Write the SQL query to perform the following queries: [10 Marks] a. Obtain the total revenue generated from sales of products in the 'Electronics' category. b. Obtain the product_name and total_price from the Sales_details table, calculating the total_price as quantity_sold multiplied by unit_price. c. Determine the products with total sales more than 30. d. Determine the sales where the quantity sold exceeds the average quantity sold. e. Determine the details of Product_details (name, category, unit price) for products that have a quantity sold above the average quantity of products sold.

```
mysql> CREATE TABLE Product_details_MC23BT029 (
    -> product_id INT,
    -> product_name VARCHAR(100),
    -> category VARCHAR(50),
    -> unit_price DECIMAL(10, 2)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> INSERT INTO Product_details_MC23BT029 (product_id, produc
t_name, category, unit_price)
    -> VALUES
    -> (101, 'Laptop', 'Electronics', 500.00),
    -> (102, 'Smartphone', 'Electronics', 300.00),
    -> (103, 'Headphones', 'Electronics', 30.00),
    -> (104, 'Keyboard', 'Electronics', 20.00),
    -> (105, 'Mouse', 'Electronics', 15.00);
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

```
mysql> CREATE TABLE Sale_details_MC23BT029 (
    -> sale_id INT,
    -> product_id INT,
    -> quantity_sold INT,
    -> sale_date DATE,
    -> total_price DECIMAL(10, 2)
    -> );
Query OK, 0 rows affected (0.14 sec)

mysql> INSERT INTO Sale_details_MC23BT029 (sale_id, product_id,
quantity_sold, sale_date, total_price)
    -> VALUES
    -> (1, 101, 5, '2024-01-01', 2500.00),
    -> (2, 102, 3, '2024-01-02', 900.00),
    -> (3, 103, 2, '2024-01-02', 60.00),
    -> (4, 104, 4, '2024-01-03', 80.00),
    -> (5, 105, 6, '2024-01-03', 90.00);
Query OK, 5 rows affected (0.03 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

A.

```
mysql> SELECT SUM(s.total_price) AS total_revenue
    -> FROM Sale_details_MC23BT029 s
    -> JOIN Product_details_MC23BT029 p ON s.product_id = p.prod
uct_id
    -> WHERE p.category = 'Electronics';
+---------------+
| total_revenue |
+---------------+
|       3630.00 |
+---------------+
1 row in set (0.01 sec)
```

B.

```
mysql> SELECT p.product_name,(s.quantity_sold * p.unit_price) AS
 total_price
    -> FROM Sale_details_MC23BT029 s
    -> JOIN Product_details_MC23BT029 p
    -> ON s.product_id = p.product_id;
+--------------+-------------+
| product_name | total_price |
+--------------+-------------+
| Laptop       |     2500.00 |
| Smartphone   |      900.00 |
| Headphones   |       60.00 |
| Keyboard     |       80.00 |
| Mouse        |       90.00 |
+--------------+-------------+
5 rows in set (0.00 sec)
```

C.

```
mysql> SELECT p.product_name,SUM(s.quantity_sold) AS total_sales

    -> FROM Sale_details_MC23BT029 s
    -> JOIN Product_details_MC23BT029 p
    -> ON s.product_id = p.product_id
    -> GROUP BY p.product_name
    -> HAVING SUM(s.quantity_sold) > 30;
Empty set (0.01 sec)
```

D.

```
mysql> SELECT s.sale_id, s.product_id, s.quantity_sold, s.sale_date, s.total_price
    -> FROM Sale_details_MC23BT029 s
    -> WHERE s.quantity_sold > (SELECT AVG(quantity_sold) FROM Sale_details_MC23BT029);
+---------+------------+---------------+------------+-------------+
| sale_id | product_id | quantity_sold | sale_date  | total_price |
+---------+------------+---------------+------------+-------------+
|       1 |        101 |             5 | 2024-01-01 |     2500.00 |
|       5 |        105 |             6 | 2024-01-03 |       90.00 |
+---------+------------+---------------+------------+-------------+
2 rows in set (0.00 sec)
```

E.

```
mysql> SELECT p.product_name, p.category, p.unit_price
    -> FROM Product_details_MC23BT029 p
    -> WHERE p.product_id IN (
    ->     SELECT s.product_id
    ->     FROM Sale_details_MC23BT029 s
    ->     WHERE s.quantity_sold > (SELECT AVG(quantity_sold) FROM Sale_details_MC23BT02
9)
    -> );
+--------------+-------------+------------+
| product_name | category    | unit_price |
+--------------+-------------+------------+
| Laptop       | Electronics |     500.00 |
| Mouse        | Electronics |      15.00 |
+--------------+-------------+------------+
2 rows in set (0.02 sec)

mysql>
```