--CHECK FOR THE STOCK OUT PRODUCT

SELECT ING\_ID,ING\_NAME,PRODUCT\_ID,PRODUCT\_NAME,Y,Q ,RN  
FROM(  
SELECT INGREDIENT.ING\_ID,ING\_NAME, PRODUCT.PRODUCT\_ID, PRODUCT\_NAME,INVENTORY\_QUANTITY AS Y, ING\_QUANTITY AS Q, ROWNUM RN   
FROM PRODUCT, INGREDIENT , INVENTORY  
WHERE PRODUCT.PRODUCT\_ID = INGREDIENT.PRODUCT\_ID AND INVENTORY.INVENTORY\_ID = INGREDIENT.INVENTORY\_ID AND PRODUCT.PRODUCT\_ID = 1   
GROUP BY INGREDIENT.ING\_ID,ING\_NAME, PRODUCT.PRODUCT\_ID, PRODUCT\_NAME, INVENTORY\_QUANTITY, ING\_QUANTITY, ROWNUM  
ORDER BY RN)

--CHECK FOR THE STOCK OUT PRODUCT (only handle for buying 1 product)

DECLARE

PRO\_ID NUMBER(10);

PRO\_NAME VARCHAR2(100);

ING\_Q NUMBER(10);

INV\_Q NUMBER(10);

i NUMBER(10);

GO\_BLOCK(‘QUANTITY\_S’);

SELECT Count(ING\_ID) INTO ING\_NUMBER

FROM(

SELECT INGREDIENT.ING\_ID

FROM PRODUCT, INGREDIENT , INVENTORY

WHERE PRODUCT.PRODUCT\_ID = INGREDIENT.PRODUCT\_ID AND INVENTORY.INVENTORY\_ID = INGREDIENT.INVENTORY\_ID AND PRODUCT.PRODUCT\_ID = 1

GROUP BY INGREDIENT.ING\_ID);

FOR i IN 1..ING\_NUMBER

LOOP

SELECT PRODUCT\_ID,PRODUCT\_NAME,INVENTORY\_QUANTITY, ING\_QUANTITY

INTO PRO\_ID, PRO\_NAME, ING\_Q, INV\_Q  
FROM(  
SELECT PRODUCT.PRODUCT\_ID, PRODUCT\_NAME,INVENTORY\_QUANTITY, ING\_QUANTITY, ROWNUM RN   
FROM PRODUCT, INGREDIENT , INVENTORY  
WHERE PRODUCT.PRODUCT\_ID = INGREDIENT.PRODUCT\_ID

AND INVENTORY.INVENTORY\_ID = INGREDIENT.INVENTORY\_ID

AND PRODUCT\_NAME = :QUANTITY\_S.PRODUCT\_NAME

GROUP BY PRODUCT.PRODUCT\_ID, PRODUCT\_NAME, INVENTORY\_QUANTITY, ING\_QUANTITY, ROWNUM  
ORDER BY RN)

WHERE RN = i;

forms\_ddl('Commit');

IF (INV\_Q - ING\_Q) < 0 THEN

message(PRO\_NAME||‘ has been sold out, please choose another. Thank you.’);

RAISE FORM TRIGGER FAILURE;

END IF;

END LOOP;

--CHECK FOR THE STOCK OUT PRODUCT (only handle for buying MORE THAN 1 product)

DECLARE

REQUIRED\_Q NUMBER(10);

ING\_Q NUMBER(10);

INV\_Q NUMBER(10);

ING\_NUMBER NUMBER(10);

i NUMBER(10);

NEEDED\_Q NUMBER(10);

PRO\_AVAILIBLE NUMBER(10);

PRO\_NAME VARCHAR(100);

SELECT :QUANTITY\_S.DETAIL\_QUANTITY INTO REQUIRED\_Q;

SELECT Count(ING\_ID) INTO ING\_NUMBER

FROM(

SELECT INGREDIENT.ING\_ID

FROM PRODUCT, INGREDIENT , INVENTORY

WHERE PRODUCT.PRODUCT\_ID = INGREDIENT.PRODUCT\_ID AND INVENTORY.INVENTORY\_ID = INGREDIENT.INVENTORY\_ID AND

PRODUCT\_NAME = :QUANTITY\_S.PRODUCT\_NAME

GROUP BY INGREDIENT.ING\_ID);

FOR i IN 1..ING\_NUMBER

LOOP

SELECT PRODUCT\_NAME, INVENTORY\_QUANTITY, ING\_QUANTITY

INTO PRO\_NAME, ING\_Q, INV\_Q  
FROM(  
SELECT PRODUCT\_NAME, INVENTORY\_QUANTITY, ING\_QUANTITY, ROWNUM RN   
FROM PRODUCT, INGREDIENT , INVENTORY  
WHERE PRODUCT.PRODUCT\_ID = INGREDIENT.PRODUCT\_ID

AND INVENTORY.INVENTORY\_ID = INGREDIENT.INVENTORY\_ID

AND PRODUCT\_NAME = :QUANTITY\_S.PRODUCT\_NAME

GROUP BY PRODUCT\_NAME,INVENTORY\_QUANTITY, ING\_QUANTITY, ROWNUM  
ORDER BY RN)

WHERE RN = i;

forms\_ddl('Commit');

NEEDED\_Q := REQUIRED\_Q \* ING\_Q

PRO\_AVAILIBLE = FLOOR(INV / NEEDED\_Q)

IF PRO\_AVAILIBLE < REQUIRED\_Q THEN

MESSAGE(‘ You can only buy ‘ || PRO\_AVAILIBLE || PRO\_NAME || ‘.’);

RAISE FORM\_TRIGGER\_FAILURE;

END IF;

END LOOP;