

电子科技大学

UNIVERSITY OF ELECTRONIC SCIENCE AND TECHNOLOGY OF CHINA

学期论文

Term Paper



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_____ English Title

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摘要

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关键字: 关键字，关键字，关键字

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Chapter 1 Introduction

1.1 Research Background and Significance

[illegible]

1.2 Outline of the Thesis

This report is organized as follows.

[illegible]

2.1 Introduction

2.2 Mandatory Elision of Copy/Move Operations

[illegible][illegible]

3

[illegible][illegible]

```
//code
```

2.4 Notes and Example

[illegible]

(3) This is text This is text This is text This is text This is text This is text This is text This is
text This is text This is text This is text This is text This is text This is text This

- Thiessen, C. Thiessen, C. Thiessen, C. Thiessen, C. Thiessen, C. Thiessen, C. Thiessen, C.

Chapter 3 Return Value Optimization

3.1 Introduction

This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text

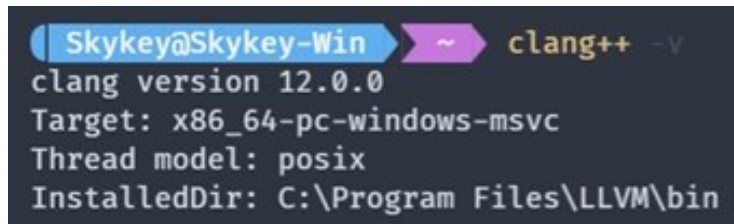
3.2 Preparation

This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text

This is text This is text This is text This is text This is text This is text This is text This is text

```
//code
```

This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text



```
Skykey@Skykey-Win ~$ clang++ -v
clang version 12.0.0
Target: x86_64-pc-windows-msvc
Thread model: posix
InstalledDir: C:\Program Files\LLVM\bin
```

This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text

3.3 Return Value Optimization

3.3.1 Introduction

This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text

3.3.2 Example

Here's a simple example:

```
\\code
```

Output (note that *-fno-elide-constructors* disable RVO in Clang):

```
\\code
```

This is text *This is text*) This is text This is text This is text This is text This is text This is text This is text This is text

This is text This is text This is text This is text This is text

(1) This is text This is text This is text This is text This is text

(2) This is text This is text This is text This is text This is text This is text

(3) This is text This is text This is text This is text This is text

3.4 Named Return Value Optimization

3.4.1 Introduction

This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text

3.4.2 Example

Here' s a simple example:

```
//code
```

Which has a similar output to *ExampleRVO()* above:

```
//code  
d' tor
```

3.4.3 Performance

This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text This is text

This is text This is text This is text This is text This is text This is text *This is text* :

```
//code
```

Output:

- [illegible]

3.6 When Return Value Optimization doesn't/can't happen

This is text This is text This is text This is text This is text This is text This is text This is
text This is text This is text This is text This is text This is text This is text This is
text This is text This is text This is text This is text This is text

3.6.1 Deciding on Instance at Runtime

This is text This is text This is text This is text This is text This is text This is text This is text

```
//code
```

Output:

```
//code
```

3.6.2 Assignment

This is text This is text This is text This is text This is text This is text This is text *This is text* This is text This is text This is text This is text

```
//code
```

Output:

```
//code
```

3.6.3 Returning Member

This is text This is text This is text This is text This is text

```
//code
```

Output:

```
//code
```


References

- [1] All. *Copy elision* [W]. Wikipedia.
- [2] Luchian Grigore, Ajay yadavK., Karamazen. *What are copy elision and return value optimization?* [W]. StackOverFlow, 2020.
- [3] 王纯业 (Wang Chunye) . 深入理解 *Return Value Optimization* [W]. 知乎, 2019.