Introduction

In this HIT, we will show you a web application under development that allows the user to type in questions about data, and view the answers about that data.

We are interested in what your opinion is about the details in the way the answer is presented.

Think about a financial application: a web site to view credit card balances. This website allows the user to type questions like this:

Show me how I spent money this month.
The system interprets the question, analyzes a database of the user's credit card expenditures, and shows the user a chart of results like this:

This chart shows that rent is the highest expense at 600 dollars this month, followed by Groceries at 300 dollars this month, all the way down to Car Payments at 50 dollars this month. Smaller amounts are not shown here.
Let's test your understanding. Look at the chart again and answer the following questions. Assume the user asked:

Show me how I spent money this month.

Let's test your understanding with two simple questions. Which was the user's highest expense?

- Rent
- Groceries
- Car Payment

Which expense was 300 dollars?

- Rent
- Groceries
Groceries Shape 1

Now consider another kind of budget information. This time, it is for someone who is trying to keep track of how they spend money on items at the grocery store. To keep it simple, we are not showing the names of the items, just how much was spent on each one. Say the user typed this:

Show me how much I spent on groceries this month.

This is what the system shows:
Which is highest Shape 1

Now consider a *different question* with this same data. The question the user asked before was

Show me how I spent money this month.

This time, the question is changed to:
Which of my grocery expenses is the highest this month?

Which of these four views would you most want to see for this question?
What is the reason for your choice of this one versus your second choice?

Which are highest Shape 1
Now consider a different question with this same data. The question the user asked before was

Show me how I spent money this month.

This time, the question is changed to:

**Which of my grocery expenses are highest this month?**

Which of these four views would you most want to see for this question?

![Bar chart](chart.png)
What is the reason for your choice of this one versus your second choice?

Which are high Shape 1

Now consider a different question with this same data. The question the user asked before was

Show me how I spent money this month.

This time, the question is changed to:

Which of my grocery expenses are high this month?

Which of these four views would you most want to see for this question?
What is the reason for your choice of this one versus your second choice?

**Groceries Shape 2**

Now consider another kind of budget information. This time, it is for someone who is trying to keep track of how they spend money on items at the grocery store. To keep it simple, we are not showing the names of the items, just how much was spent on each one. Say the user typed this:

Show me how much I spent money on groceries this month.

This is what the system shows:
Which is highest Shape 2

Now consider a different question with this same data. The question the user asked before was

Show me how I spent money this month.

This time, the question is changed to:

Which of my grocery expenses is the highest this month?
Which of these four views would you most want to see for this question?
What is the reason for your choice of this one versus your second choice?

Which are highest Shape 2

Now consider a different question with this same data. The question the user asked before was

Show me how I spent money this month.
This time, the question is changed to:

Which of my grocery expenses are highest this month?

Which of these four views would you most want to see for this question?
What is the reason for your choice of this one versus your second choice?
Which are high Shape 2

Now consider a *different question* with this same data. The question the user asked before was

Show me how I spent money this month.

This time, the question is changed to:

**Which of my grocery expenses are high this month?**

Which of these four views would you most want to see for this question?
What is the reason for your choice of this one versus your second choice?

Groceries Shape 3

Now consider another kind of budget information. This time, it is for someone who is trying to keep track of how they spend money on items at the grocery store. To keep it simple, we are not showing the names of the items, just how much was spent on each one. Say the user typed this:

Show me how much I spent money on groceries this month.

This is what the system shows:
Which is highest Shape 3

Now consider a *different question* with this same data. The question the user asked before was:

Show me how I spent money this month.

This time, the question is changed to:

**Which of my grocery expenses is the highest this month?**
Which of these four views would you most want to see for this question?
What is the reason for your choice of this one versus your second choice?

Which are high Shape 3

Now consider a different question with this same data. The question the user asked before was

Show me how I spent money this month.
This time, the question is changed to:

**Which of my grocery expenses are high this month?**

Which of these four views would you most want to see for this question?
What is the reason for your choice of this one versus your second choice?

Which are highest Shape 3
Now consider a different question with this same data. The question the user asked before was

Show me how I spent money this month.

This time, the question is changed to:

**Which of my grocery expenses are highest this month?**

Which of these four views would you most want to see for this question?
What is the reason for your choice of this one versus your second choice?

Block Participant Background

(Optional) Feel free to share any views you have about this HIT.