How to run the program?

The command to run the program is "java MockProlog".

The program receives queries in interactive mode. The program can process both simple queries that consist of a single query and more complicated queries that consist of conjunctions of multiple statements.

(1) Simple Query

Assume you want to input a single query which is "value(X, Y, Z)" in Prolog. The example below shows how the program works. You need to input the predicate and arguments (which are in green in the example) according to the displayed instructions (answer "n" to the question "Do you want to add another query (Y/N) " to stop input stage and begin process your query).
The orange part is the result and answers to your query. It returns whether your query can be true for some value substitutions and the value of the variables in your query. The program will remove duplicate answers to your query, so the number of answer might be different to Prolog's output.

```
======================
Begin reading the query [1]...
Please enter the predicate name of the query:
value
Enter the first argument of the query:
X
Enter the second argument of the query:
Y
Enter the third argument of the query:
Z
Do you want to add another query (Y/N):
n
======================
The result of your query is: true

The values of your variables are:
Answer 1:
X: david
Y: isa
Z: diabetics
======================
Answer 2:
X: diabetics
Y: shouldAvoid
Z: sugar
======================
Answer 3:
X: candy
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```
Y: contains
Z: sugar
=====================
Answer 4:
X: snickers
Y: ako
Z: candy
=====================
Answer 5:
X: david
Y: shouldAvoid
Z: sugar
=====================
Answer 6:
X: david
Y: shouldAvoid
Z: candy
=====================
Answer 7:
X: david
Y: shouldAvoid
Z: snickers
=====================
Answer 8:
X: snickers
Y: contains
Z: sugar
=====================
Answer 9:
X: diabetics
Y: shouldAvoid
Z: candy
=====================
Answer 10:
X: diabetics
Y: shouldAvoid
Z: snickers
=====================
```

(2) Complicated Query

Assume you want to input a more complicated query which is "value(X1,shouldAvoid,Y1), value(X1,isa,Y2)." in Prolog (Kind Reminder: This is a query of a conjunction of the two query statements, not two separate queries,). The example below shows how the program works. You need to input the predicate and arguments (which are in green in the example) according to the displayed instructions (answer "y" to the question "Do you want to add another

query (Y/N) “ to input the second statement; answer “n” when you don’t have any more statements to input and begin process your query).
The orange part is the result and answers to your query. It returns whether your query can be true for some value substitutions and the value of the variables in your query. The program will remove duplicate answers to your query, so the number of answer might be different to Prolog’s output.

```
======================
Begin reading the query [1]...
Please enter the predicate name of the query:
value
Enter the first argument of the query:
X1
Enter the second argument of the query:
shouldAvoid
Enter the third argument of the query:
Y1
Do you want to add another query (Y/N):
y
======================
Begin reading the query [2]...
Please enter the predicate name of the query:
value
Enter the first argument of the query:
X1
Enter the second argument of the query:
isa
Enter the third argument of the query:
X2
Do you want to add another query (Y/N):
n
======================
The result of your query is: true

The values of your variables are:
Answer 1:
X1: david
Y1: sugar
X2: diabetics
======================
Answer 2:
X1: david
Y1: candy
X2: diabetics
======================
Answer 3:
X1: david
```

Y1: snickers
X2: diabetics
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