

Expense Data Code:

```
1 class ExpenseData {
2     private final String[] categories = {"Groceries", "Utilities", "Medical", "Others"};
3     private final double[] totals = new double[categories.length];
4     private final int[] counts = new int[categories.length];
5     private final StringBuilder[] expenseLists = new StringBuilder[categories.length];
6
7     public ExpenseData() {
8         for (int i = 0; i < categories.length; i++) {
9             expenseLists[i] = new StringBuilder();
10        }
11    }
12
13    public void addExpense(String category, Double expense) {
14        int index = getCategoryIndex(category);
15        double amount = expense;
16        totals[index] += amount;
17        counts[index]++;
18        expenseLists[index].append(category).append(": RM").append(expense).append("\n");
19    }
20
21    public String getExpenseList() {
22        StringBuilder sb = new StringBuilder();
23        for (int i = 0; i < categories.length; i++) {
24            sb.append(expenseLists[i]);
25        }
26        return sb.toString();
27    }
28
29    public String getFilteredExpenses(String category) {
30        int index = getCategoryIndex(category);
31        return expenseLists[index].toString();
32    }
33
34    public double getAverageExpense(String category) {
35        int index = getCategoryIndex(category);
36        return counts[index] == 0 ? 0 : totals[index] / counts[index];
37    }
38
39    private int getCategoryIndex(String category) {
40        for (int i = 0; i < categories.length; i++) {
41            if (category.equals(categories[i])) {
42                return i;
43            }
44        }
45        throw new IllegalArgumentException("Invalid category: " + category);
46    }
47 }
```