termsim: terminal simulation pachage

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Abstract

The termsim is a tcolorbox-based package developed with LaTeX3, which provides a `terminal` environment and a `\termfile` macro for simulationg terminal in Win10, Mac or Ubuntu with dark, light or white color theme. The `terminal` environment creates terminal with it's body and the `\termfile` macro is used to read in the specified file and output it in the simulated terminal. The starred `terminal*` environment and `\termfile*` macro are also provided to simulate a terminal with comments at the bottom of terminal. All style and color theme can be setted by `\termset` macro or environment's and macro's key-value options.

Contents

1 Introduction

termsim is an LaTeXpackage for simulating Win10, Mac or Ubuntu terminal with dark, light or white color theme.

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[*] https://github.com/registor/termsim
[†] https://gitee.com/nwafu_nan/termsim

2 Interface

2.1 `terminal` and `terminal*` environment

`\begin{terminal}` [⟨*options*⟩] {⟨*terminal title*⟩}

.....

`\end{terminal}`

`\begin{terminal*}` [⟨*options*⟩] [⟨*comments*⟩] {⟨*terminal title*⟩}
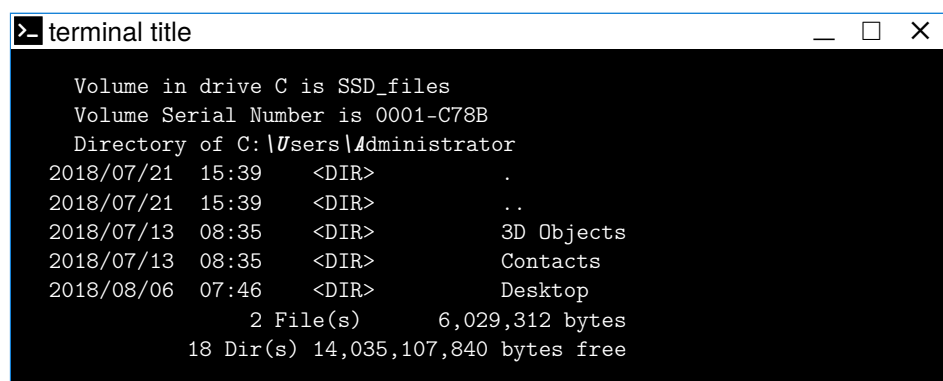
.....

`\end{terminal*}`

Typesetting terminal with environment body. You can set the title for the terminal by using {⟨*terminal title*⟩}.

The appearance of the terminal is set by key-value in [⟨*options*⟩].

The starred environment `terminal*` is used to add comments at the bottom of terminal, note that this needs to be done with [⟨*comments*⟩] after [⟨*options*⟩].

Of course the key-value [⟨*options*⟩] can also be set via the comma-separated key-value list of the `\termset` macro.

```
1  \centering
2  \termset{os=win10,theme=dark,shstretch=1.0}
3  \bgin{terminal}{terminal title}
4    Volume in drive C is SSD_files
5    Volume Serial Number is 0001-C78B
6
7    Directory of C:\Users\Administrator
8
9    2018/07/21  15:39    <DIR>            .
10   2018/07/21  15:39    <DIR>            ..
11   2018/07/13  08:35    <DIR>            3D Objects
12   2018/07/13  08:35    <DIR>            Contacts
13   2018/08/06  07:46    <DIR>            Desktop
14               2 File(s)      6,029,312 bytes
15          18 Dir(s) 14,035,107,840 bytes free
16 \end{terminal}
```


2.2 `\termfile` and `\termfile*` macro

`\termfile` [⟨*options*⟩] {⟨*terminal title*⟩} {⟨*contents file*⟩}

`\termfile*` [⟨*options*⟩] [⟨*comments*⟩] {⟨*terminal title*⟩} {⟨*contentes file*⟩}

Typesetting terminal from a file. You can set the title for the terminal by using {⟨*terminal title*⟩}.

The appearance of the terminal is set by key-value in [⟨*options*⟩].

The starred macro `termfile*` is used to add comments at the bottom of terminal, note that this needs to be done with [⟨*comments*⟩] after [⟨*options*⟩].

Of course the key-value [⟨*options*⟩] can also be set via the comma-separated key-value list of the `\termset` macro.

```
1  \centering
2  \termfile{terminal title}{test.bat}
```



```
>_ terminal title                                              _  □  ✕

    Volume in drive C is SSD_files
    Volume Serial Number is 0001-C78B
    Directory of C:\Users\Administrator
    2018/07/21  15:39    <DIR>              .
    2018/07/21  15:39    <DIR>              ..
    2018/07/13  08:35    <DIR>              3D Objects
    2018/07/13  08:35    <DIR>              Contacts
    2018/08/06  07:46    <DIR>              Desktop
                2 File(s)      6,029,312 bytes
            18 Dir(s) 14,035,107,840 bytes free
```

2.3 \termset **macro**

\termset {⟨key-values⟩}

The arguments to \termset are a set of options separated by commas in the form ⟨key⟩ = ⟨value⟩. The ⟨*value*⟩ of some options can be omitted. For the same option, subsequent settings will override previous settings.

Most options was initialized with default values.

\termset uses LaTeX3 style key settings, supporting different types and multiple levels of option settings. In the ⟨key⟩ = ⟨value⟩ list, the spaces around |=| do not affect anything; However, it should be noted that **no blank lines** are allowed in the list. The |= true| in the parameter ⟨option⟩ = true for the Boolean type can be omitted.

3 Options

The termsim package provides a number of options to set the style of the terminal. The following options can be set with \termset macro. Also, these options can be set with the terminal(terminal*) environment's or the \termfile(\termfile*) command's [⟨*options*⟩].

3.1 shell code engine

minted = ⟨**true**|*false*⟩   Init = **true**

minted is used to set shell code engine, if it is **true** then the minted package is used, if it is **false** then the listings package is used. The default value is **true**.

3.2 os type

os = ⟨*win10*|*mac*|*ubuntu*⟩   Init = **win10**

os is used to set Operating System type. The default value is **win10**.

3.3 color theme

theme = ⟨*dark*|*light*|*white*⟩   Init = **dark**

theme is used to set terminal color theme. The default value is **dark**.

3.4   shell code style

`shstyle`

`shstyle = {⟨style⟩}`   Init = `bw`

`shstyle` is used to set shell code style, valid only for the minted engine. The default value is **bw**.

3.5   shell code fontsize

`shsize`

`shsize = {⟨fontsize⟩}`   Init = `\small`

`shsize` is used to set shell code fontsize, valid only for minted engine. The default value is\small.

3.6   comment format

`commentf`

`commentf = {⟨format group⟩}`   Init = `\small\sffamily`

`commentf` is used to set comment format at terminal bottom. The default value is \small\sffamily.

3.7   shell code baseline stretch

`shstretch`

`shstretch = {⟨float number⟩}`   Init = `1.0`

`shstretch` is used to set shell code baseline stretch, valid only for minted engine. The default value is**1.0**.

4 Examples

The termsim package can be used in situations where the operating system terminal window needs to be typeset to avoid the use of screenshots. Terminal windows can be with or without underline comments and can be dark, light or white color themes.

4.1 Win10 terminal

4.1.1 `terminal` or `terminal*` environment

```
1  \centering
2  \termset{os=win10,theme=dark,shstretch=1.0}
3  \begin{terminal}{terminal title}
4    Volume in drive C is SSD_files
5    Volume Serial Number is 0001-C78B
6    Directory of C:\Users\Administrator
7    2018/07/21  15:39    <DIR>             .
8    2018/07/21  15:39    <DIR>             ..
9    2018/07/13  08:35    <DIR>             3D Objects
10   2018/07/13  08:35    <DIR>             Contacts
11   2018/08/06  07:46    <DIR>             Desktop
12              2 File(s)      6,029,312 bytes
13           18 Dir(s) 14,035,107,840 bytes free
14 \end{terminal}
```
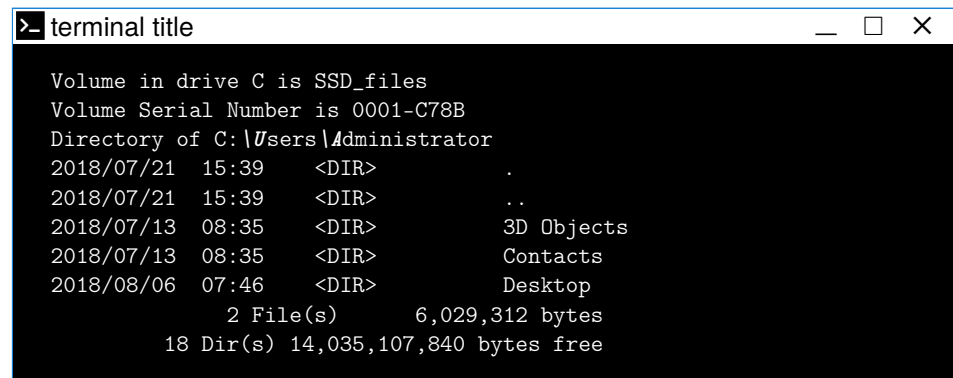


```
1  \centering
2  \begin{terminal*}[os=win10,theme=light][comment text]{terminal title}
3    Volume in drive C is SSD_files
4    Volume Serial Number is 0001-C78B
5    Directory of C:\Users\Administrator
6    2018/07/21  15:39    <DIR>             .
7    2018/07/21  15:39    <DIR>             ..
8    2018/07/13  08:35    <DIR>             3D Objects
9    2018/07/13  08:35    <DIR>             Contacts
10   2018/08/06  07:46    <DIR>             Desktop
11              2 File(s)      6,029,312 bytes
12           18 Dir(s) 14,035,107,840 bytes free
13 \end{terminal*}
```

```
>_ terminal title                                    _  □  ×

    Volume in drive C is SSD_files
    Volume Serial Number is 0001-C78B
    Directory of C:\Users\Administrator
    2018/07/21  15:39    <DIR>              .
    2018/07/21  15:39    <DIR>              ..
    2018/07/13  08:35    <DIR>              3D Objects
    2018/07/13  08:35    <DIR>              Contacts
    2018/08/06  07:46    <DIR>              Desktop
                 2 File(s)      6,029,312 bytes
            18 Dir(s) 14,035,107,840 bytes free


    comment text
```

4.1.2 \termfile or \termfile* macro

```
1   \centering
2   \termset{os=win10,theme=dark}
3   \termfile{terminal title}{test.bat}
```

```
>_ terminal title                                    _  □  ×

    Volume in drive C is SSD_files
    Volume Serial Number is 0001-C78B
    Directory of C:\Users\Administrator
    2018/07/21  15:39    <DIR>              .
    2018/07/21  15:39    <DIR>              ..
    2018/07/13  08:35    <DIR>              3D Objects
    2018/07/13  08:35    <DIR>              Contacts
    2018/08/06  07:46    <DIR>              Desktop
                 2 File(s)      6,029,312 bytes
            18 Dir(s) 14,035,107,840 bytes free
```

```
1   \centering
2   \termfile*[os=win10,theme=light][comment text]{terminal title}{test.bat}
```

```
>_ terminal title                                    _  □  ×

    Volume in drive C is SSD_files
    Volume Serial Number is 0001-C78B
    Directory of C:\Users\Administrator
    2018/07/21  15:39    <DIR>              .
    2018/07/21  15:39    <DIR>              ..
    2018/07/13  08:35    <DIR>              3D Objects
    2018/07/13  08:35    <DIR>              Contacts
    2018/08/06  07:46    <DIR>              Desktop
                 2 File(s)      6,029,312 bytes
            18 Dir(s) 14,035,107,840 bytes free


    comment text
```
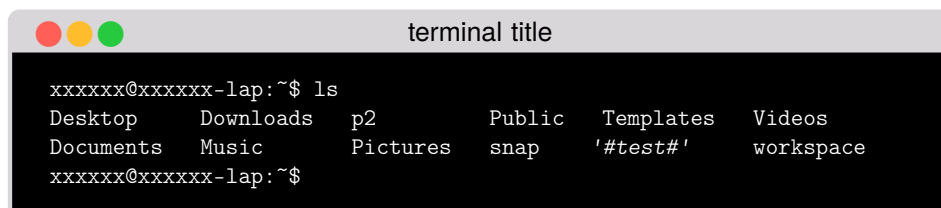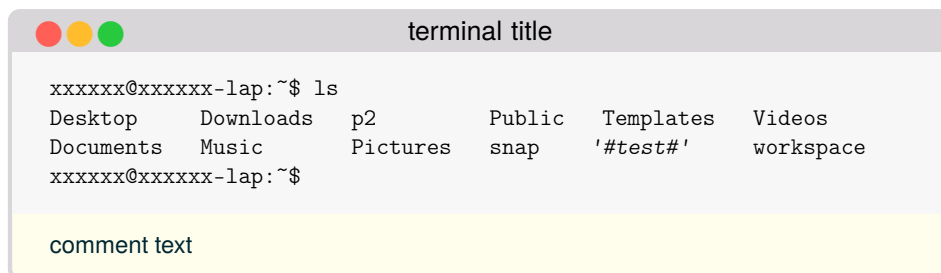
4.2 Mac terminal

4.2.1 `terminal` or `terminal*` environment

```
1 \centering
2 \termset{os=mac,theme=dark}
3 \begin{terminal}{terminal title}
4   xxxxxx@xxxxxx-lap:~$ ls
5 Desktop    Downloads   p2         Public    Templates   Videos
6 Documents  Music       Pictures   snap      '#test#'    workspace
7   xxxxxx@xxxxxx-lap:~$
8 \end{terminal}
```

```
xxxxxx@xxxxxx-lap:~$ ls
Desktop     Downloads    p2          Public     Templates    Videos
Documents   Music        Pictures    snap       '#test#'     workspace
xxxxxx@xxxxxx-lap:~$
```
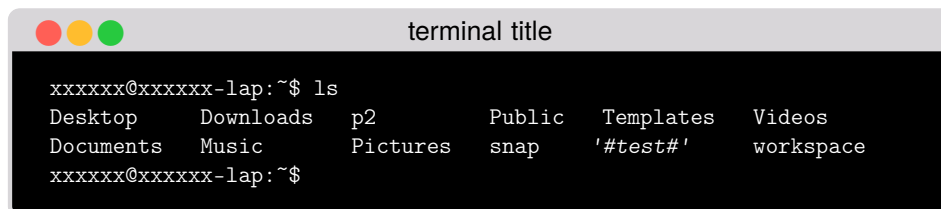(terminal title)

```
1 \centering
2 \begin{terminal*}[os=mac,theme=light][comment text]{terminal title}
3   xxxxxx@xxxxxx-lap:~$ ls
4 Desktop    Downloads   p2         Public    Templates   Videos
5 Documents  Music       Pictures   snap      '#test#'    workspace
6   xxxxxx@xxxxxx-lap:~$
7 \end{terminal*}
```

```
xxxxxx@xxxxxx-lap:~$ ls
Desktop     Downloads    p2          Public     Templates    Videos
Documents   Music        Pictures    snap       '#test#'     workspace
xxxxxx@xxxxxx-lap:~$
```
(terminal title)

comment text

4.2.2 `\termfile` or `\termfile*` macro

```
1    \centering
2    \termset{os=mac,theme=dark}
3    \termfile{terminal title}{testls}
```

```
xxxxxx@xxxxxx-lap:~$ ls
Desktop     Downloads    p2          Public     Templates    Videos
Documents   Music        Pictures    snap       '#test#'     workspace
xxxxxx@xxxxxx-lap:~$
```
(terminal title)

```
1    \centering
2    \termfile*[os=mac,theme=light][comment text]{terminal title}{testls}
```

```
xxxxxx@xxxxxx-lap:~$ ls
Desktop     Downloads   p2        Public    Templates   Videos
Documents   Music       Pictures  snap      '#test#'    workspace
xxxxxx@xxxxxx-lap:~$
```
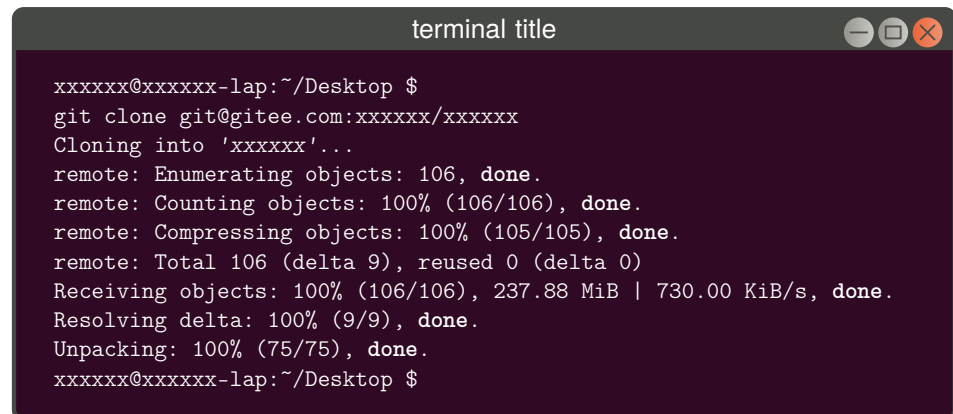
comment text
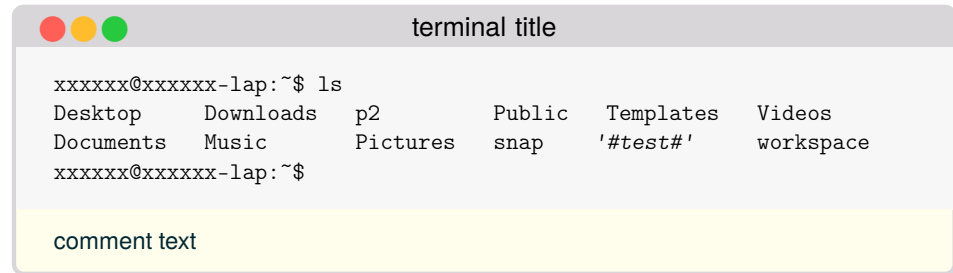
4.3 Ubuntu terminal

4.3.1 `terminal` or `terminal*` environment

```
1    \centering
2    \termset{os=ubuntu,theme=dark}
3    \begin{terminal}{terminal title}
4      xxxxxx@xxxxxx-lap:~/Desktop $
5      git clone git@gitee.com:xxxxxx/xxxxxx
6      Cloning into 'xxxxxx'...
7      remote: Enumerating objects: 106, done.
8      remote: Counting objects: 100% (106/106), done.
9      remote: Compressing objects: 100% (105/105), done.
10     remote: Total 106 (delta 9), reused 0 (delta 0)
11     Receiving objects: 100% (106/106), 237.88 MiB | 730.00 KiB/s, done.
12     Resolving delta: 100% (9/9), done.
13     Unpacking: 100% (75/75), done.
14     xxxxxx@xxxxxx-lap:~/Desktop $
15   \end{terminal}
```

```
terminal title

xxxxxx@xxxxxx-lap:~/Desktop $
git clone git@gitee.com:xxxxxx/xxxxxx
Cloning into 'xxxxxx'...
remote: Enumerating objects: 106, done.
remote: Counting objects: 100% (106/106), done.
remote: Compressing objects: 100% (105/105), done.
remote: Total 106 (delta 9), reused 0 (delta 0)
Receiving objects: 100% (106/106), 237.88 MiB | 730.00 KiB/s, done.
Resolving delta: 100% (9/9), done.
Unpacking: 100% (75/75), done.
xxxxxx@xxxxxx-lap:~/Desktop $
```

```
1    \centering
2    \begin{terminal*}[os=ubuntu,theme=light][comment text]{terminal title}
3      xxxxxx@xxxxxx-lap:~/Desktop $
4      git clone git@gitee.com:xxxxxx/xxxxxx
5      Cloning into 'xxxxxx'...
6      remote: Enumerating objects: 106, done.
7      remote: Counting objects: 100% (106/106), done.
8      remote: Compressing objects: 100% (105/105), done.
9      remote: Total 106 (delta 9), reused 0 (delta 0)
10     Receiving objects: 100% (106/106), 237.88 MiB | 730.00 KiB/s, done.
11     Resolving delta: 100% (9/9), done.
12     Unpacking: 100% (75/75), done.
13     xxxxxx@xxxxxx-lap:~/Desktop $
14   \end{terminal*}
```

terminal title ⊖ ▢ ✕

```
xxxxxx@xxxxxx-lap:~/Desktop $
git clone git@gitee.com:xxxxxx/xxxxxx
Cloning into 'xxxxxx'...
remote: Enumerating objects: 106, done.
remote: Counting objects: 100% (106/106), done.
remote: Compressing objects: 100% (105/105), done.
remote: Total 106 (delta 9), reused 0 (delta 0)
Receiving objects: 100% (106/106), 237.88 MiB | 730.00 KiB/s, done.
Resolving delta: 100% (9/9), done.
Unpacking: 100% (75/75), done.
xxxxxx@xxxxxx-lap:~/Desktop $
```

comment text

4.3.2 \termfile **or** \termfile* **macro**

```
1    \centering
2    \termset{os=ubuntu,theme=dark}
3    \termfile{terminal title}{testsh}
```

terminal title ⊖ ▢ ✕

```
xxxxxx@xxxxxx-lap:~/Desktop $
git clone git@gitee.com:xxxxxx/xxxxxx
Cloning into 'xxxxxx'...
remote: Enumerating objects: 106, done.
remote: Counting objects: 100% (106/106), done.
remote: Compressing objects: 100% (105/105), done.
remote: Total 106 (delta 9), reused 0 (delta 0)
Receiving objects: 100% (106/106), 237.88 MiB | 730.00 KiB/s, done.
Resolving delta: 100% (9/9), done.
Unpacking: 100% (75/75), done.
xxxxxx@xxxxxx-lap:~/Desktop $
```

```
1    \centering
2    \termfile*[os=ubuntu,theme=light][comment text]{terminal title}{testsh}
```

terminal title ⊖ ▢ ✕

```
xxxxxx@xxxxxx-lap:~/Desktop $
git clone git@gitee.com:xxxxxx/xxxxxx
Cloning into 'xxxxxx'...
remote: Enumerating objects: 106, done.
remote: Counting objects: 100% (106/106), done.
remote: Compressing objects: 100% (105/105), done.
remote: Total 106 (delta 9), reused 0 (delta 0)
Receiving objects: 100% (106/106), 237.88 MiB | 730.00 KiB/s, done.
Resolving delta: 100% (9/9), done.
Unpacking: 100% (75/75), done.
xxxxxx@xxxxxx-lap:~/Desktop $
```
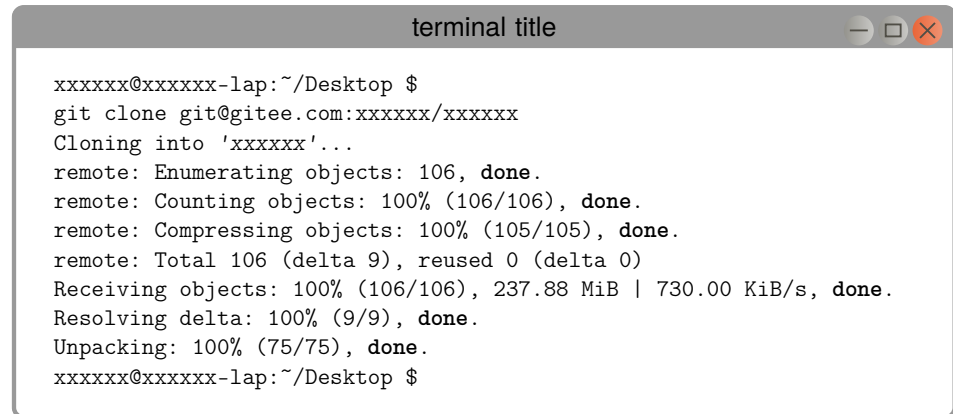
comment text

You can also use the white color theme and use black text on a white background for print on paper.

```
1 \centering
2 \termset{os=ubuntu,theme=white}
3 \begin{terminal}{terminal title}
4   xxxxxx@xxxxxx-lap:~/Desktop $
5   git clone git@gitee.com:xxxxxx/xxxxxx
```

9

```
 6    Cloning into 'xxxxxx'...
 7    remote: Enumerating objects: 106, done.
 8    remote: Counting objects: 100% (106/106), done.
 9    remote: Compressing objects: 100% (105/105), done.
10    remote: Total 106 (delta 9), reused 0 (delta 0)
11    Receiving objects: 100% (106/106), 237.88 MiB | 730.00 KiB/s, done.
12    Resolving delta: 100% (9/9), done.
13    Unpacking: 100% (75/75), done.
14    xxxxxx@xxxxxx-lap:~/Desktop $
15  \end{terminal}
```

terminal title	⊝ ▢ ✕

```
xxxxxx@xxxxxx-lap:~/Desktop $
git clone git@gitee.com:xxxxxx/xxxxxx
Cloning into 'xxxxxx'...
remote: Enumerating objects: 106, done.
remote: Counting objects: 100% (106/106), done.
remote: Compressing objects: 100% (105/105), done.
remote: Total 106 (delta 9), reused 0 (delta 0)
Receiving objects: 100% (106/106), 237.88 MiB | 730.00 KiB/s, done.
Resolving delta: 100% (9/9), done.
Unpacking: 100% (75/75), done.
xxxxxx@xxxxxx-lap:~/Desktop $
```