

# NLP Parser

NLP Parser parses the text into token model. Token model is a model that contains the structure of the text. Parser classifies these model into several queries.

## Query and Transformation

Query is a set pattern that will parse token model. The matches result will be transformed into command model. The command model properties are as following.

- `command` - The command that will tell **Execution Router**
- `target` - The target of execution
- `related_tokens` - The tokens that are related to the target. For example, in `current date`, `current` is related tokens
- `type` - The type of command
- `source` - It can be an input for the target for execution

## 1. WhatQuery

**The match pattern:**

1. Index 0 → Position: `DET`
2. Index 1 → Position: `NOUN`
3. Index 2 → Position: `AUX`, optional
4. Index 3 → Position: `ADV`
5. Index 4 → Position: `PUNCT`, optional

**Example matches:**

- What time is it now?
- What time is now?
- What time now?

**Token transformation:**

1. `command`: `NOUN`

## 2. WhoQuery

### The match pattern:

1. Index 0 → Position: PRON
2. Index 1 → Position: AUX
3. Index 2 → Position: PRON

### Example matches:

- Who are you?
- Who is that?

### Token transformation:

None

## 3. AuxiliaryQuery

### Example matches:

1. Index 0 → Position: NOUN
2. Index 1 → Position: ADV , optional
3. Index 2 → Position: AUX
4. Index 3 → Position: PUNCT , optional

### Example matches:

- Current time is?

### Token transformation:

1. command : NOUN

## 4. CommandQuery

### Pattern 1

### Example matches:

1. Index 0 → Position: VERB
2. Index 1 → Position: PRON , optional
3. Index 2 → Position: DET , optional
4. Index 3 → Position: ADJ , optional
5. Index 4 → Position: NOUN

### Example matches:

- Show me directory media

## Pattern 2

### Example matches:

1. Index 0 → Position: VERB
2. Index 1 → Position: PRON, optional
3. Index 2 → Position: DET, optional
4. Index 3 → Position: ADJ, optional
5. Index 4 → Position: PROPN

### Example matches:

- Show me running containers

### Token transformation:

1. target: NOUN or PROPN

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Revision #2

Created 5 January 2025 05:56:02 by Ahmad

Updated 5 January 2025 06:57:13 by Ahmad