NPC

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Chapter 1

Class Index

1.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 2

File Index

2.1 File List

Here is a list of all documented files with brief descriptions:

Chapter 3

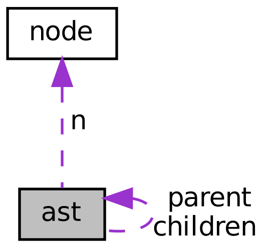
Class Documentation

3.1 ast Struct Reference

The abstract syntax tree is a tree representation of the source program.

`#include <ast.h>`

Collaboration diagram for ast:



Public Attributes

- node **n**
- ast ∗∗ **children**
- ast ∗ **parent**
- long **used**
- long **size**

3.1.1 Detailed Description

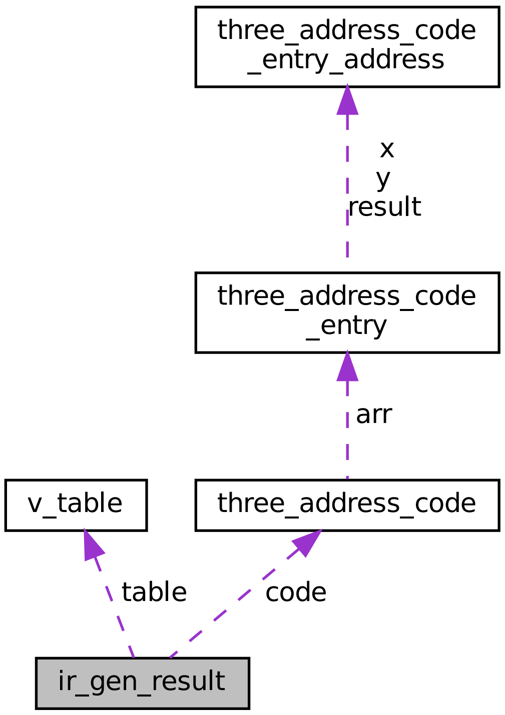
The abstract syntax tree is a tree representation of the source program.

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/ast.h

3.2 ir_gen_result Struct Reference

Collaboration diagram for ir_gen_result:



Public Attributes

- three_address_code ∗ **code**
- v_table ∗ **table**

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/ir_gen.h

3.3 node Struct Reference

Public Attributes

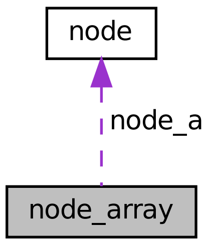
- node_type **type**
- node_type_class **type_class**
- long **value**

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/node.h

3.4 node_array Struct Reference

Collaboration diagram for node_array:



Public Attributes

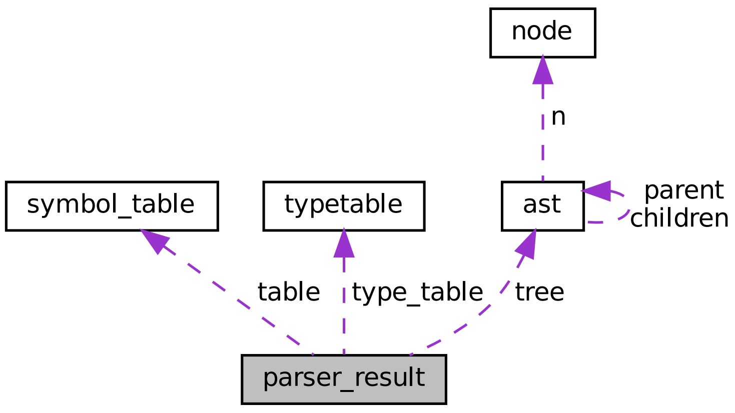
- long **used**
- long **size**

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/node.h

3.5 parser_result Struct Reference

Collaboration diagram for parser_result:



Public Attributes

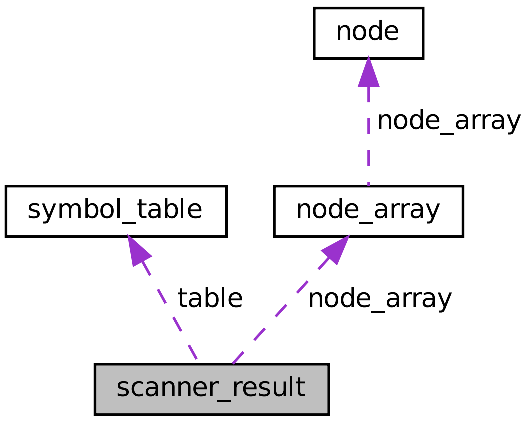
- ast ∗ **tree**
- symbol_table ∗ **table**
- typetable ∗ **type_table**

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/parser.h

3.6 scanner_result Struct Reference

Collaboration diagram for scanner_result:



Public Attributes

- node_array ∗ **node_array**
- symbol_table ∗ **table**

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/scanner.h

3.7 symbol_table Struct Reference

Public Attributes

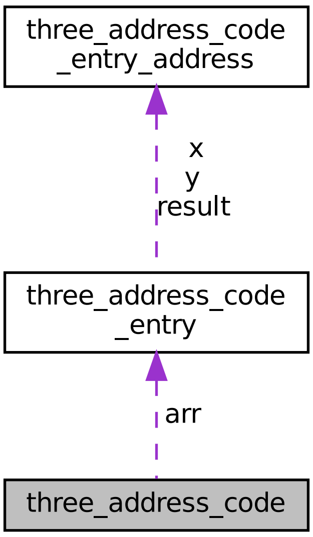
- size_t ∗ **position**
- size_t ∗ **line**
- char ∗∗ **value**
- size_t **size**
- size_t **used**

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/symbol_table.h

3.8 three_address_code Struct Reference

Collaboration diagram for three_address_code:



Public Attributes

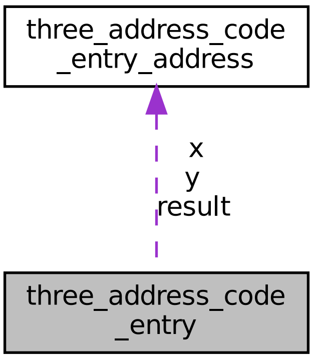
- size_t **used**
- size_t **size**
- three_address_code_entry ∗ **arr**

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/three_address_code.h

3.9 three_address_code_entry Struct Reference

Collaboration diagram for three_address_code_entry:



Public Attributes

- long **label**
- three_address_code_op **operation**
- three_address_code_entry_address **result**
- three_address_code_entry_address **x**
- three_address_code_entry_address **y**

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/three_address_code.h

3.10 three_address_code_entry_address Struct Reference

Public Attributes

- address_type **type**
- long **value**

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/three_address_code.h

3.11 typetable Struct Reference

Public Attributes

- char $**$ **name**
- size_t $*$ **type_size**
- size_t **used**
- size_t **size**

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/typetable.h

3.12 v_table Struct Reference

Public Attributes

- char $**$ **name**
- size_t **size**
- size_t **used**

The documentation for this struct was generated from the following file:

- /home/max/Npc/src/ir_gen.h

Chapter 4

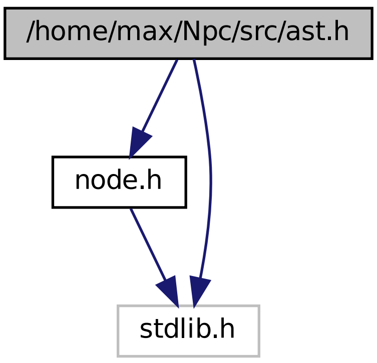
File Documentation

4.1 /home/max/Npc/src/ast.h File Reference

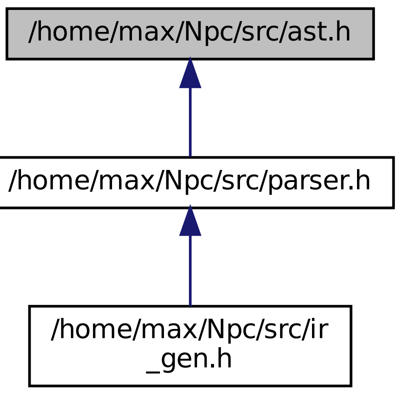
Ast contains the type and prototypes for working with abstract syntax trees.

```
#include "node.h"
#include <stdlib.h>
```

Include dependency graph for ast.h:



This graph shows which files directly or indirectly include this file:



Classes

- struct ast

  The abstract syntax tree is a tree representation of the source program.

Macros

- #define **AST_INIT_SIZE** 10

Typedefs

- typedef struct ast **ast**

Functions

- ast ∗ **ast_make** ()
- void ast_add (ast ∗parent, ast ∗tree)
- ast ∗ **ast_get_child** (ast ∗tree, long id)
- void **ast_set_node** (ast ∗tree, node ∗n)
- ast ∗ **ast_get_last** (ast ∗tree)
- ast ∗ **ast_get_parent** (ast ∗tree)

4.1.1 Detailed Description

Ast contains the type and prototypes for working with abstract syntax trees.

Author

MaximilianHeim@protonmail.com

Version

0.1

Date

2022-04-26

Copyright

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4.1.2 Function Documentation

4.1.2.1 ast_add()

```
void ast_add (
            ast * parent,
            ast * tree )
```

Parameters

parent	
tree	

4.2 /home/max/Npc/src/char_utils.h File Reference

An utility class for scanning, should be selfexplanatory.

Functions

- int **is_space** (char ∗ptr)
- int **is_tab** (char ∗ptr)
- int **is_whitespace** (char ∗ptr)
- int **is_newline** (char ∗ptr)
- int **is_latin** (char ∗ptr)
- int **is_number** (char ∗ptr)
- int **is_underscore** (char ∗ptr)

4.2.1 Detailed Description

An utility class for scanning, should be selfexplanatory.

Author

`MaximilianHeim@protonmail.com`

Version

0.1

Date

2022-04-27

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