

Assignment 3 answers

1.1. Total Spent per Category:

```
SELECT category, SUM(amount) AS total_amount
FROM expenses
GROUP BY category;
```

Alternative:

```
SELECT e.category,
       (SELECT SUM(amount) FROM expenses WHERE category = e.category) AS total_amount
FROM
       (SELECT DISTINCT category
        FROM expenses) AS e;
```

1.2. Average Expense per Category

```
SELECT category, AVG(amount) AS average_expense
FROM expenses
GROUP BY category;
```

Alternative:

```
SELECT
       category,
       (SELECT AVG(amount) FROM expenses e2 WHERE e2.category = e.category) AS
average_amount
FROM
       expenses e
GROUP BY
       category;
```

Modified queries showing only the top 4 categories where you spend the most.

1.1. Total Spent per Category:

```
SELECT category, SUM(amount) AS total_amount
FROM expenses
GROUP BY category
ORDER BY total_amount DESC
LIMIT 4;
```

1.2. Average Expense per Category

```
SELECT category, AVG(amount) AS average_amount
FROM expenses
GROUP BY category
ORDER BY average_amount DESC
LIMIT 4;
```

To give average amount to 2 decimal places:

```
SELECT category, ROUND(AVG(amount), 2) AS average_amount
FROM expenses
GROUP BY category
ORDER BY average_amount DESC
LIMIT 4;
```