FancyPrint Module

Screen Functions

clear() It Clears the terminal and return the cursor to home (it uses the system command).

clean() It Cleans the terminal and return the cursor to home (it uses the ansi command).

erase() It Erases the terminal and leave the cursor to in the current position (it uses the ansi command).

dimensions() It returns the dimensions of the terminal, cols and rows.

resize(rows=25, cols=80) It resizes the terminal size.

Example: import fancyprint as fp

fp.clean()

r, c = fp.dimensions()
print(f"rows: {r}, Cols: {c}")

fp.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. Three options for better visualization.

- 1.- The option bold for the font (True / False)
- 2.- The option fg to visualize the background colors with a specific foreground color.
- 3.- The option n_line 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. Three options for better visualization.

- 1.- The option bold for the font (True / False)
- 2.- The option bg to visualize the background colors with a specific foreground color.
- 3.- The option n_line to insert lines between the colors.

 $ins_chr(n=1, unicode=""")$ \rightarrow This function inserts n times the unicode provided, by default is set to space.

ins_newline(n=1) \rightarrow This function insert n new lines.

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

reset_font() → This function reset 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 pass 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.

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

```
Example: import fancyprint as fp
```

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

Note: This 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 display below:

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 display below:

Layout → This class is used with FancyFormat class and Draw 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	-

WHITE_DIAMOND WHITE_CIRCLE

BLACK_DIAMOND BLACK_CIRCLE

FACE

,,,,,,,,,

For more reference → https://www.unicode.org/charts/nameslist/

Line_Style

→ This class is used with FancyFormat class and Draw class. There are 8 options.

Style_Line.CUSTOMIZED

Style_Line.SINGLE

Style_Line.SINGLE_BOLD

Style_Line.SINGLE_HEAVY

Style_Line.DOUBLE

Style_Line.DASH

Style_Line.SQR_BRACKETS

Style_Line.NONE

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

```
Style Line.CUSTOMIZED
                              "customized"
                                                 Style Line.SINGLE
                                                                                "single"
Style Line.SINGLE BOLD
                               "single bold"
                                                 Style Line.SINGLE HEAVY
                                                                                "single_heavy"
Style_Line.DOUBLE
                              "double"
                                                 Style_Line.DASH
                                                                                "dash"
Style_Line.SQ_BRACKETS
                              "sq_brackets"
                                                 Style_Line.NONE
                                                                                "none"
```

Cursor Class

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

```
jumpTo \rightarrow This method jumps rows or columns for the cursor in the terminal.
```

 $jumpxy \rightarrow This method jumps the cursor to a specific coordinates in the terminal.$

moveTo → This method moves rows or columns for the cursor in the terminal.

movexy → This method moves the cursor to a specific coordinates in the terminal.

```
Example:
```

```
import fancyprint as fp
crs = fp.Cursor()
crs.jumpTo(4, "D")

crs.jumpTo(qty=20, direction=fp.Move.RIGHT) ← . → crs.jumpTo(qty=20, direction="right")
print("Hello There...!")

print(f"{crs.moveTo(qty=20, direction=fp.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 display below.

```
bold
       = False
                     bg
                               = -1
                                                       = -1
                                                                       italic
                                                                                  = False
dim
       = False
                     underline = False
                                              blinking = False
                                                                       inverse
                                                                                 = False
hidden = False
                     strike
                               = False
                                              indent = False
                                                                       next line = True
           → this define how far we want to start to print the message from the left.
next line → this define where we want to jump the line or not when printing the message.
print_style(msg) → This method will print the style with the defined attributes.
```

```
Example:
```

```
import fancyprint as fp
fs = fp.FontStyle()
fs.bg = 21
fs.fg = 231
fs.print_style(" My Font Style ")

# reset_style() → This method will reset the style to the default values.
fs.reset_style()
fs.print_style(" My Font Style ")
# start_style() and stop_style() → This methods are used if we will be continuing using the style in many rows.
```

```
print(f"{fs.start_style()} Font Style Line 1")
            print(f" Font Style Line 2 ")
            print(f" Font Style Line 3 {fs.stop_style()}")
            fs.reset_style()
            print(f"{fs.start_style()} Default Style {fs.stop_style()}")
FancyMessage Class
#------
# Body Default Values
#-----
                        strike_body = False
hidden_body = False
inverse_body = False
blinking_body = False
bg_body = 4
                                                   msg_body = "Body Msg
fg\_body = 231
                                                   right_indent = 2
bold body = False
                                                   left indent = 2
dim body = False
                                                   top lines = 1
italic body= False
                        underline_body = False
                                                   bottom lines = 1
help lines = False
                        length = Length bg.ALL ROW
# 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 Attributes
#-------
msg_note = " Note: " align_note = Align.J
bg_note = 231 strike_note = False
fg_note = 0 italic_note = False
bold_note = False inverse_note = False
dim_note = False hidden_note = False
                        align_note = Align.JUSTIFY blinking_note = False
                        strike_note = False
                                                      underline_note = False
                        italic note = False
                                                      position note
                                                                      = 1
                                                      right_space_note = 2
                                                      left_space_note = 2
# Title Attributes
#-----
                        align_title = Align.LEFT
msg_title = ""
bg_title = 4
fg_title = 231
bold_title = False
dim_title = False
                                                      blinking_title = False
                        strike_title = False
italic_title = False
                                                      underline title = False
                                                      title_indent
                        inverse_title = False
                                                      lines_title_body = 1
                        hidden_title = False
# Footnote Attributes
msg_footnote = ""
bg_footnote = 4
fg_footnote = 231
bold_footnote = False
#------
                                                         blinking_footnote = False
                        align_footnote = Align.RIGHT
                        strike_footnote = False
                                                         underline_footnote = False
                        italic_footnote = False
                                                          footnote_indent = 2
                        inverse_footnote = False
                                                         lines_body_footnote = 1
dim_footnote = False
                        hidden_footnote = False
```

Example:

import fancyprint as fp
fs = fp.FontStyle()

fs.bg = 21fs.fg = 231

```
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 Centrum 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.

import fancyprint as fp

msg = fp.FancyMessage()

msg.msg_title = "TITLE"

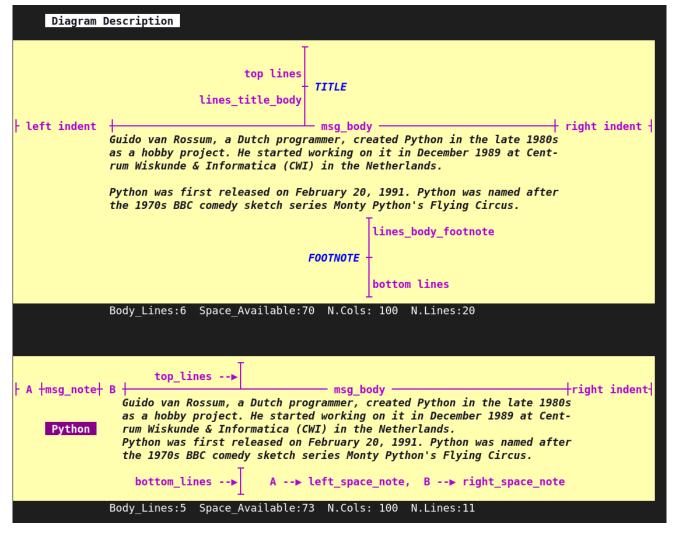
msg.msg_footnote = "FOOTNOTE"

msg.print_fancy_message(paragraph)

fp.ins_newline(2)

msg.msg_note = "Python"

msg.print_fancy_note(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 reset all the attributes to their default values.

Examples: import fancyprint as fp tbl = fp.FancyFormat()

Case 1: Passing any type of variable.
tbl.print_fancy_format("Hello World...!")

Output: +-----+ | Hello World...! | +-----+

Case 3: Passing single item in a list.
my_list = ["Hello World...!"]
tbl.print_fancy_format(my_list)

Output: +-----+ | Hello World...! | +------+

Case 5: Passing a list.
my_list = [1,2,3,4]
tbl.print_fancy_format(my_list)

Output: +----*----*----+ | 1 | 2 | 3 | 4 | +----*---*----*----+

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 | +----*----*----+

Case 7: Passing a list with a some combination rows and cols. my_list = [[5,"hello"],6,50,[45]] tbl.print_fancy_format(my_list)

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

Case 8: Passing a list with rows and one cols. my_list = [[10],[20],[30],[40]] tbl.print_fancy_format(my_list)

Case 2: Passing an empty list.
tbl.print_fancy_format([])

Output: +-----+ | none | +-----+

Case 4: Passing single item in a row to a list.
my_list = [["hello there!"]]
tbl.print_fancy_format(my_list)

Output: +-----+ | hello there! | +------+

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

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

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

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

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

```
      Output:
      +-----+
      +-----+

      | R1C1 |
      | 10 |

      | R1C2 |
      | 20 |

      | R1C3 |
      | 30 |

      | R1C4 |
      | 40 |
```

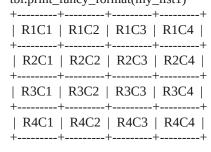
Case 9:

tbl.print_fancy_format(my_list1)

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 | | +------+



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

Attributes in FancyFormat Class:

adi → 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.

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 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
                        strike_title = False
                                                   blinking_title = False
bg_title = -1
fg_title = -1
                        dim_title = False
                                                   underline_title = False
msg_title The title name for the list. It only accepts string values, by default is empty.
bold_title It only accepts two int values 0 and 1, by default 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"
bold_footnote = False
bg_footnote = -1 strike_footnote = False
                                                                 hidden footnote
                                                                                      = False
                                                                 inverse_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 default is set to 0.
bg_ footnote and fg_footnote accepts int values from -1 to 256. Default value from the system are -1 and 256.
align_footnote It accepts 4 values, left (l), justify (j), center (c), and right (r).
# Data Section
inverse_data
                                                                        = False
                                                       blinking data
                                                                        = False
bg_data = -1
                        strike_data = False
                                                       underline_data = False
                                      = False
                                                       bg_all_cell_data = True
fg_data
         = -1
                        dim_data
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 value from the system are -1 and 256.
# Horizontal Line Section
top_horizontal_line_chr = "-"
top_horizontal_line_on = True
                                     bottom_horizontal_line_chr ="-"
bottom_horizontal_line_on = True
                                                                               middle horizontal line chr = "-"
                                                                               middle_horizontal_line_on = False
bold horizontal line = False
                                     bg horizontal line = -1
                                                                               fg horizontal line
```

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 value 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 value from the system are -1 and 256.
# External Corner Section
                                        bottom_right_corner_chr = "+" bold_corner_chr = False
bottom left corner chr = "+" bg_corner_chr = -1
top_left_corner_chr = "+"
                                        bottom_left_corner_chr = "+"
top_right_corner_chr = "+"
                                                                                    bg_corner_chr = -1
                                        fg_corner_chr = -1
                         A string type. For reference check Figure 1. By default set to "+"
top left corner chr
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 "+"
                             A string type. For reference check Figure 1. By default set to "+"
bottom_left_corner_chr
bg_corner_chr and fg_corner_chr Accepts int values from -1 to 256. Default value 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 value 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 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 value from the system are -1 and 256.
Attributes for the header lines
bold_vertical_header_line_chr = False
                                               right_vertical_header_line_chr
                                                                                    = "|"
                                                                                    = "i"
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 firs data row.

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

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

```
bold_corner_under_line_header = False left_corner_under_line_header_chr = "+" right_corner_under_line_header_chr = "+" right_corner_under_line_header_chr = "+" middle_corner_under_line_header_chr = "+"
```

For more reference see figure 3.

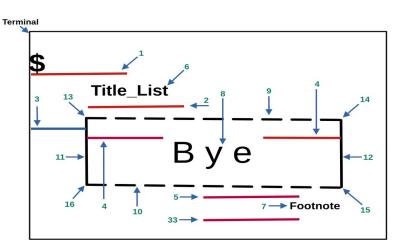
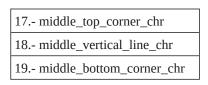
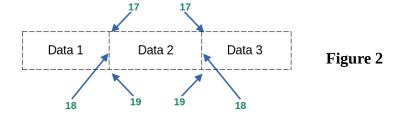
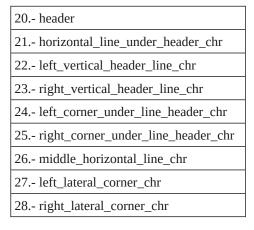


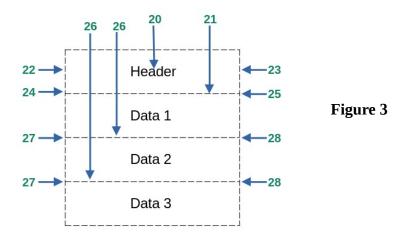
Figure 1

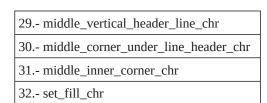
1 adj_top_margin	2 top_space	3 adj_indent
4 adj_space	5 bottom_space	6 msg_title
7 msg_footnote	8 data	9 top_horizontal_line_chr
10 bottom_horizontal_line_chr	11 left_vertical_line_chr	12 right_vertical_line_chr
13 top_left_corner_chr	14 top_right_corner_chr	15 bottom_right_corner_chr
16 bottom_left_corner_chr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











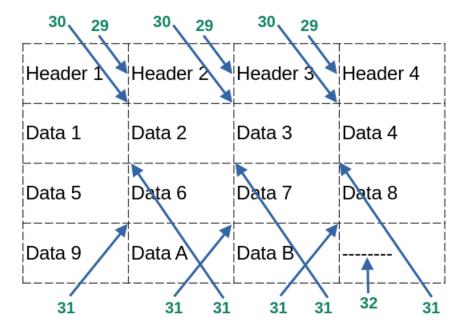
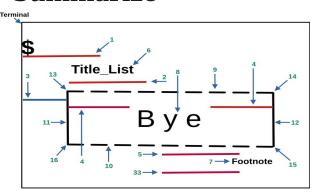
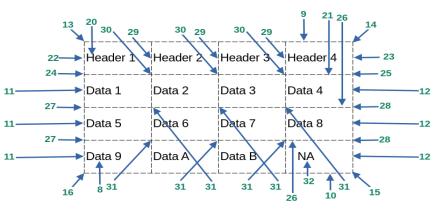


Figure 4

Summarize

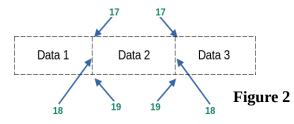




Note: 2 and 33 only works if title and footnote exist.

Figure 5

Figure 1



	I	
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_under_line_header_chr
25 right_corner_under_line_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_under_line_header_chr
31 middle_inner_corner_chr	32 set_fill_chr	33. adj_bottom_margin

Horizontal Line Default Values:

bg_all_cell_data/header Default Values:

top_horizontal_line_on	= 1	bottom_horizontal_line_on	= 1	bg_all_cell_data	= True
middle_horizontal_line_on	= 0	horizontal_line_under_header_on	= 0	bg_all_cell_header	r = True

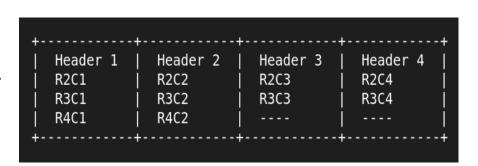
Some Other Default Values:

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 fancyprint as fp
tlb = fp.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)
Demo 2. A Little bit of Customization
```



```
import fancyprint as fp
```

```
tlb = fp.FancyFormat()
lst = [["Header 1","Header 2","Header 3","Header 4"],
   ["R2C1","R2C2","R2C3","R2C4"],
```

["R3C1","R3C2","R3C3","R3C4"], ["R4C1","R4C2"]]

tlb.msg title = "Title"

tlb.align_title = fp.Align.CENTER

tlb.bold_title = True tlb.fg title = 21tlb.bg_title = 231

 $tlb.bg_header = 90$ $tlb.fg_header = 231$

tlb.horizontal_line_under_header_on = True

tlb.align_data = fp.Align.CENTER

tlb.fg_data = 14

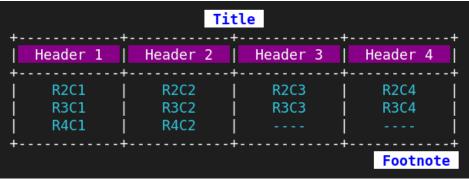
tlb.msg footnote = "Footnote List" tlb.align_footnote= fp.Align.RIGHT

tlb.bold_footnote = True tlb.bg_footnote = 231 tlb.fg_footnote = 21

tlb.print_fancy_format(lst)

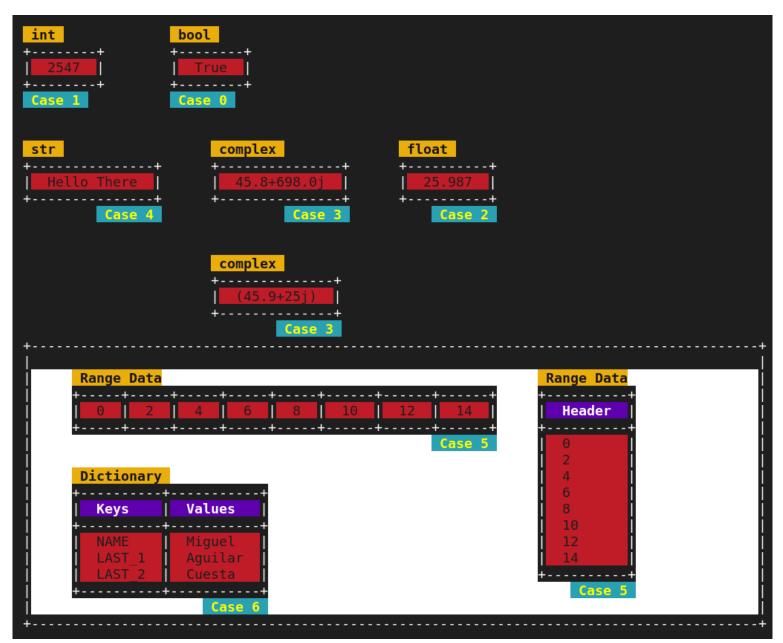
lst = [["Header"],["R2C1"],["R3C1"],["R4C1"]]

tlb.print_fancy_format(lst, fp.Line_Style.SINGLE)





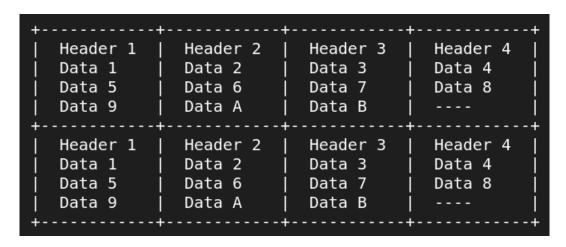
Demo $3 \rightarrow$ **Type of Variables**



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



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_right_corner_chr = "+" bottom_left_corner_chr = "+" refill_bg_color = False
```

Line Default ValuesGeneral Default Valuesbold_draw_line= Falseadj_indent = 0bg_draw_line= -1fg_draw_line= -1

Example: import fancyprint as fp pen = fp.Pen()



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