custom_print Module

Screen Functions

clean()	It cleans the terminal and returns the cursor to home.
clear()	It clears the terminal and returns the cursor to home.
erase()	It erases the terminal and leaves the cursor in the current position.
dimensions()	It returns the dimensions of the terminal, cols and rows.
resize(rows=25, cols=80)	It resizes the terminal size.

Example:

```
import custom_print as cp
cp.clean()
r, c = cp.dimensions()
print(f"rows: {r}, Cols: {c}")
cp.resize(25, 120)
```

Internal Functions

bg_ansi_colors(bold=False, fg=-1, n_line=0)

This function displays all background colors available with ansi code. The following options are for a better visualization.
1.- The bold option for the font (True / False)
2.- The fg option to visualize the background colors with a specific foreground color.
3.- The n_line option to insert lines between the colors.

fg_ansi_colors(bold=False, bg=-1, n_line=0)

This function displays all foreground colors available with ansi code. The following options are for a better visualization.
1.- The bold option for the font (True / False)
2.- The bg option to visualize the background colors with a specific foreground color.
3.- The n_line option to insert lines between the colors.

ins_chr(n=1, unicode=” ”) → This function inserts n times the unicode provided, by default it is set to space.

ins_newline(n=1) → This function inserts n new lines.

terminal_bell() → This function makes the sound of the terminal bell.

reset_font() → This function resets the font attributes when we use the set_font() function.

set_font(bold=False, bg=-1, fg=-1, italic=False, underline=False, strike=False, blinking=False, dim=False, hidden=False, inverse=False) →
This function passes many attributes for the font. If passing all these arguments is a little annoying to you, you can use the Font Style Class for simplicity. The best way to use this function is to pass only the first 3 parameters like the example below.

Colors range goes from -1 to 256. To set the default color from the system use -1 or 256.

Example:

```
import custom_print as cp
print(cp.set_font(1,11,21) + " Python is " + cp.set_font(0,1) + " Wonderful."+cp.reset_font())
print(f"{cp.set_font(bold=0, bg=22, fg=0)} Python {cp.set_font(1,90,7)} Language.{cp.reset_font()}")
```

Note: These functions are being used by the FancyFormat Class. Feel free to ignore them if not useful to you.

Help Classes

Move → This class is used with the Cursor class and it contains 4 options.

Move.RIGHT Move.LEFT Move.UP Move.DOWN

Note: These options can be replaced for the original values as displays below:

```
Move.RIGHT = “right”  = “r”          Move.LEFT   = “left”   = “l”
Move.UP    = “up”     = “u”          Move.DOWN = “down” = “d”
```

Align → This class is used with the FancyFormat class and FancyMessage class. It contains 4 options.

Align.RIGHT Align.LEFT Align.CENTER Align.JUSTIFY

Note: These options can be replaced for the original values as displays below:

```
Align.RIGHT   = “right”   = “r”        Align.LEFT      = “left”     = “l”
Align.CENTER = “center”  = “c”        Align.JUSTIFY  = “justify” = ”j”
```

Layout → This class is used with FancyFormat class and Pen class. It contains 2 options.

```
Layout.HORIZONTAL   = “horizontal”        Layout.VERTICAL = “vertical”
```

Length_bg → This class is used with FancyMessage class and contains 2 options.

ALL_ROW ONLY_WORD

Unicode → This class is to insert some unicode characters.

```
#----------------------------------------------------------------------------------------------------------------
# Lines                                                   Triangle                                              -
#----------------------------------------------------------------------------------------------------------------
BOX_DRAWINGS_LIGHT_HORIZONTAL                             BLACK_UP_POINTING_TRIANGLE
BOX_DRAWINGS_LIGHT_VERTICAL_AND_RIGHT                     WHITE_UP_POINTING_TRIANGLE
BOX_DRAWINGS_LIGHT_VERTICAL_AND_LEFT                      BLACK_RIGHT_POINT_TRIANGLE
BOX_DRAWINGS_LIGHT_VERTICAL                               WHITE_RIGHT_POINT_TRIANGLE
BOX_DRAWINGS_LIGHT_DOWN_AND_HORIZONTAL                    BLACK_DOWN_POINTING_TRIANGLE
BOX_DRAWINGS_LIGHT_UP_AND_HORIZONTAL                      WHITE_DOWN_POINTING_TRIANGLE
BOX_DRAWINGS_LIGHT_VERTICAL_AND_HORIZONTAL                BLACK_LEFT_POINTING_TRIANGLE
EM_DASH                                                   WHITE_LEFT_POINTING_TRIANGLE
#----------------------------------------------------------------------------------------------------------------
# Miscellaneous                                                                                                 -
#----------------------------------------------------------------------------------------------------------------
BLACK_DIAMOND            WHITE_DIAMOND                    FACE
BLACK_CIRCLE             WHITE_CIRCLE                     Reference → https://www.unicode.org/charts/nameslist/
```

Line_Style → This class is used with FancyFormat class and Pen class. There are some options available.

```
CUSTOMIZED          SINGLE          SPACE_COL_COLOR
SINGLE_BOLD         DASH            NO_SPACE_COL_COLOR
SINGLE_HEAVY        DOUBLE
SQR_BRACKETS        NONE
```

Note: SPACE_COL_COLOR and NO_SPACE_COL_COLOR are not included in Pen class.

Note: These options can be replaced for the original value as displays below:

CUSTOMIZED	→	"customized"	SINGLE	→	"single"	SPACE_COL_COLOR	→	"space_col_color"
SINGLE_BOLD	→	"single_bold"	DASH	→	"dash"	NO_SPACE_COL_COLOR	→	"no_space_col_color"
SINGLE_HEAVY	→	"single_heavy"	DOUBLE	→	"double"			
SQ_BRACKETS	→	"sq_brackets"	NONE	→	"none"			

Variables to visualize the effect on options SPACE_COL_COLOR and NO_SPACE_COL_COLOR with FancyFormat.

bg_horizontal_line = 21	bg_header = 90	bg_data = 231
bg_vertical_line = 21	fg_header = 231	fg_data = 0
bg_corner_chr = 21	bold_header = True	bold_data = True
bg_inner_corner_chr = 21	bg_corner_under_line_header = 21	middle_horizontal_line_on = True
bg_under_line_header = 21	bg_vertical_header_line_chr = 21	horizontal_line_under_header_on = True

Example:

```
import custom_print as cp
tbl1 = cp.FancyFormat()
tbl1.print_fancy_format(data=lst2, style=cp.Line_Style.SPACE_COL_COLOR)
tbl1.print_fancy_format(data=lst3, style=cp.Line_Style.NO_SPACE_COL_COLOR)
```

Cursor Class

This class contains 4 methods. The difference between jump and move is that jump executes the code while move returns the code.

jumpTo(qty=0, direction=cp.Move.DOWN) → This method jumps rows or columns for the cursor in the terminal.

jumpxy(x=0, y=0) → This method jumps the cursor to specific coordinates in the terminal.

moveTo(qty=0, direction=cp.Move.DOWN) → This method moves rows or columns for the cursor in the terminal.

movexy(x=0, y=0) → This method moves the cursor to specific coordinates in the terminal.

Example:

```
import custom_print as cp
crs = cp.Cursor()
crs.jumpTo(4, “D”)

crs.jumpTo(qty=20, direction=cp.Move.RIGHT)   ←.→   crs.jumpTo(qty=20, direction=”right”)
print(“Hello There…!”)

print(f”{crs.moveTo(qty=20, direction=cp.Move.RIGHT)}Hello There…!”)
print(f”{crs.movexy(0,10)}Col 10, row 1”)
```

FontStyle Class

This class contains 4 methods and the attributes and their default values are displays below.

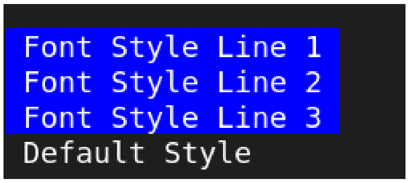
bold	= False	bg	= -1	fg	= -1	align	= “j”	force_align	= False
dim	= False	underline	= False	blinking	= False	indent	= 0	bg_top_lines	= 0
hidden	= False	strike	= False	inverse	= False	italic	= False	bg_bottom_lines	= 0

indent → this defines how far we want to start to print the message from the left, it works with style_on and print_style.
bg_top_lines and bg_bottom_lines → these are lines above and below the message with the bg specified.

style_on() and style_off() → These methods are used if we will be continuing using the style in many rows.

Example:

```
import custom_print as cp
fs = cp.FontStyle()
fs.bg = 21
fs.fg = 231
print(f”{fs.style_on()}Font Style Line 1 ”)
print(f” Font Style Line 2 ”)
print(f” Font Style Line 3 {fs.style_off()}”)
fs.reset_style()
print(f”{fs.style_on()} Default Style {fs.style_off()}”)
```



```
 Font Style Line 1 
 Font Style Line 2 
 Font Style Line 3 
 Default Style
```

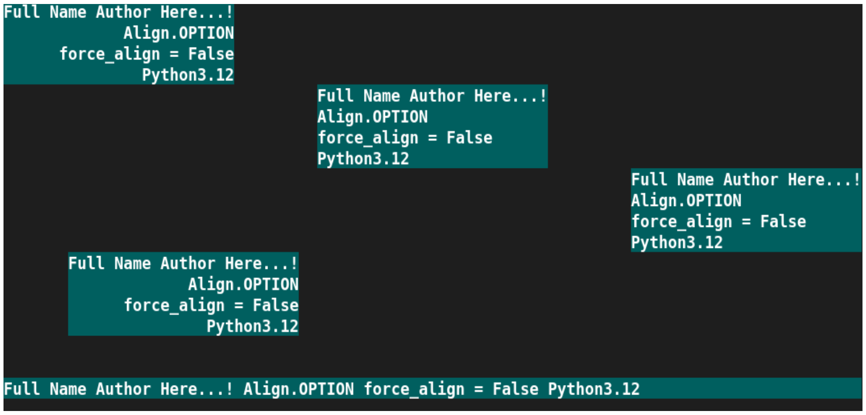
# reset_style() → This method will reset the style to the default values.

```
fs.reset_style()
fs.print_style(“ My Font Style “)
```

print_style(msg) → This method will print the style with the defined attributes.

Example:

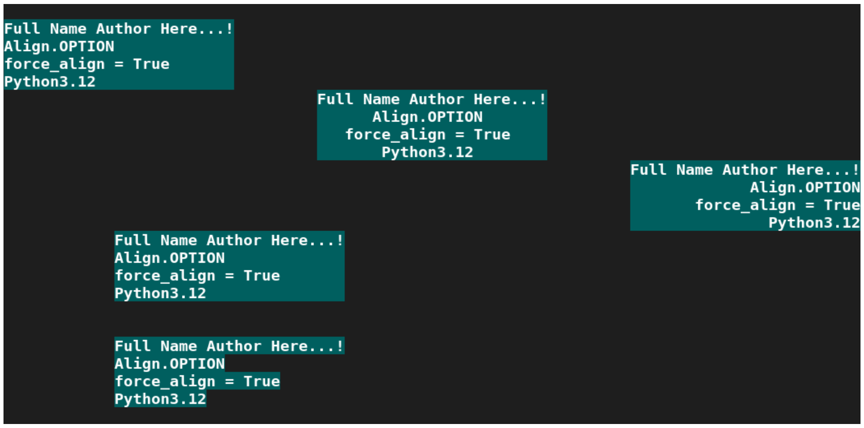
```
import custom_print as cp
fs = cp.FontStyle()
msg = f'''
Full Name Author Here...!
Align.OPTION
force_align = False
Python3.12
'''
fs.fg = 231
fs.bg = 23
fs.bold = True
fs.force_align = False

fs.align = cp.Align.LEFT
fs.print_style(msg)

fs.align = cp.Align.CENTER
fs.print_style(msg)

fs.align = cp.Align.RIGHT
fs.print_style(msg)

fs.align = cp.Align.JUSTIFY
fs.indent = 7
fs.print_style(msg)
cp.ins_newline(2)

fs.align = "none"
fs.print_style(msg)
```



```
Full Name Author Here...!
             Align.OPTION
      force_align = False
               Python3.12
                                  Full Name Author Here...!
                                  Align.OPTION
                                  force_align = False
                                  Python3.12
                                                                    Full Name Author Here...!
                                                                    Align.OPTION
                                                                    force_align = False
                                                                    Python3.12
       Full Name Author Here...!
                    Align.OPTION
             force_align = False
                      Python3.12

Full Name Author Here...! Align.OPTION force_align = False Python3.12
```

Example:

```
import custom_print as cp
fs = cp.FontStyle()

msg = f'''
Full Name Author Here...!
Align.OPTION
force_align = True
Python3.12
'''
fs.fg = 231
fs.bg = 23
fs.bold = True
fs.force_align = True

cp.ins_newline(2)

fs.align = cp.Align.LEFT
fs.print_style(msg)

fs.align = cp.Align.CENTER
fs.print_style(msg)

fs.align = cp.Align.RIGHT
fs.print_style(msg)

fs.align = cp.Align.JUSTIFY
fs.indent = 12
fs.print_style(msg)

cp.ins_newline(2)

fs.align = "none"
fs.print_style(msg)
```

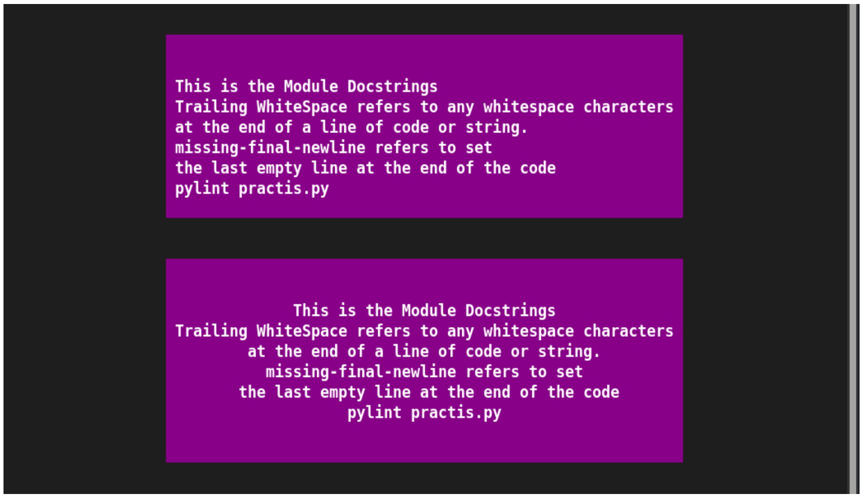


```
Full Name Author Here...!
Align.OPTION
force_align = True
Python3.12
                                  Full Name Author Here...!
                                        Align.OPTION
                                     force_align = True
                                         Python3.12
                                                                    Full Name Author Here...!
                                                                                 Align.OPTION
                                                                           force_align = True
                                                                                   Python3.12
            Full Name Author Here...!
            Align.OPTION
            force_align = True
            Python3.12

            Full Name Author Here...!
            Align.OPTION
            force_align = True
            Python3.12
```

```
paragraph = '''
 This is the Module Docstrings
 Trailing WhiteSpace refers to any whitespace characters
 at the end of a line of code or string.
 missing-final-newline refers to set
 the last empty line at the end of the code
 pylint practis.py
'''
```

Example:

```
import custom_print as cp
fs = cp.FontStyle()
fs.fg = 231
fs.bg = 90

cp.ins_newline(2)

fs.align = cp.Align.CENTER
fs.force_align = False
fs.bg_top_lines = 1
fs.bg_bottom_lines = 1
fs.print_style(paragraph)

cp.ins_newline(2)

fs.align = cp.Align.CENTER
fs.force_align = True
fs.bg_top_lines = 2
fst.bg_bottom_lines = 2
fs.print_style(paragraph)
```



```

This is the Module Docstrings
Trailing WhiteSpace refers to any whitespace characters
at the end of a line of code or string.
missing-final-newline refers to set
the last empty line at the end of the code
pylint practis.py



             This is the Module Docstrings
Trailing WhiteSpace refers to any whitespace characters
        at the end of a line of code or string.
          missing-final-newline refers to set
      the last empty line at the end of the code
                   pylint practis.py

```

FancyMessage Class

This class contains 3 methods:

print_fancy_message(msg_body="") → This method works with Body Default Values, Title and Footnote Attributes.

print_fancy_note(msg_body="") → This method works with Body Default Values, and Note Default Attributes.

get_message_attributes(msg_body="", print_attributes=True) →This method returns the attributes of the message in 2 variables. A list with all the attributes of the message and another list with the words of the message. It has the option to print all the attributes at the same time.

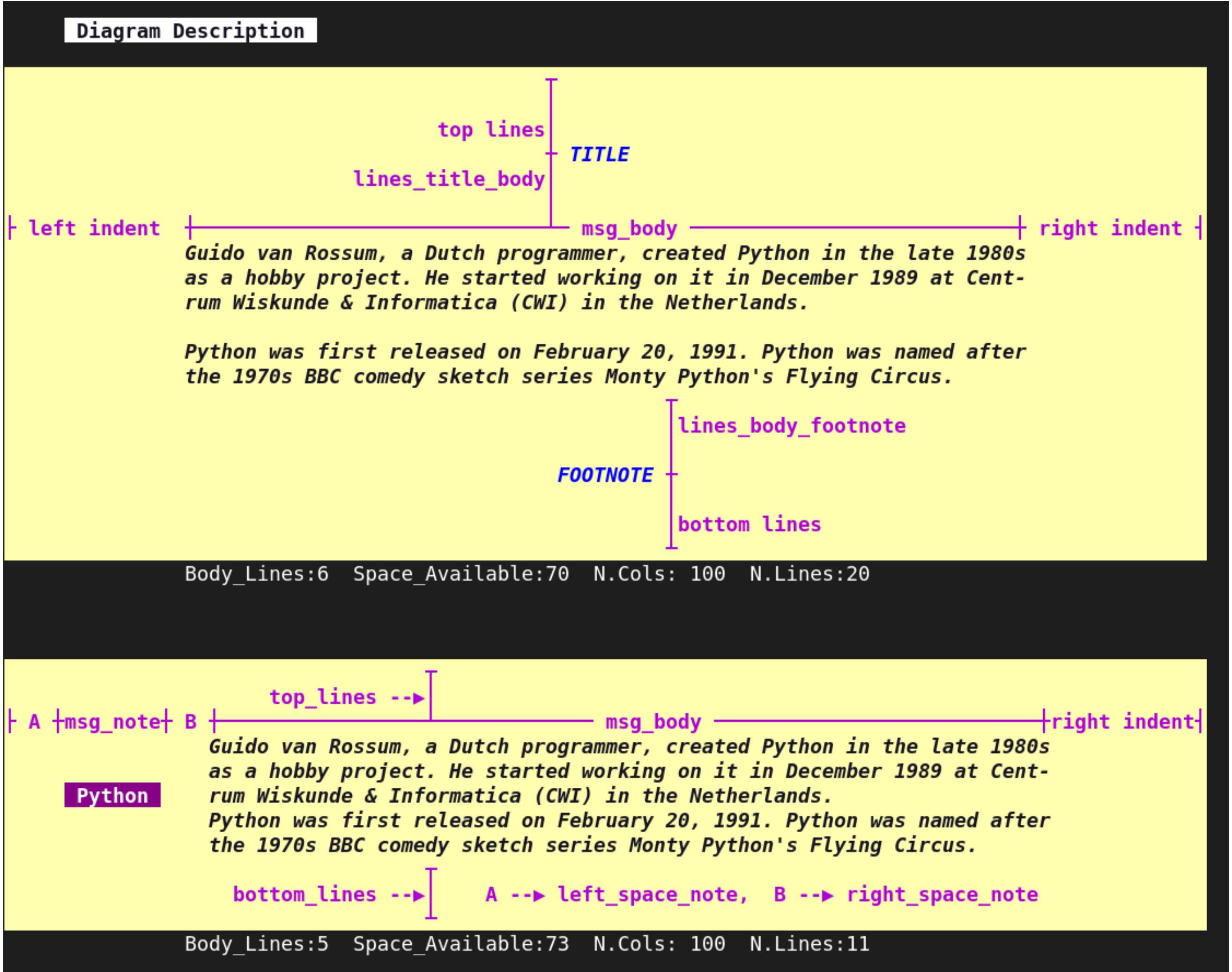
```
#------------------------------------------------------------------------------------------------------------------------------------------
# Body Default Values                                                                                                                     -
#------------------------------------------------------------------------------------------------------------------------------------------
bg_body     = 4             strike_body     = False       msg_body     = "Body Msg        help_lines = False
fg_body     = 231           hidden_body     = False       right_indent  = 2               length = Length_bg.ALL_ROW
bold_body = False           inverse_body    = False       left_indent   = 2
dim_body  = False           blinking_body   = False       top_lines     = 1
italic_body= False          underline_body = False        bottom_lines = 1

# These two options work when length is Length_bg.ONLY_WORD. They don't do anything when length is Length_bg.All_ROW.

    adj_bg_lines_to_right_indent      = False

    adj_bg_msg_to_space_available = False
```

Note: All the above variables are being used by both methods, print_fancy_message and print_fancy_note.

```
#------------------------------------------------------------------------------------------------------------------------------------------
# Note Default Values                                                                                                                     -
#------------------------------------------------------------------------------------------------------------------------------------------
msg_note = " Note: "        align_note    = Align.JUSTIFY    blinking_note      = False
bg_note    = 231            strike_note   = False            underline_note     = False
fg_note    = 0              italic_note   = False            position_note      = 1
bold_note = False           inverse_note = False             right_space_note = 2
dim_note  = False           hidden_note   = False            left_space_note    = 2

#------------------------------------------------------------------------------------------------------------------------------------------
# Title Attributes                                                                                                                        -
#------------------------------------------------------------------------------------------------------------------------------------------
msg_title  = ""             align_title     = Align.LEFT     blinking_title      = False
bg_title    = 4             strike_title    = False          underline_title     = False
fg_title    = 231           italic_title    = False          title_indent        = 2
bold_title  = False         inverse_title   = False          lines_title_body    = 1
dim_title   = False         hidden_title    = False

#------------------------------------------------------------------------------------------------------------------------------------------
# Footnote Attributes                                                                                                                     -
#------------------------------------------------------------------------------------------------------------------------------------------
msg_footnote = ""           align_footnote     = Align.RIGHT     blinking_footnote      = False
bg_footnote    = 4          strike_footnote    = False           underline_footnote     = False
fg_footnote    = 231        italic_footnote    = False           footnote_indent        = 2
bold_footnote = False       inverse_footnote  = False            lines_body_footnote  = 1
dim_footnote  = False       hidden_footnote   = False
```

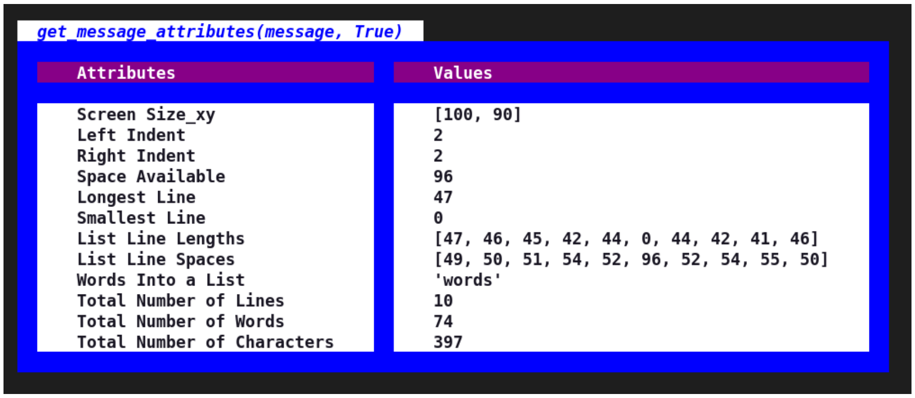
Example:

```
import custom_print as cp

msg = cp.FancyMessage()

paragraph = '''
                    Guido van Rossum, a Dutch programmer, created Python in the late 1980s
                    as a hobby project. He started working on it in December 1989 at Cent-
                    rum Wiskunde & Informatica (CWI) in the Netherlands.

                    Python was first released on February 20, 1991. Python was named after
                    the 1970s BBC comedy sketch series Monty Python's Flying Circus.
               '''

msg.msg_title = "TITLE"

msg.msg_footnote = "FOOTNOTE"

msg.print_fancy_message(paragraph)        #  Method 1

cp.ins_newline(2)

msg.msg_note = “Python”

msg.position_note = 4

msg.print_fancy_note(paragraph)           #  Method 2
```



```
   Diagram Description

                                     top lines ┬
                                               ┼ TITLE
                              lines_title_body ┴
├ left indent ┼────────────────────────────────── msg_body ──────────────────┼ right indent ┤
              Guido van Rossum, a Dutch programmer, created Python in the late 1980s
              as a hobby project. He started working on it in December 1989 at Cent-
              rum Wiskunde & Informatica (CWI) in the Netherlands.

              Python was first released on February 20, 1991. Python was named after
              the 1970s BBC comedy sketch series Monty Python's Flying Circus.
                                                    ┬lines_body_footnote
                                           FOOTNOTE ┼
                                                    ┴bottom lines
              Body_Lines:6  Space_Available:70  N.Cols: 100  N.Lines:20



                         top_lines -->┬
├ A ┼msg_note┼ B ┼─────────────────────────── msg_body ───────────────────────┼right indent┤
                 Guido van Rossum, a Dutch programmer, created Python in the late 1980s
                 as a hobby project. He started working on it in December 1989 at Cent-
   Python        rum Wiskunde & Informatica (CWI) in the Netherlands.
                 Python was first released on February 20, 1991. Python was named after
                 the 1970s BBC comedy sketch series Monty Python's Flying Circus.

                  bottom_lines -->┴    A --> left_space_note,  B --> right_space_note
              Body_Lines:5  Space_Available:73  N.Cols: 100  N.Lines:11
```

```
#------------------------------------------------------------------------------------------------------------------------------------------------------------------
# Get Message Attributes                                                                                                                                         -
#------------------------------------------------------------------------------------------------------------------------------------------------------------------
import custom_print as cp
paragraph3 = '''
I should probably collect a list of the best
romantic poems ever written, and maybe I will.
This is not that. I mostly talk about writing
books, but I noticed most of the other big
writing sites actually get most of the their

traffic from this keyword, because everybody
is interested in romantic poetry! When you
want to tell her how you feel, but do not
have the words to express all that emotion...!
'''
fmsg = cp.FancyMessage()
attributes, words = fmsg.get_message_attributes(msg_body=paragraph3, print_attributes=True)            #  Method 3
```



```
get_message_attributes(message, True)

    Attributes                           Values

    Screen Size_xy                       [100, 90]
    Left Indent                          2
    Right Indent                         2
    Space Available                      96
    Longest Line                         47
    Smallest Line                        0
    List Line Lengths                    [47, 46, 45, 42, 44, 0, 44, 42, 41, 46]
    List Line Spaces                     [49, 50, 51, 54, 52, 96, 52, 54, 55, 50]
    Words Into a List                    'words'
    Total Number of Lines                10
    Total Number of Words                74
    Total Number of Characters           397
```

words is a list that contains all the word of the paragraph.

FancyFormat Class

This class contains two methods:

print_fancy_format(data, style) → Two arguments, the data to print and the line style.
reset_fancy_format() → It resets all the attributes to their default values.

Examples:

```
import custom_print as cp
tbl = cp.FancyFormat()
```

Case 1: Passing any type of variable.

```
tbl.print_fancy_format("Hello World…!")
```

Output:

```
+---------------------+
 |  Hello World...!  |
+--------------------+
```

Case 2: Passing an empty list.

```
tbl.print_fancy_format([])
```

Output:

```
+---------+
 |  none   |
+---------+
```

Case 3: Passing single item in a list.

```
my_list = ["Hello World...!"]
tbl.print_fancy_format(my_list)
```

Output:

```
+--------------------+
|  Hello World...!  |
+--------------------+
```

Case 4: Passing single item in a row to a list.

```
my_list = [["hello there!"]]
tbl.print_fancy_format(my_list)
```

Output:

```
+----------------+
 |  hello there!  |
+----------------+
```

Case 5: Passing a list.

```
my_list = [1,2,3,4]
tbl.print_fancy_format(my_list)
```

Output:

```
+-----*-----*-----*-----+
|  1  |  2  |  3  |  4  |
+-----*-----*-----*-----+
```

```
my_list = ["Terminology","hello there!", "I am Miguelito"]
tbl.print_fancy_format(my_list)
```

```
+-----------------*---------------*---------------+
| Terminology  | hello there!  | I am Migue   |
+-----------------*---------------*---------------+
```

Case 6: Passing a list in a single row.

```
my_list = [[1,2,3,4]]
tbl.print_fancy_format(my_list)
```

Output:

```
+-----*-----*-----*-----+
|  1  |  2  |  3  |  4  |
+-----*-----*-----*-----+
```

```
my_list = [["Terminology","hello there!", "I am Hello"]]
tbl.print_fancy_format(my_list)
```

```
+-----------------*---------------*--------------+
| Terminology  | hello there!  | I am Hello   |
+-----------------*---------------*--------------+
```

Case 7: Passing a list with a some combination of rows and cols.

```
my_list = [[5,"hello"],6,50,[45]]
tbl.print_fancy_format(my_list)
```

Output:

```
+----------------*-----*--------*---------+
|  [5, 'hello']  |  6  |   50   |  [45]   |
+----------------*-----*--------*---------+
```

```
my_list1 = [10,[50],[250],["C"],["H"],10,20]
tbl.print_fancy_format(my_list)
```

```
+------*--------*---------*---------*---------*------*------+
|  10  |  [50]  |  [250]  |  ['C']  |  ['H']  |  10  |  20 |
+------*--------*---------*---------*---------*------*------+
```

Case 8: Passing a list with rows and one col.

```
my_list = [[10],[20],[30],[40]]
tbl.print_fancy_format(my_list)
```

Output:

```
+---------+                       +-----+
 | R1C1 |                         | 10 |
 | R1C2 |                         | 20 |
 | R1C3 |                         | 30 |
 | R1C4 |                         | 40 |
+---------+                       +-----+
```

Case 9:

Passing a list with a some combination of rows and cols.

```
my_list =  [["R1C1","R1C2","R1C3"],
            ["R2C1","R2C2","R2C3"],
            ["R3C1","R3C2","R3C3"]]

tbl.print_fancy_format(my_list1)
```

```
my_list = [["R1C1","R1C2","R1C3"],
           ["R2C1","R2C2","R2C3"],
           ["R3C1","R3C2","R3C3"]]

tbl.horizontal_line_under_header_on= True
tbl.middle_horizontal_line_on        = True
tbl.print_fancy_format(my_list1)
```

Output:

```
+---------+--------+---------+---------+
| R1C1 | R1C2 | R1C3 | R1C4 |
| R2C1 | R2C2 | R2C3 | R2C4 |
| R3C1 | R3C2 | R3C3 | R3C4 |
| R4C1 | R4C2 | R4C3 | R4C4 |
+---------+---------+---------+---------+
```

```
+---------+---------+---------+---------+
 | R1C1 | R1C2 | R1C3 | R1C4 |
+---------+---------+---------+---------+
 | R2C1 | R2C2 | R2C3 | R2C4 |
+---------+---------+---------+---------+
 | R3C1 | R3C2 | R3C3 | R3C4 |
+---------+---------+---------+---------+
 | R4C1 | R4C2 | R4C3 | R4C4 |
                                        +---------+---------+---------+---------+
```

Note: Although the main idea is to use list type, print_fancy_format(tbl) accepts any type of variable. Refer to Demo 3 figure.

Attributes in FancyFormat Class:

```
#----------------------------------------------------------------------------------------------------------------------------------------
# General Use Section                                                                                                                    -
#----------------------------------------------------------------------------------------------------------------------------------------
```

adj → adjust

```
adj_top_margin = 0      adj_bottom_margin = 0      adj_indent = 2      set_fill_chr = “----”      set_layout   = Layout.HORIZONTAL
adj_top_space   = 0     adj_bottom_space   = 0     adj_space  = 2      updata_list  = False
```

adj_top_margin Lines to be added between the terminal ($) and the title. It only accepts int values.
adj_top_space Lines to be added between title and top list. It only accepts int values.

adj_bottom_margin Lines to be added between the end of the list or footnote to the terminal ($).
adj_bottom_space Lines to be added between the bottom of the list and the footnote. It only accepts int values.

adj_indent Space from the left terminal to the first character in the list to be printed. It only accepts int values.
adj_space Space from the left of the box to the first character in the list to be printed. It only accepts int values.

set_fill_chr When a list is not complete in the data, it will be filled out with some characters. fill_chr will be converted to string.

update_list Notice that every single element in the list being passed will be converted to string in a temporary internal list.
If you want to save this conversion to your original list then set to True. It only works with the list type of variable.

set_layout This option only works with set, frozenset or range type of variables.

Note: adj_top_space won’t work if the title is not set up. Also adj_bottom_space won’t work if the footnote is not set up.
Use adj_top_margin or adj_bottom_margin or ins_newline(n), or print(“\n”) if you need more space.

```
#----------------------------------------------------------------------------------------------------------------------------------------
# Title Section                                                                                                                          -
#----------------------------------------------------------------------------------------------------------------------------------------
msg_title  = “”            align_title  = "justify"        hidden_title     = False
bold_title  = False        italic_title  = False           inverse_title    = False
bg_title    = -1           strike_title = False            blinking_title   = False
fg_title    = -1           dim_title    = False            underline_title = False
```

msg_title The title name for the list. It only accepts string values, by defaults is empty.
bold_title It only accepts two int values 0 and 1, by defaults is set to 0.

bg_title and fg_title accepts int values from -1 to 256. Default value from the system are -1 and 256.

align_title It accepts 4 values, left (l), justify (j), center (c), and right (r).

```
#----------------------------------------------------------------------------------------------------------------------------------------
# Footnote Section                                                                                                                       -
#----------------------------------------------------------------------------------------------------------------------------------------
msg_footnote = “”            align_footnote   = "justify"        hidden_footnote      = False
bold_footnote = False        italic_footnote  = False            inverse_footnote     = False
bg_footnote   = -1           strike_footnote  = False            blinking_footnote    = False
fg_footnote   = -1           dim_footnote     = False            underline_footnote   = False
```

msg_footnote The title name for the list. It only accepts string values, by default is empty.
bold_ footnote It only accepts two int values 0 and 1, by defaults is set to 0.

bg_ footnote and fg_footnote accepts int values from -1 to 256. Default values from the system are -1 and 256.

align_footnote It accepts 4 values, left (l), justify (j), center (c), and right (r).

```
#--------------------------------------------------------------------------------------------------------------------------------------
# Data Section                                                                                                                         -
#--------------------------------------------------------------------------------------------------------------------------------------
align_data = "justify"          hidden_data   = False           inverse_data      = False
bold_data  = False              italic_data   = False           blinking_data     = False
bg_data    = -1                 strike_data   = False           underline_data    = False
fg_data    = -1                 dim_data      = False           bg_all_cell_data  = True
```

bg_all_cell_data The bg color will affect the entire cell or just the data.

align_data It accepts 4 values, left (l), justify (j), center (c), and right (r).

bg_data and fg_data accepts int values from -1 to 256. Default values from the system are -1 and 256.

```
#--------------------------------------------------------------------------------------------------------------------------------------
# Horizontal Line Section                                                                                                              -
#--------------------------------------------------------------------------------------------------------------------------------------
top_horizontal_line_chr  = "-"        bottom_horizontal_line_chr ="-"        middle_horizontal_line_chr  = "-"
top_horizontal_line_on   = True       bottom_horizontal_line_on  = True      middle_horizontal_line_on   = False
bold_horizontal_line     = False      bg_horizontal_line         = -1        fg_horizontal_line          = -1
```

middle_horizontal_line_on These are the lines below the data. Check Case 9: for reference.

bg_horizontal_line and fg_horizontal_line accepts int values from -1 to 256. Default values from the system are -1 and 256.

For more reference check Figure 1**.**

```
#--------------------------------------------------------------------------------------------------------------------------------------
# Vertical Line Section                                                                                                                -
#--------------------------------------------------------------------------------------------------------------------------------------
bold_vertical_line = False          left_vertical_line_chr    = "|"
bg_vertical_line   = -1             middle_vertical_line_chr  = "|"
fg_vertical_line   = -1             right_vertical_line_chr   = "|"
```

middle_vertical_line_chr → A string type. The char used to make the horizontal line. For more reference check Figure 2.
right_vertical_line_chr → A string type. Refer to Figure 1.
left_vertical_line_chr → A string type. Refer to Figure 1.
bg_vertical_line and fg_vertical_line Accepts int values from -1 to 256. Default values from the system are -1 and 256.

```
#--------------------------------------------------------------------------------------------------------------------------------------
# External Corner Section                                                                                                              -
#--------------------------------------------------------------------------------------------------------------------------------------
top_left_corner_chr   = "+"          bottom_right_corner_chr = "+"          bold_corner_chr  = False
top_right_corner_chr  = "+"          bottom_left_corner_chr  = "+"          bg_corner_chr    = -1
                                                                            fg_corner_chr    = -1
```

top_left_corner_chr A string type. For reference check Figure 1. By default set to “+”

top_right_corner_chr A string type. For reference check Figure 1. By default set to “+”

bottom_right_corner_chr A string type. For reference check Figure 1. By default set to “+”

bottom_left_corner_chr A string type. For reference check Figure 1. By default set to “+”

bg_corner_chr and fg_corner_chr Accepts int values from -1 to 256. Default values from the system are -1 and 256.

```
#-----------------------------------------------------------------------------------------------------------------------------------------------------
# Middle Corner Section                                                                                                                               -
#-----------------------------------------------------------------------------------------------------------------------------------------------------
bold_inner_corner_chr   = False       middle_top_corner_chr     = "+"     right_lateral_corner_chr = "+"
bg_inner_corner_chr     = -1          middle_inner_corner_chr   = "+"     left_lateral_corner_chr  = "+"
fg_inner_corner_chr     = -1          middle_bottom_corner_chr  = "+"
```

bg_corner_chr and fg_corner_chr Accepts int values from -1 to 256. Default values from the system are -1 and 256.

For reference check Figure 3 and 4.

```
#-----------------------------------------------------------------------------------------------------------------------------------------------------
# Header Section                                                                                                                                      -
#-----------------------------------------------------------------------------------------------------------------------------------------------------
align_header  = "justify"             hidden_header     = False          inverse_header        = False
bold_header   = False                 italic_header     = False          blinking_header       = False
bg_header     = -1                    strike_header     = False          underline_header      = False
fg_header     = -1                    dim_header        = False          bg_all_cell_ header   = True
```

bg_all_cell_data The bg color will affect the entire cell or just the header.

align_header It accepts 4 values, left (l), justify (j), center (c), and right (r).

bg_header and fg_header Accepts int values from -1 to 256. Default values from the system are -1 and 256.

Attributes for the header lines

```
bold_vertical_header_line_chr  = False        right_vertical_header_line_chr    = "|"
bg_vertical_header_line_chr    = -1           left_vertical_header_line_chr     = "|"
fg_vertical_header_line_chr    = -1           middle_vertical_header_line_chr   = "|"
```

For reference check Figure 3 and 4.

```
#-----------------------------------------------------------------------------------------------------------------------------------------------------
# Header Under Line Section                                                                                                                           -
#-----------------------------------------------------------------------------------------------------------------------------------------------------
```

Attributes for the line below the header text

```
bold_under_line_header = False            horizontal_line_under_header_on   = False
bg_under_line_header   = -1               horizontal_line_under_header_chr  = "-"
fg_under_line_header   = -1
```

horizontal_line_under_header_on Horizontal lines between headers and the first data row.

bg_under_line_header and fg_under_line_header Accepts int values from -1 to 256. Default values from the system are -1 and 256.

Attributes for the header corners (left, middles and right)

```
bold_corner_under_line_header = False        left_corner_line_under_header_chr    = "+"
bg_corner_under_line_header   = -1           right_corner_line_under_header_chr   = "+"
```

fg_corner_under_line_header = -1 middle_corner_line_under_header_chr = "+"

For more reference see figure 3.

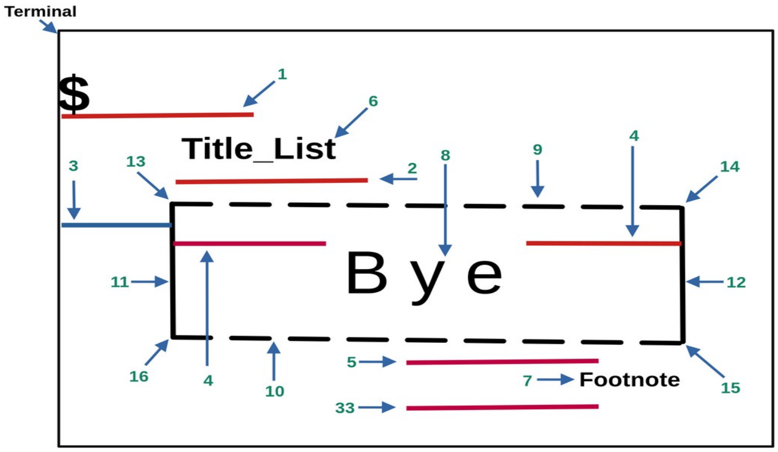


Figure 1

1.- adj_top_margin	2.- top_space	3.- adj_indent
4.- adj_space	5.- bottom_space	6.- msg_title
7.- msg_footnote	8.- data	9.- top_horizontal_line_chr
10.- bottom_horizontal_line_chr	11.- left_vertical_line_chr	12.- right_vertical_line_chr
13.- top_left_corner_chr	14.- top_right_corner_chr	15.- bottom_right_corner_chr
16.- bottom_left_corner_chr	33.- adj_bottom_margin	

17.- middle_top_corner_chr
18.- middle_vertical_line_chr
19.- middle_bottom_corner_chr

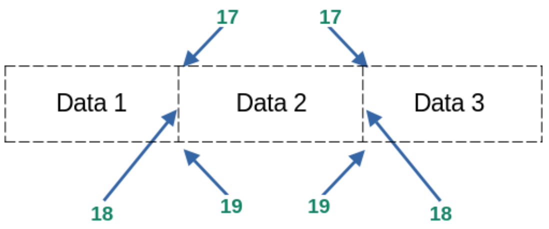


Figure 2

20.- header
21.- horizontal_line_under_header_chr
22.- left_vertical_header_line_chr
23.- right_vertical_header_line_chr
24.- left_corner_line_under_header_chr
25.- right_corner_line_under_header_chr
26.- middle_horizontal_line_chr
27.- left_lateral_corner_chr

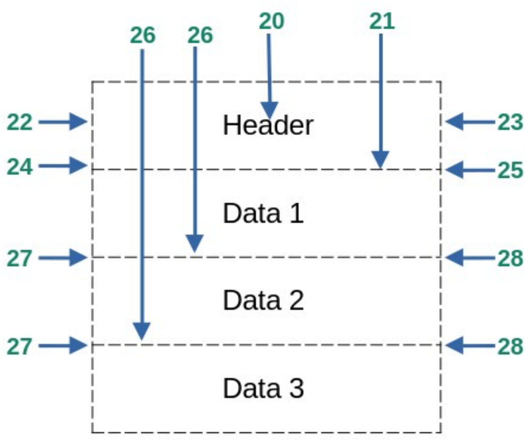


Figure 3

28.- right_lateral_corner_chr

29.- middle_vertical_header_line_chr
30.- middle_corner_line_under_header_chr
31.- middle_inner_corner_chr
32.- set_fill_chr

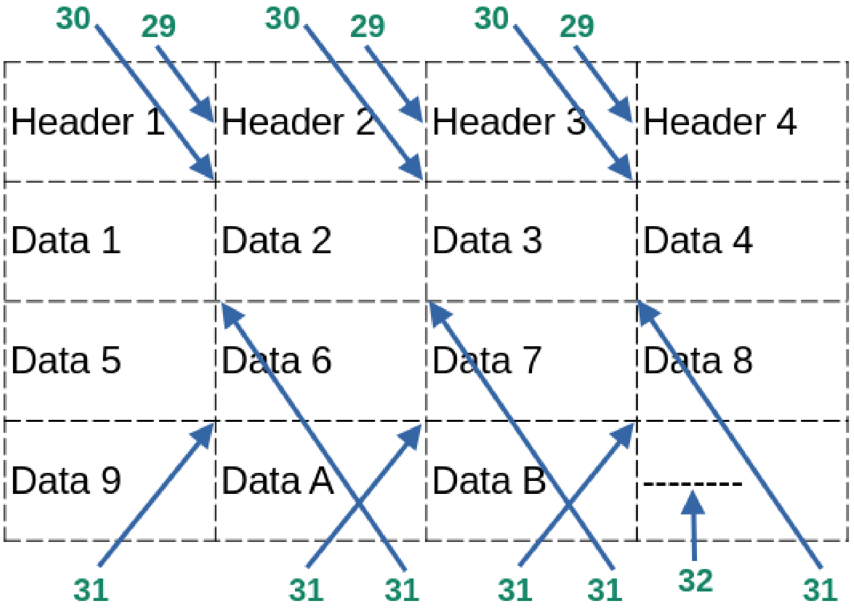
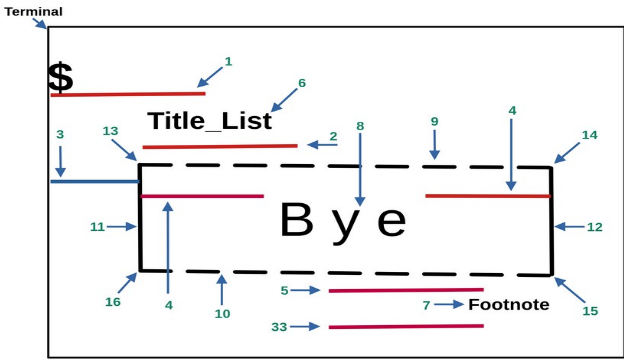


Figure 4

Summarize



Note: 2 and 33 only work if the title and footnote exist.

Figure 1

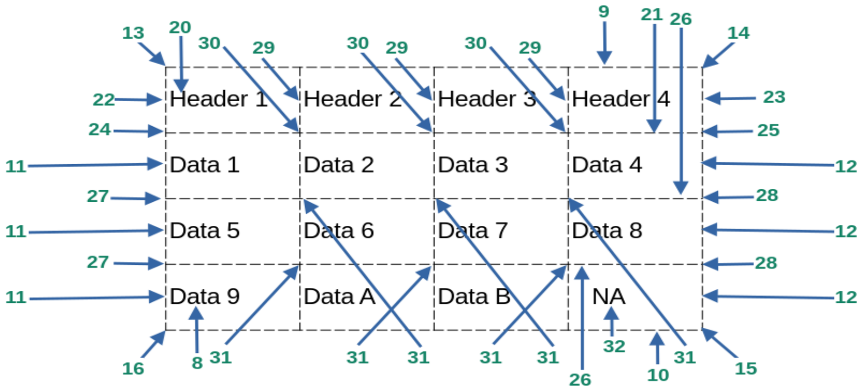


Figure 5

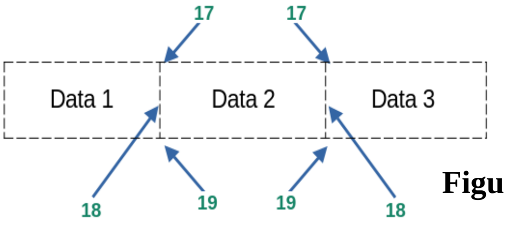


Figure 2

1.- adj_top_margin	2.- top_space	3.- adj_indent

4.- adj_space	5.- bottom_space	6.- msg_title
7.- msg_footnote	8.- data	9.- top_horizontal_line_chr
10.- bottom_horizontal_line_chr	11.- left_vertical_line_chr	12.- right_vertical_line_chr
13.- top_left_corner_chr	14.- top_right_corner_chr	15.- bottom_right_corner_chr
16.- bottom_left_corner_chr	17.- middle_top_corner_chr	18.- middle_vertical_line_chr
19.- middle_bottom_corner_chr	20.- header	21.- horizontal_line_under_header_chr
22.- left_vertical_header_line_chr	23.- right_vertical_header_line_chr	24.- left_corner_line_under_header_chr
25.- right_corner_line_under_header_chr	26.- middle_horizontal_line_chr	27.- left_lateral_corner_chr
28.- right_lateral_corner_chr	29.- middle_vertical_header_line_chr	30.- middle_corner_line_under_header_chr
31.- middle_inner_corner_chr	32.- set_fill_chr	33. adj_bottom_margin

Horizontal Line Default Values:

top_horizontal_line_on = 1

bottom_horizontal_line_on = 1

middle_horizontal_line_on = 0

horizontal_line_under_header_on = 0

bg_all_cell_data/header Default Values:

bg_all_cell_data = True

bg_all_cell_header = True

Some Other Default Values:

align_title = “justify”

msg_title = “”

align_data = “justify”

update_list = False

align_footnote = “justify”

msg_footnote = “”

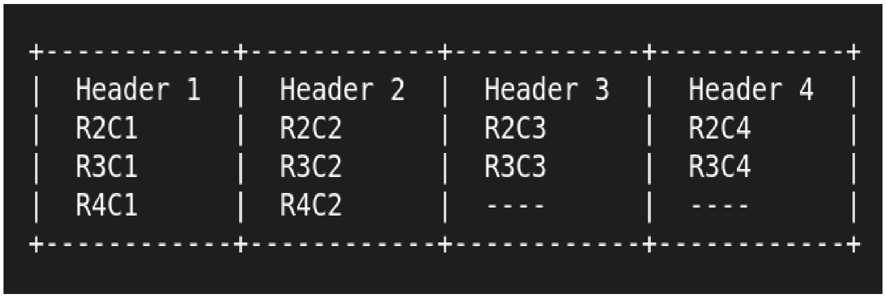
align_header = “justify”

set_layout = Layout.HORIZONTAL

Examples:

Demo 1. Default Values

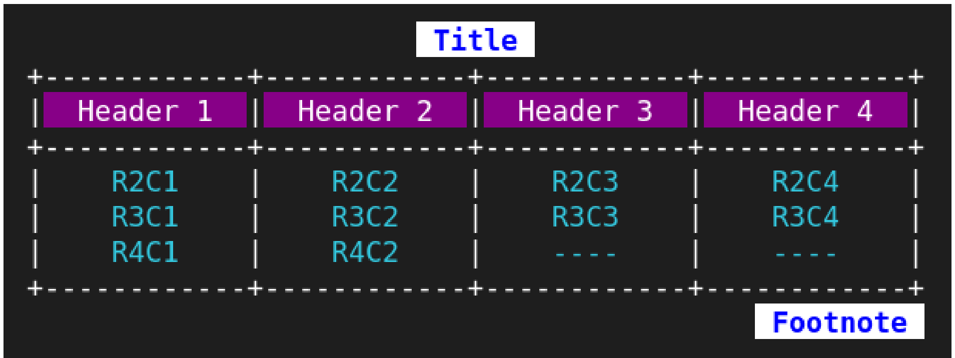
```
import custom_print as cp

tlb = cp.FancyFormat()
lst = [["Header 1","Header 2","Header 3","Header 4"],
       ["R2C1","R2C2","R2C3","R2C4"],
       ["R3C1","R3C2","R3C3","R3C4"],
       ["R3C1","R3C2"]]

tlb.print_fancy_format(lst)
```



```
+------------+------------+------------+------------+
|  Header 1  |  Header 2  |  Header 3  |  Header 4  |
|  R2C1      |  R2C2      |  R2C3      |  R2C4      |
|  R3C1      |  R3C2      |  R3C3      |  R3C4      |
|  R4C1      |  R4C2      |  ----      |  ----      |
+------------+------------+------------+------------+
```

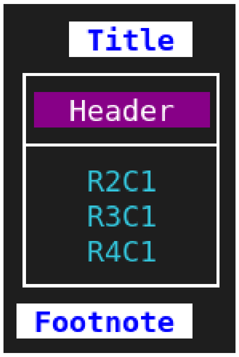
Demo 2. A Little bit of Customization

```
import custom_print as cp

tlb = cp.FancyFormat()
lst = [["Header 1","Header 2","Header
3","Header 4"],
      ["R2C1","R2C2","R2C3","R2C4"],
      ["R3C1","R3C2","R3C3","R3C4"],
      ["R4C1","R4C2"]]
```



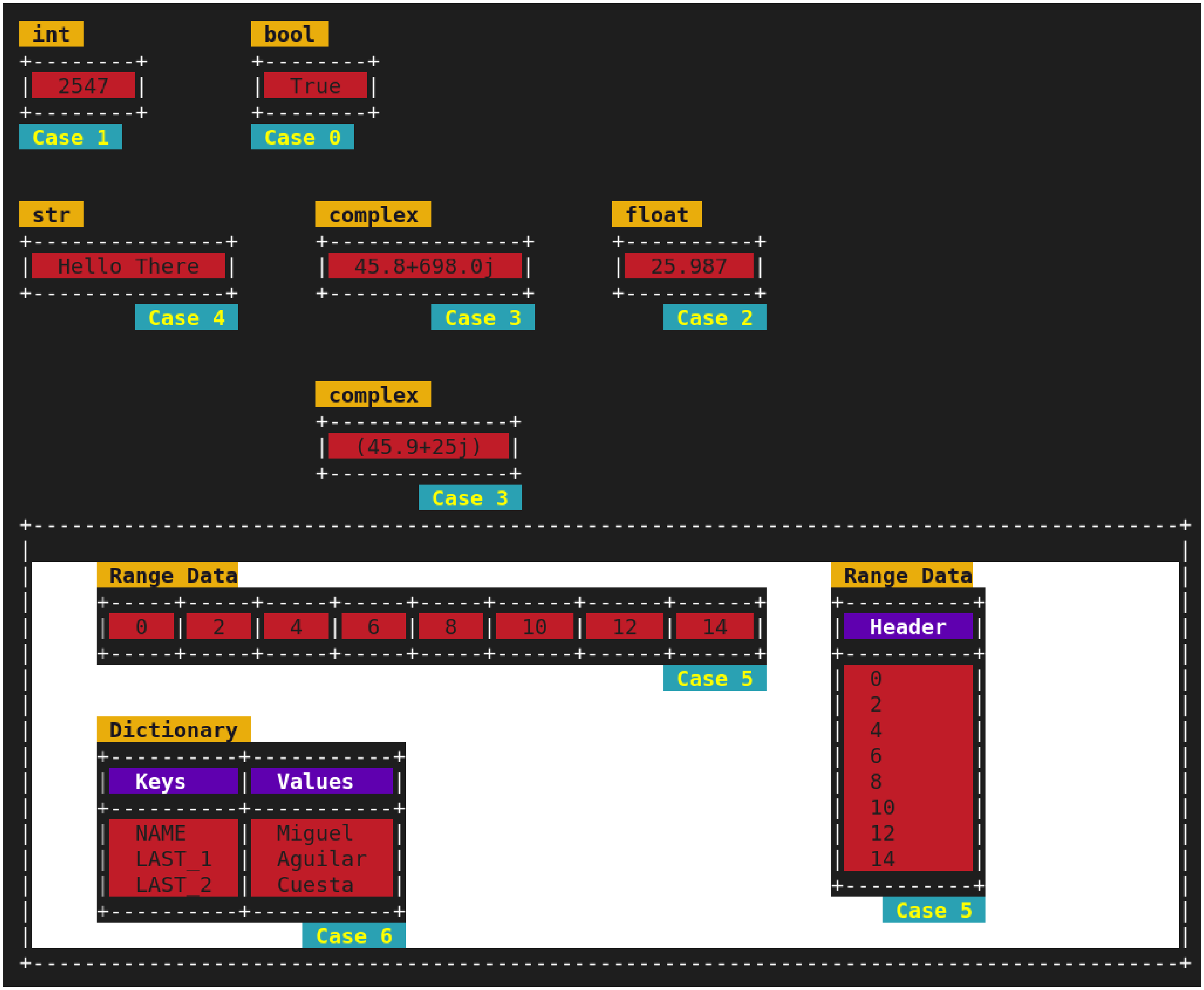
```
                         Title
+------------+------------+------------+------------+
|  Header 1  |  Header 2  |  Header 3  |  Header 4  |
+------------+------------+------------+------------+
|    R2C1    |    R2C2    |    R2C3    |    R2C4    |
|    R3C1    |    R3C2    |    R3C3    |    R3C4    |
|    R4C1    |    R4C2    |    ----    |    ----    |
+------------+------------+------------+------------+
                                          Footnote
```

```
tlb.msg_title   = " Title "
tlb.align_title = cp.Align.CENTER
tlb.bold_title  = True
tlb.fg_title    = 21
tlb.bg_title    = 231

tlb.bg_header = 90
tlb.fg_header  = 231
tlb.horizontal_line_under_header_on = True

tlb.align_data = cp.Align.CENTER
tlb.fg_data    = 14

tlb.msg_footnote  = " Footnote "
tlb.align_footnote= cp.Align.RIGHT
tlb.bold_footnote = True
tlb.bg_footnote    = 231
tlb.fg_footnote    = 21

tlb.print_fancy_format(lst)

lst = [["Header"],["R2C1"],["R3C1"],["R4C1"]]

tlb.print_fancy_format(lst, cp.Line_Style.SINGLE)
```



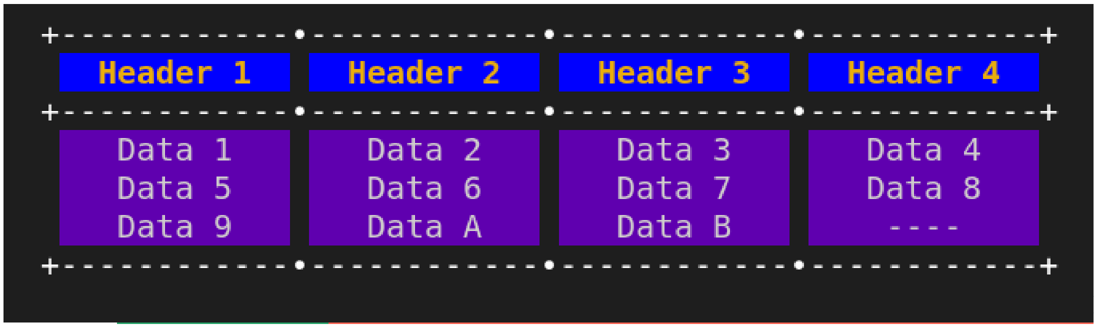
```
    Title
┌──────────┐
│  Header  │
├──────────┤
│   R2C1   │
│   R3C1   │
│   R4C1   │
└──────────┘
 Footnote
```

Demo 3 → Type of Variables



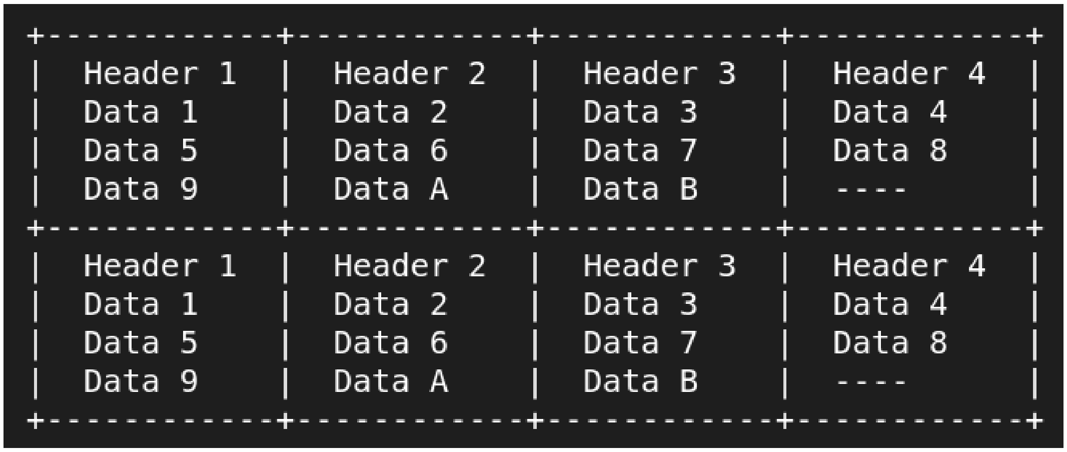
```
 int                  bool
+--------+           +--------+
| 2547   |           | True   |
+--------+           +--------+
 Case 1               Case 0


 str                       complex                   float
+---------------+         +---------------+         +----------+
| Hello There   |         | 45.8+698.0j   |         | 25.987   |
+---------------+         +---------------+         +----------+
         Case 4                    Case 3                Case 2


                           complex
                          +--------------+
                          | (45.9+25j)   |
                          +--------------+
                                   Case 3
+------------------------------------------------------------------------------------------+
|                                                                                          |
|     Range Data                                                     Range Data            |
|     +-----+-----+-----+-----+-----+-----+------+------+-----+      +----------+          |
|     | 0   | 2   | 4   | 6   | 8   | 10  | 12   | 14   |     |      | Header   |          |
|     +-----+-----+-----+-----+-----+-----+------+------+-----+      +----------+          |
|                                                 Case 5             | 0        |          |
|                                                                    | 2        |          |
|     Dictionary                                                     | 4        |          |
|     +----------+----------+                                        | 6        |          |
|     | Keys     | Values   |                                        | 8        |          |
|     +----------+----------+                                        | 10       |          |
|     | NAME     | Miguel   |                                        | 12       |          |
|     | LAST_1   | Aguilar  |                                        | 14       |          |
|     | LAST_2   | Cuesta   |                                        +----------+          |
|     +----------+----------+                                              Case 5          |
|                   Case 6                                                                 |
+------------------------------------------------------------------------------------------+
```

Demo 4. Some More Customization



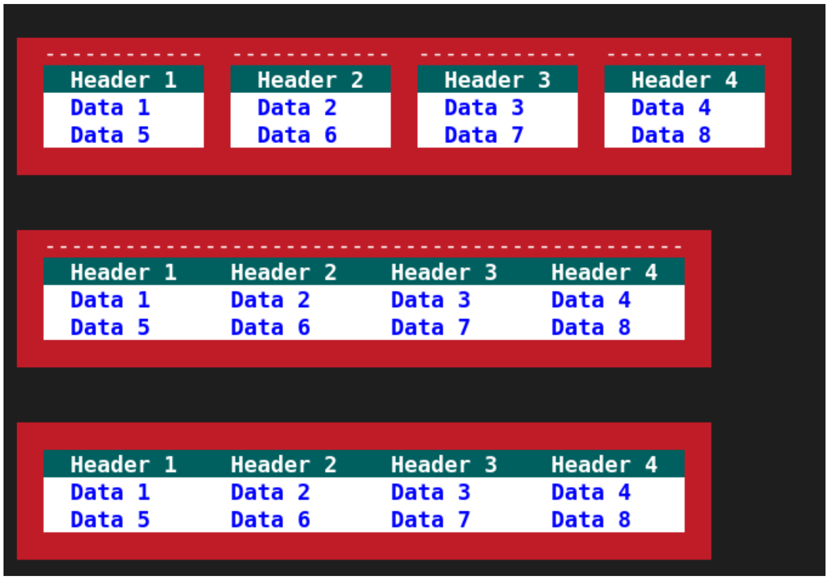
```
+------------•------------•------------•------------+
   Header 1     Header 2     Header 3     Header 4
+------------•------------•------------•------------+
    Data 1       Data 2       Data 3       Data 4
    Data 5       Data 6       Data 7       Data 8
    Data 9       Data A       Data B        ----
+------------•------------•------------•------------+
```

Demo 5. Two List Joined



```
+------------+------------+------------+------------+
|  Header 1  |  Header 2  |  Header 3  |  Header 4  |
|  Data 1    |  Data 2    |  Data 3    |  Data 4    |
|  Data 5    |  Data 6    |  Data 7    |  Data 8    |
|  Data 9    |  Data A    |  Data B    |  ----      |
+------------+------------+------------+------------+
|  Header 1  |  Header 2  |  Header 3  |  Header 4  |
|  Data 1    |  Data 2    |  Data 3    |  Data 4    |
|  Data 5    |  Data 6    |  Data 7    |  Data 8    |
|  Data 9    |  Data A    |  Data B    |  ----      |
+------------+------------+------------+------------+
```

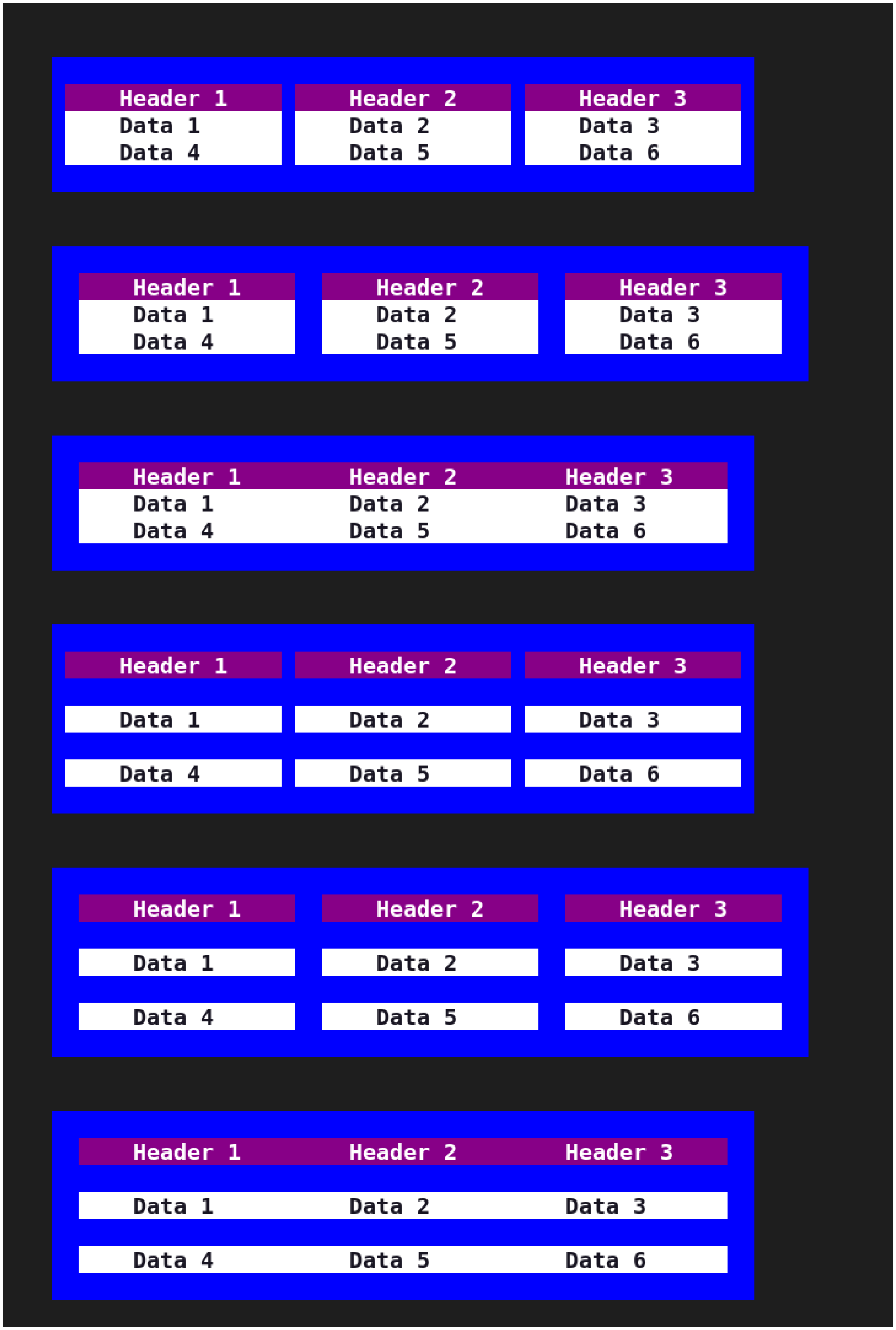
Demo 6. Some More Customization



```
------------  ------------  ------------  ------------
  Header 1      Header 2      Header 3      Header 4
  Data 1        Data 2        Data 3        Data 4
  Data 5        Data 6        Data 7        Data 8

------------------------------------------------------
  Header 1    Header 2    Header 3    Header 4
  Data 1      Data 2      Data 3      Data 4
  Data 5      Data 6      Data 7      Data 8


  Header 1    Header 2    Header 3    Header 4
  Data 1      Data 2      Data 3      Data 4
  Data 5      Data 6      Data 7      Data 8
```

```
import custom_print as cp
tbl = cp.FancyFormat()
lst =  [[“Header 1”   “Header 2”,   “Header 3”    ],
         [“Data 1”,    “Data 2”,     “Data 3”      ],
         [“Data 4”,    “Data 5”,     “Data 6”      ]]
# Colors
tbl.bg_horizontal_line = 21
tbl.bg_vertical_line = 21
tbl.bg_corner_chr = 21

tbl.bg_inner_corner_chr = 21
tbl.bg_under_line_header = 21

tbl.bg_corner_under_line_header = 21
tbl.bg_vertical_header_line_chr = 21
tbl.bg_header = 90
tbl.fg_header = 231
tbl.bold_header = True
tbl.bg_data = 231
tbl.fg_data = 0
tbl.bold_data = True
```

```
tbl1.adj_top_margin = 2
tbl1.print_fancy_format(data=lst, style=cp.Line_Style.NONE)
tbl1.print_fancy_format(data=lst, style=cp.Line_Style.DOUBLE_SPACE_COL_COLOR)
tbl1.print_fancy_format(data=lst, style=cp.Line_Style.NO_SPACE_COL_COLOR)

tbl1.horizontal_line_under_header_on = True
tbl1.middle_horizontal_line_on = True
tbl1.print_fancy_format(data=lst, style=cp.Line_Style.NONE)
tbl1.print_fancy_format(data=lst, style=cp.Line_Style.DOUBLE_SPACE_COL_COLOR)
tbl1.print_fancy_format(data=lst, style=cp.Line_Style.NO_SPACE_COL_COLOR)
```



Header 1	Header 2	Header 3
Data 1	Data 2	Data 3
Data 4	Data 5	Data 6

Header 1	Header 2	Header 3
Data 1	Data 2	Data 3
Data 4	Data 5	Data 6

Header 1	Header 2	Header 3
Data 1	Data 2	Data 3
Data 4	Data 5	Data 6

Header 1	Header 2	Header 3
Data 1	Data 2	Data 3
Data 4	Data 5	Data 6

Header 1	Header 2	Header 3
Data 1	Data 2	Data 3
Data 4	Data 5	Data 6

Header 1	Header 2	Header 3
Data 1	Data 2	Data 3
Data 4	Data 5	Data 6

Pen Class

This class contains two methods:

```
draw_line(size=0, layout=Layout.HORIZONTAL, tail="\N{BLACK DIAMOND}", body="-", head="\N{BLACK DIAMOND}")

draw_rectangle(length=3, width=3, style=Line_Style.DASH)
```

Rectangle Default Values

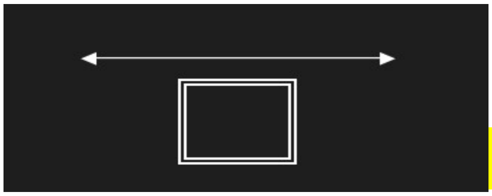
```
top_left_corner_chr      = "+"        top_horizontal_line_chr     = "-"       right_vertical_line_chr   = "|"
top_right_corner_chr     = "+"        bottom_horizontal_line_chr ="-"        left_vertical_line_chr    = "|"
bottom_right_corner_chr= "+"
bottom_left_corner_chr   = "+"        refill_bg_color = False
```

Line Default Values   General Default Values

```
bold_draw_line    = False              adj_indent= 0
bg_draw_line      = -1
fg_draw_line      = -1
```

Example:

```
import custom_print as cp
pen = cp.Pen()
pen.adj_indent = 8
pen.draw_line(size=20, layout=cp.Layout.HORIZONTAL, tail=cp.Unicode.BLACK_LEFT_POINTING_TRIANGLE,
                             body=cp.Unicode.EM_DASH, head=cp.Unicode.BLAKC_RIGHT_POINT_TRIANGLE)

cp.ins_newline(2)
pen.adj_indent = 14
pen.draw_rectangle(length=8, width=4, style=cp.Line_Style.DOUBLE)
```



```
        ◀────────────────────▶

              ╔══════╗
              ║      ║
              ║      ║
              ╚══════╝
```

Report bugs at → acma.mex@hotmail.com

FanyPrint module is not a big thing, but I hope you find useful occasionally. Python 3.12.1 or greater is required.

Note: custom_print module has been tested on RedHat 9, Centos Stream 9, AlmaLinux 9, and Windows 10.

https://github.com/acma82/New_Fancy_Print/

Saturday November 16, 2024.