How to write good IOP questions

- In the IOP:
  - You are not out to capture the actual first question out of the user’s mouth, but rather to encapsulate an entire reference transaction
  - The IOP “Questions” do not actually have to be questions. They can be statements.

Types of actual user needs

- Some users want to verify a fact: “What is the population of Budapest” and some databases can answer that right on the screen
- Some users want to see if you have something: “Do you have Airframe?” and the system can say yes or no
- Some users want the system to point them to a group of objects so they can examine them: “I need some books on shark attacks”

We will concentrate on the last type of question!

What a user usually asks:

- Information about something, called something, or by somebody
- They usually have a desired level of complexity (precision)
- They usually have a desired amount (how many things they want to check out)

Your IOP questions must be written:

- Such that the user specifies desired precision
- Such that the user specifies desired recall
- Such that the user has to go get the stuff from the shelf

“I need (has to go to the shelf) a couple (desired recall) books that deal with making simple household furniture” (desired precision)
**Mini-Lecture Series:**

**Introduction to IOP Project**

### Desired Precision

- Expressed as low, moderate or high
- Is a statement of how complex the user wants the desired material to be

If the overall subject is say, animal books:
- "I need some doggie books" – low
- "I need some books on dog training" – moderate
- "I need some books on training dogs as bird hunters" – high

### Desired Recall

- Expressed as low, moderate or high
- Is a statement of how many objects the user wants to check out, **NOT** how many are in the system or how many have been written or published

If the overall subject is say, animal books:
- "I need a book on dog training" – low
- "I need some books on dog training" – moderate
- "I need all the books (or ‘about 10’, etc) you have on dog training” – high

### The IOP question mask in Section 1.3

**Question 1:** Here, you write out your sample question, such as "I need a couple books on dogs by Gerry Hoover"

**Object Attributes:** Here, you indicate which attributes are important in this question (subject, author, for example)

**Desired Precision:** Here, you indicate what the desired precision of the question is. Looking at it, it would probably be moderate.

**Desired Recall:** Here, you indicate how many objects the user wants to check out. "A couple" would be low or moderate.

### Good question/bad question

#### Improperly written question:
- "Do you have a book on sheep shearing?"
  - Why? Question does not say how many books user wants. User only wants to know does the library have one? This is a yes/no question.

#### Properly written question:
- "I need a book on sheep shearing"
  - Why? Requires user to actually go to the shelf to satisfy "I need".

#### Improperly written question:
- "Who wrote “Last of the Mohicans?”
  - Why? Question does not say how many books user wants. This is a trivia question that can be answered at the terminal, or off the top of the librarian’s head.

#### Properly written question:
- "I need a book called “Last of the Mohicans”
  - Why? Requires user to actually go to the shelf to satisfy “I need”.

#### Improperly written question:
- "Where are the animal books?
  - Why? Question does not say how many books user wants. User only wants to know where certain books are. This can be answered by pointing.

#### Properly written question:
- "I need a couple animal books"
  - Why? Requires user to actually go to the shelf to satisfy “I need”.

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**Good question/bad question**

- **Improperly written question:**
  - "Is there a book that will tell me how to change a ball joint on a 1992 Dodge??
  - Why? Question does not say how many books user wants. User only wants to know if a book exists. This can be answered at the terminal. "yes, a book exists".

- **Properly written question:**
  - "I want to check out a book or two that talk about changing ball joints"
  - Why? Requires user to actually go to the shelf to satisfy "I want to check out".

**Attributes or Values?**

- Dog
- Author
- Dog day afternoon
- Dog breed
- Award
- Eunice Strunk
- AR level
- Blue Bonnet
- 4.7

- Short
- Book feature
- Title
- Penguin
- Length
- 3rd ed.
- Violence
- Publisher
- Schnauzer