

PDL Quick Reference

pip install prompt-declaration-language

pdl examples/hello/hello.pdl

LLM call with current context

```
model: watsonx/ibm/granite-13b-chat-v2
parameters:
  temperature: 0.1
```

LLM call with explicit input

```
model: watsonx/ibm/granite-13b-chat-v2
parameters:
  temperature: 0.1
input:
  array:
    - role: user
      content: Hello,
```

Reading from a file or stdin

```
read: # optionally, add file name
message: Please enter an input.
multiline: true # omit to stop at \n
```

Creating data (v1, v2 can be any block)

```
text: # outputs "v1v2"
  - v1
  - v2
```

```
lastOf: # outputs v2
  - v1
  - v2
```

```
# implicit lastOf, outputs v2
- v1
- v2
```

```
array: # outputs [v1, v2]
  - v1
  - v2
```

```
object: # outputs {k1: v1, k2: v2}
  k1: v1
  k2: v2
```

```
data: # outputs {k1: v1, model: v2}
  k1: v1
  model: v2 # no LLM call
```

Including a PDL file

```
include: ./helper_defs.pdl
```

Declaring and calling functions

```
def: add
function:
  x: int
  y: int
return: ${x + y}
```

```
call: add
args:
  x: 2
  y: 2
pdl_context: [] # optional
```

Control constructs (all lists use implicit lastOf)

```
if: ${x > 0}
then: positive
else: non-negative
```

```
for: # outputs 2_0_5
  i: [1, 0, 1]
  j: [2, 3, 5]
repeat: ${i * j}
join:
  with: _ # optional
```

```
repeat: # implicit lastOf, outputs HoHoHo
  - Hi
  - Ho
num_iterations: 3
```

```
repeat: # outputs HiHoHiHoHiHo
  text:
    - Hi
    - Ho
num_iterations: 3
```

```
repeat:
  def: x
  read:
until: ${ (x | trim) == "stop" }
```

Optional keywords for any block

```
description: documentation text

def: x # define variable from block

defs: # define multiple variables
  x: v1
  y: v2

role: user # or system or assistant

contribute: [result, context] # or less

parser: json # or jsonl, yaml, regex

spec: type # type specification
```

spec Types (shorthand for JSON Schema)

Basic types	str, int, float, bool, null
Arrays	[int]
Objects	{x: int, y: int}
Enums	{enum: [red, green, blue]}

\${...} Expressions (subset of Jinja2)

Basic values	"hi", 5, 3.1, true, none
Arrays/objects	[1, 2, 3], {"x": 4, "y": 5}
Variables	x, y[0], z.f
Operators	+, -, *, /, //, %, **, ~, and, or, not, ==, <, >, in
Tests	x if x is defined else 0
Filters	x default(0)

Executing code

```
lang: python
code: |
  result = "Hello, world!"
```