Exercise

1. Produce a list which returns all rows from the SALES and PRODUCT tables where there is a matching PRODUCT_ID value in both the SALES and PRODUCT tables.

2. Produce a list which returns all rows from the SALES table and only those rows from the PRODUCT table where the joined field PRODUCT_ID is equal.

3. Produce a list which returns all rows from the PRODUCT table and only those rows from the SALES table where the joined field PRODUCT_ID is equal.

4. Produce a list which returns all rows from the SALES and PRODUCT table irrespective of PRODUCT_ID match between these tables. (PRODUCT_ID can match between both these tables or it might not match).

Copy and paste the below SQL's in SQL Developer and run them, You will get errors and try to correct those errors.

1.
```sql
SELECT ORDER_ID,  CUSTOMER_ID FROM
SALES S INNER  JOIN  CUSTOMER C
ON S.CUSTOMER_ID = C.CUSTOMER_ID
```

Answers:

```
1. SELECT *
   FROM sales
   INNER JOIN product
   ON sales.product_id = product.product_id;

2. SELECT *
   FROM sales
   LEFT OUTER JOIN product
   ON sales.product_id = product.product_id;
```

Note: If a PRODUCT_ID value in the SALES table does not exist in the PRODUCT table, all fields in the PRODUCT table will display as <null> in the result set.

```
3. SELECT *
   FROM sales
   RIGHT OUTER JOIN product
   ON sales.product_id = product.product_id;

4. SELECT *
   FROM sales
   FULL OUTER JOIN product
   ON sales.product_id = product.product_id;
```

Answers for errors:

1) You will get an error "ORA-00918: column ambiguously defined" when you run below SQL statement.

```
SELECT ORDER_ID, CUSTOMER_ID FROM
SALES S INNER JOIN CUSTOMER C
ON S.CUSTOMER_ID = C.CUSTOMER_ID
```

Correct the above SQL statement by adding S. in front of CUSTOMER_ID or by adding C. in front of CUSTOMER_ID (Remember when you are joining tables and you are selecting a column name which is in multiple tables, then you need to let oracle know from which table you want to bring that column data.)

```
SELECT ORDER_ID, S.CUSTOMER_ID FROM
SALES S INNER JOIN CUSTOMER C
ON S.CUSTOMER_ID = C.CUSTOMER_ID

SELECT ORDER_ID, C.CUSTOMER_ID FROM
SALES S INNER JOIN CUSTOMER C
ON S.CUSTOMER_ID = C.CUSTOMER_ID
```