------------	-------	------------	------------------

S0004	TECH SOLUTIONS	321 AVENUE D	BANGALORE	8765432190	TECH@SOLUTIONS.COM
-------	----------------	--------------	-----------	------------	--------------------

S0005	DELTA DISTRIBUTORS	654 ROAD E	HYDERABAD	7654321987	DELTA@DISTRIBUTORS.COM
-------	--------------------	------------	-----------	------------	------------------------

S0006	ALPHA GOODS	987 STREET F	CHENNAI	9987654321	ALPHA@GOODS.COM
-------	-------------	--------------	---------	------------	-----------------

S0007	BETA IMPORTS	112 ROAD G	KOLKATA	9867543210	BETA@IMPORTS.COM
-------	--------------	------------	---------	------------	------------------

1125 -----

1126 */

1127

1128 SELECT * FROM PRODUCTS; -- 17 ROWS

1129 /*

1130 -----

PID	PDESC	PRICE	CATEGORY	SID
-----	-------	-------	----------	-----

1132 -----

P0001	LAPTOP	1200	IT	S0001
-------	--------	------	----	-------

P0002	REFRIGERATOR	700	HA	S0002
-------	--------------	-----	----	-------

P0003	THERMOMETER	50	HC	S0003
-------	-------------	----	----	-------

P0004	PRINTER	200	IT	S0001
-------	---------	-----	----	-------

P0005	WASHING MACHINE	500	HA	S0002
-------	-----------------	-----	----	-------

P0006	BLOOD PRESSURE MONITOR	120	HC	S0003
-------	------------------------	-----	----	-------

P0007	SMARTPHONE	950	IT	S0004
-------	------------	-----	----	-------

P0008	AIR CONDITIONER	1200	HA	S0005
-------	-----------------	------	----	-------

P0009	PULSE OXIMETER	30	HC	S0003
-------	----------------	----	----	-------

P0010	ESKTOP COMPUTER	800	IT	S0006
-------	-----------------	-----	----	-------

P0012	SMART WATCH	350	IT	S0004
-------	-------------	-----	----	-------

P0013	JUICER	90	HA	S0005
-------	--------	----	----	-------

P0014	FITNESS TRACKER	100	HC	S0007
-------	-----------------	-----	----	-------

P0015	GAMING CONSOLE	400	IT	S0001
-------	----------------	-----	----	-------

```

1147 | P0016 | BLENDER          | 80      | HA      | S0006 |
1148 | P0017 | VACUUM CLEANER   | 250     | HA      | S0007 |

```

```

1149 -----

```

```

1150 */

```

```

1151

```

```

1152 SELECT * FROM STOCK;          -- 10 ROWS

```

```

1153 /*

```

```

1154 -----

```

```

1155 | PID   | SQTY | ROL  | MOQ  |

```

```

1156 -----

```

```

1157 | P0001 | 30   | 10   | 5    |

```

```

1158 | P0002 | 20   | 8    | 5    |

```

```

1159 | P0003 | 100  | 20   | 10   |

```

```

1160 | P0004 | 15   | 5    | 5    |

```

```

1161 | P0005 | 15   | 3    | 5    |

```

```

1162 | P0006 | 60   | 15   | 10   |

```

```

1163 | P0007 | 25   | 10   | 5    |

```

```

1164 | P0008 | 20   | 8    | 5    |

```

```

1165 | P0009 | 75   | 15   | 10   |

```

```

1166 | P0010 | 12   | 4    | 5    |

```

```

1167 -----

```

```

1168 */

```

```

1169

```

```

1170 SELECT * FROM CUSTOMERS;      -- 7 ROWS

```

```

1171 /*

```

```

1172 -----

```

```

1173 | CID   | CNAME          | ADDRESS          | CITY   | PHONE      | EMAIL                                | DOB          |

```

```

1174 -----

```

```

1175 | C0001 | RAHUL SHARMA   | 12 GANDHI ROAD  | DELHI  | 9876543210 | RAHUL.SHARMA@GMAIL.COM             | 1985-06-15 |

```

```

1176 | C0002 | PRIYA SINGH    | 45 MG ROAD      | MUMBAI | 9123456789 | PRIYA.SINGH@YAHOO.COM              | 1995-08-20 |

```

```

1177 | C0003 | AMIT KUMAR     | 78 BRIGADE ROAD | BANGALORE | 9988776655 | AMIT.KUMAR@REDIFFMAIL.COM          | 1989-03-12 |

```

```

1178 | C0004 | SNEHA PATEL    | 22 NEHRU AVENUE | AHMEDABAD | 9876549876 | SNEHA.PATEL@GMAIL.COM              | 1990-12-25 |

```

```

1179 | C0005 | VIKRAM VERMA   | 33 PARK STREET  | KOLKATA | 9234567890 | VIKRAM.VERMA@OUTLOOK.COM           | 1988-04-15 |

```

```

1180 | C0006 | ANITA NAIR     | 89 MARINE DRIVE | CHENNAI | 9987654321 | ANITA.NAIR@GMAIL.COM               | 1997-11-15 |

```

```

1181 | C0007 | ROHIT DESAI    | 14 RESIDENCY ROAD | PUNE   | 9876543212 | ROHIT.DESAI@GMAIL.COM              | 1992-01-05 |

```

```
1182 -----
1183 */
1184
1185 SELECT * FROM ORDERS;      -- 4 ROWS
1186 /*
1187 -----
1188 | OID   | ODATE       | PID   | CID   | QTY   |
1189 -----
1190 | 00001 | 2024-10-26  | P0001 | C0001 | 20    |
1191 | 00002 | 2024-10-26  | P0002 | C0002 | 10    |
1192 | 00004 | 2024-10-26  | P0004 | C0001 | 10    |
1193 | 00005 | 2024-10-26  | P0007 | C0004 | 20    |
1194 -----
1195 */
1196
1197 -----
1198
1199
1200
1201
1202
1203
1204
1205
1206
1207
1208
1209
1210
1211
1212
1213
1214
1215
1216
```

```
1217
1218 /* CREATION OF REPORTS: */
1219 -----
1220
1221 -- 1. CUSTOMER LEASURE
1222
1223 -- Create a PROCEDURE which will display all the Transactions done by a particular Customer.
1224 CREATE PROCEDURE CUSTOMER_LEASURE
1225     @CID CHAR (5)
1226 AS
1227 BEGIN
1228     SELECT
1229         C.CID AS CUSTOMER_ID,
1230         C.CNAME AS CUSTOMER_NAME,
1231         O.OID AS ORDER_ID,
1232         O.ODATE AS ORDER_DATE,
1233         P.PID AS PRODUCT_ID,
1234         P.PDESC AS PRODUCT_NAME,
1235         P.PRICE AS PRICE,
1236         O.QQTY AS QUANTITY
1237     FROM ORDERS O
1238         JOIN CUSTOMERS C ON C.CID = O.CID
1239         JOIN PRODUCTS P ON P.PID = O.PID
1240     WHERE O.CID = @CID;
1241 END;
1242 -- O/P: Commands completed successfully.
1243
1244 -- DROP PROCEDURE CUSTOMER_LEASURE;
1245
1246
1247
1248
1249
1250
1251
```

```
1252
1253 CUSTOMER_LEASURE 'C0001';
1254 /*
1255 -----
1256 | CUSTOMER_ID | CUSTOMER_NAME | ORDER_ID | ORDER_DATE | PRODUCT_ID | PRODUCT_NAME | PRICE | QUANTITY |
1257 -----
1258 | C0001       | RAHUL SHARMA  | 00001    | 2024-10-26 | P0001      | LAPTOP       | 1200  | 20       |
1259 | C0001       | RAHUL SHARMA  | 00004    | 2024-10-26 | P0004      | PRINTER      | 200   | 10       |
1260 -----
1261 */
1262
1263 CUSTOMER_LEASURE 'C0004';
1264 /*
1265 -----
1266 | CUSTOMER_ID | CUSTOMER_NAME | ORDER_ID | ORDER_DATE | PRODUCT_ID | PRODUCT_NAME | PRICE | QUANTITY |
1267 -----
1268 | C0004       | SNEHA PATEL   | 00005    | 2024-10-26 | P0007      | SMARTPHONE   | 950   | 20       |
1269 -----
1270 */
1271
1272 CUSTOMER_LEASURE 'C0007';
1273 /*
1274 -----
1275 | CUSTOMER_ID | CUSTOMER_NAME | ORDER_ID | ORDER_DATE | PRODUCT_ID | PRODUCT_NAME | PRICE | QUANTITY |
1276 -----
1277 */
1278 -----
1279
1280
1281
1282
1283
1284
1285
1286
```

```
1287
1288 -- 2. SUPPLIER REPORT
1289
1290 -- Create a PROCEDURE which will display all the Products that are Procured by a particular Supplier .
1291 CREATE PROCEDURE SUPPLIER_REPORT
1292     @SID CHAR (5)
1293 AS
1294 BEGIN
1295     SELECT
1296         P.SID AS SUPPLIER_ID,
1297         S.SNAME AS SUPPLIER_NAME,
1298         P.PID AS PRODUCT_ID,
1299         PDESC AS PRODUCT_NAME,
1300         PRICE,
1301         CATEGORY
1302     FROM PRODUCTS P JOIN SUPPLIERS S ON P.SID = S.SID
1303     WHERE P.SID = @SID;
1304 END;
1305 -- O/P: Commands completed successfully.
1306
1307 -- DROP PROCEDURE SUPPLIER_REPORT;
1308
1309
1310
1311
1312
1313
1314
1315
1316
1317
1318
1319
1320
1321
```

```
1322
1323 SUPPLIER_REPORT 'S0001';
1324 /*
1325 -----
1326 | SUPPLIER_ID | SUPPLIER_NAME | PRODUCT_ID | PRODUCT_NAME | PRICE | CATEGORY |
1327 -----
1328 | S0001       | ACME CORP     | P0001      | LAPTOP        | 1200  | IT        |
1329 | S0001       | ACME CORP     | P0004      | PRINTER       | 200   | IT        |
1330 | S0001       | ACME CORP     | P0015      | GAMING CONSOLE | 400   | IT        |
1331 -----
1332 */
1333
1334 SUPPLIER_REPORT 'S0007';
1335 /*
1336 -----
1337 | SUPPLIER_ID | SUPPLIER_NAME | PRODUCT_ID | PRODUCT_NAME | PRICE | CATEGORY |
1338 -----
1339 | S0007       | BETA IMPORTS  | P0014      | FITNESS TRACKER | 100   | IT        |
1340 | S0007       | BETA IMPORTS  | P0017      | VACUUM CLEANER | 250   | IT        |
1341 -----
1342 */
1343
1344 SUPPLIER_REPORT 'S0008';
1345 /*
1346 -----
1347 | SUPPLIER_ID | SUPPLIER_NAME | PRODUCT_ID | PRODUCT_NAME | PRICE | CATEGORY |
1348 -----
1349 */
1350
1351 -----
1352
1353
1354
1355
1356
```

```

1357 -- 3. DAILY REPORT
1358
1359 -- Create a PROCEDURE which will display all the Transactions done on a particular Day.

```

```

1360 CREATE PROCEDURE DAILY_REPORT
1361     @TR_DATE DATE
1362 AS
1363 BEGIN
1364     SELECT
1365         O.OID AS ORDER_ID,
1366         O.ODATE AS ORDER_DATE,
1367         C.CID AS CUSTOMER_ID,
1368         C.CNAME AS CUSTOMER_NAME,
1369         P.PID AS PRODUCT_ID,
1370         P.PDESC AS PRODUCT_NAME,
1371         O.OQTY AS QUANTITY,
1372         (P.Price * O.OQTY) AS AMOUNT
1373 FROM ORDERS O
1374     JOIN CUSTOMERS C ON C.CID = O.CID
1375     JOIN PRODUCTS P ON P.PID = O.PID
1376 WHERE ODATE = @TR_DATE;
1377 END;

```

```

1378 -- O/P: Commands completed successfully.

```

```

1379
1380 -- DROP PROCEDURE DAILY_REPORT

```

```

1381
1382 DAILY_REPORT '2024-10-26';

```

```

1383 /*

```

```

1384 -----
1385 | ORDER_ID | ORDER_DATE | CUSTOMER_ID | CUSTOMER_NAME | PRODUCT_ID | PRODUCT_NAME | QUANTITY | AMOUNT |
1386 -----
1387 | 00001    | 2024-10-26 | C0001       | RAHUL SHARMA  | P0001      | LAPTOP       | 20       | 24000  |
1388 | 00002    | 2024-10-26 | C0002       | PRIYA SINGH   | P0002      | REFRIGERATOR | 10       | 7000   |
1389 | 00004    | 2024-10-26 | C0001       | RAHUL SHARMA  | P0004      | PRINTER      | 10       | 2000   |
1390 | 00005    | 2024-10-26 | C0004       | SNEHA PATEL   | P0007      | SMARTPHONE   | 20       | 19000  |
1391 -----

```



```
1392 */
1393
1394 -----
1395 -- 4. BILL
1396
1397 -- Create a PROCEDURE which will display the Bill for a particular ORDER ID.
1398 CREATE PROCEDURE BILL
1399     @OID CHAR(5)
1400 AS
1401 BEGIN
1402     SELECT OID AS ORDER_ID,
1403            ODATE AS ORDER_DATE,
1404            CNAME AS CUSTOMER_NAME,
1405            ADDRESS,
1406            PHONE,
1407            PDESC AS PRODUCT,
1408            PRICE,
1409            OQTY AS QUANTITY,
1410            (PRICE * OQTY) AS AMOUNT
1411     FROM ORDERS O
1412          INNER JOIN PRODUCTS P ON O.PID = P.PID
1413          INNER JOIN CUSTOMERS C ON O.CID = C.CID
1414     WHERE OID = @OID;
1415 END;
1416 -- O/P: Commands completed successfully.
1417
1418 -- DROP PROCEDURE BILL;
1419
1420
1421
1422
1423
1424
1425
1426
```

```
1427
1428 BILL '00001';
1429 /*
1430 -----
1431 | ORDER_ID | ORDER_DATE | CUSTOMER_NAME | ADDRESS          | PHONE       | PRODUCT | PRICE | QUANTITY | AMOUNT |
1432 -----
1433 | 00001    | 2024-10-26 | RAHUL SHARMA  | 12 GANDHI ROAD | 9876543210 | LAPTOP  | 1200  | 20       | 24000  |
1434 -----
1435 */
1436
1437 BILL '00004';
1438 /*
1439 -----
1440 | ORDER_ID | ORDER_DATE | CUSTOMER_NAME | ADDRESS          | PHONE       | PRODUCT | PRICE | QUANTITY | AMOUNT |
1441 -----
1442 | 00004    | 2024-10-26 | RAHUL SHARMA  | 12 GANDHI ROAD | 9876543210 | PRINTER | 200   | 10       | 2000   |
1443 -----
1444 */
1445
1446 BILL '00003';
1447 /*
1448 -----
1449 | ORDER_ID | ORDER_DATE | CUSTOMER_NAME | ADDRESS | PHONE | PRODUCT | PRICE | QUANTITY | AMOUNT |
1450 -----
1451 */
1452
1453 -----
1454
1455
1456
1457
1458
1459
1460
1461
```

```
1462
1463 -- 5. PRODUCT REPORT:
1464
1465 -- Create a PROCEDURE which will display the Details of a particular Order.
1466 CREATE PROCEDURE PRODUCT_REPORT
1467     @OID CHAR (5)
1468 AS
1469 BEGIN
1470     SELECT
1471         O.OID AS ORDER_ID,
1472         O.ODATE AS ORDER_DATE,
1473         O.CID AS CUSTOMER_ID,
1474         C.CNAME AS CUSTOMER_NAME,
1475         P.PID AS PRODUCT_ID,
1476         P.PDESC AS PRODUCT_NAME,
1477         O.OQTY AS QUANTITY,
1478         P.PRICE
1479     FROM ORDERS O
1480         JOIN PRODUCTS P ON P.PID = O.PID
1481         JOIN CUSTOMERS C ON C.CID = O.CID
1482     WHERE O.OID = @OID;
1483 END;
1484 -- O/P: Commands completed successfully.
1485
1486 -- DROP PROCEDURE PRODUCT_REPORT
1487
1488
1489
1490
1491
1492
1493
1494
1495
1496
```

```
1497
1498 PRODUCT_REPORT '00001';
1499 /*
1500 -----
1501 | ORDER_ID | ORDER_DATE | CUSTOMER_ID | CUSTOMER_NAME | PRODUCT_ID | PRODUCT_NAME | QUANTITY | PRICE |
1502 -----
1503 | 00001    | 2024-10-26 | C0001       | RAHUL SHARMA  | P0001      | LAPTOP       | 20       | 1200  |
1504 -----
1505 */
1506
1507 PRODUCT_REPORT '00002';
1508 /*
1509 -----
1510 | ORDER_ID | ORDER_DATE | CUSTOMER_ID | CUSTOMER_NAME | PRODUCT_ID | PRODUCT_NAME | QUANTITY | PRICE |
1511 -----
1512 | 00002    | 2024-10-26 | C0002       | PRIYA SINGH   | P0002      | REFRIGERATOR | 10       | 700   |
1513 -----
1514 */
1515
1516 PRODUCT_REPORT '00003';
1517 /*
1518 -----
1519 | ORDER_ID | ORDER_DATE | CUSTOMER_ID | CUSTOMER_NAME | PRODUCT_ID | PRODUCT_NAME | QUANTITY | PRICE |
1520 -----
1521 */
1522
1523 -----
1524
1525
1526
1527
1528
1529
1530
1531
```

```
1532
1533 DROP TABLE ORDERS;
1534 DROP TABLE CUSTOMERS;
1535 DROP TABLE STOCK;
1536 DROP TABLE PRODUCTS;
1537 DROP TABLE SUPPLIERS;
1538
1539 -- DELETE FROM SUPPLIERS;
1540 -- DELETE FROM PRODUCT;
1541 -- DELETE FROM STOCK;
1542 -- DELETE FROM CUSTOMERS;
1543 -- DELETE FROM ORDERS;
1544
1545 DROP SEQUENCE SID_SEQ;
1546 DROP SEQUENCE PID_SEQ;
1547 DROP SEQUENCE CID_SEQ;
1548 DROP SEQUENCE OID_SEQ;
1549
1550 DROP FUNCTION GenerateID;
1551
1552 DROP PROCEDURE Add_Supplier;
1553 DROP PROCEDURE Add_Product;
1554 DROP PROCEDURE Add_Stock;
1555 DROP PROCEDURE Add_Customer;
1556 DROP PROCEDURE Add_Order;
1557
1558 DROP PROCEDURE CUSTOMER_LEASURE;
1559 DROP PROCEDURE SUPPLIER_REPORT;
1560 DROP PROCEDURE DAILY_REPORT;
1561 DROP PROCEDURE BILL;
1562 DROP PROCEDURE PRODUCT_REPORT;
1563
1564 DROP DATABASE INVENTORY;
1565 -----
1566 -----
```

```
1567
1568 /*
1569 INSERT INTO SUPPLIERS (SID, SNAME, SADD, SCITY, SPHONE, EMAIL)
1570 VALUES
1571 ('S0001', 'ACME CORP',          '123 STREET A',  'DELHI',      '9876543210', 'ACME@SUPPLIER.COM'),
1572 ('S0002', 'GLOBAL SUPPLIES',    '456 STREET B',  'MUMBAI',     '9123456789', 'GLOBAL@SUPPLIER.COM'),
1573 ('S0003', 'XYZ TRADERS',        '789 STREET C',  'DELHI',      '9988776655', 'XYZ@SUPPLIER.COM'),
1574 ('S0004', 'TECH SOLUTIONS',     '321 AVENUE D',  'BANGALORE',  '8765432190', 'TECH@SOLUTIONS.COM'),
1575 ('S0005', 'DELTA DISTRIBUTORS', '654 ROAD E',    'HYDERABAD',  '7654321987', 'DELTA@DISTRIBUTORS.COM' ),
1576 ('S0006', 'ALPHA GOODS',        '987 STREET F',  'CHENNAI',    '9987654321', 'ALPHA@GOODS.COM'),
1577 ('S0007', 'BETA IMPORTS',       '112 ROAD G',    'KOLKATA',    '9867543210', 'BETA@IMPORTS.COM');
1578
1579
1580 INSERT INTO PRODUCTS (PID, PDESC, PRICE, CATEGORY, SID)
1581 VALUES
1582 ('P0001', 'LAPTOP',              1200.50, 'IT', 'S0001'),
1583 ('P0002', 'REFRIGERATOR',        700.00,  'HA', 'S0002'),
1584 ('P0003', 'THERMOMETER',         50.99,   'HC', 'S0003'),
1585 ('P0004', 'PRINTER',             200.75,  'IT', 'S0001'),
1586 ('P0005', 'WASHING MACHINE',     500.50,  'HA', 'S0002'),
1587 ('P0006', 'BLOOD PRESSURE MONITOR', 120.00,  'HC', 'S0003'),
1588 ('P0007', 'SMARTPHONE',          950.00,  'IT', 'S0004'),
1589 ('P0008', 'AIR CONDITIONER',     1200.00, 'HA', 'S0005'),
1590 ('P0009', 'PULSE OXIMETER',       30.75,   'HC', 'S0003'),
1591 ('P0010', 'DESKTOP COMPUTER',     800.00,  'IT', 'S0006'),
1592 ('P0011', 'MICROWAVE',            150.25,  'HA', 'S0002'),
1593 ('P0012', 'SMART WATCH',         350.00,  'IT', 'S0004'),
1594 ('P0013', 'JUICER',              90.50,   'HA', 'S0005'),
1595 ('P0014', 'FITNESS TRACKER',      100.99,  'HC', 'S0007'),
1596 ('P0015', 'GAMING CONSOLE',       400.00,  'IT', 'S0001'),
1597 ('P0016', 'BLENDER',             80.25,   'HA', 'S0006'),
1598 ('P0017', 'VACUUM CLEANER',       250.00,  'HA', 'S0007');
1599
1600
1601
```

1602

1603 INSERT INTO STOCK (PID, SQTY, ROL, MOQ)

1604 VALUES

1605 ('P0001', 20, 5, 10),

1606 ('P0002', 50, 10, 15),

1607 ('P0003', 30, 8, 12),

1608 ('P0004', 25, 5, 10),

1609 ('P0005', 60, 10, 20),

1610 ('P0006', 40, 12, 15),

1611 ('P0007', 35, 5, 10),

1612 ('P0008', 100, 15, 30),

1613 ('P0009', 70, 20, 25),

1614 ('P0010', 15, 5, 8);

1615

1616

1617 INSERT INTO CUSTOMERS (CID, CNAME, ADDRESS, CITY, PHONE, EMAIL, DOB)

1618 VALUES

1619 ('C0001', 'RAHUL SHARMA', '12 GANDHI ROAD', 'DELHI', '9876543210', 'RAHUL.SHARMA@GMAIL.COM',
'1985-06-15'),1620 ('C0002', 'PRIYA SINGH', '45 MG ROAD', 'MUMBAI', '9123456789', 'PRIYA.SINGH@YAHOO.COM',
'1995-08-20'),1621 ('C0003', 'AMIT KUMAR', '78 BRIGADE ROAD', 'BANGALORE', '9988776655', 'AMIT.KUMAR@REDIFFMAIL.COM ',
'1989-03-12'),1622 ('C0004', 'SNEHA PATEL', '22 NEHRU AVENUE', 'AHMEDABAD', '9876549876', 'SNEHA.PATEL@GMAIL.COM',
'1990-12-25'),1623 ('C0005', 'VIKRAM VERMA', '33 PARK STREET', 'KOLKATA', '9234567890', 'VIKRAM.VERMA@OUTLOOK.COM' ,
'1988-04-15'),1624 ('C0006', 'ANITA NAIR', '89 MARINE DRIVE', 'CHENNAI', '9987654321', 'ANITA.NAIR@GMAIL.COM',
'1997-11-15'),1625 ('C0007', 'ROHIT DESAI', '14 RESIDENCY ROAD', 'PUNE', '9876543212', 'ROHIT.DESAI@GMAIL.COM',
'1992-01-05');

1626

1627

1628

1629

1630

1631 INSERT INTO ORDERS (OID, ODATE, PID, CID, OQTY)

1632 VALUES

1633 ('00001', '2024-10-01', 'P0001', 'C0001', 20),

1634 ('00002', '2024-10-02', 'P0002', 'C0002', 10),

1635 ('00003', '2024-10-03', 'P0002', 'C0003', 30),

1636 ('00004', '2024-10-04', 'P0004', 'C0001', 10),

1637 ('00005', '2024-10-05', 'P0007', 'C0004', 20);

1638 */

1639 -----

1640 -----