ntexup

A declarative, text-based document & presentation generator

Open Source

thevpc

https://github.com/thevpc/ntexup

2025-08-06

v0.8.6.0

Rationale

- Text-based, declarative, and intuitive syntax
- Readable by humans, writable with ease
- Designed for long-lived documents with effortless maintenance
- Unmatched control over rendering
- Seamless multi-file support
- Version-control friendly (Git & more)
- Integrates with LaTeX, UML, and beyond

Rationale

- Uses TSON which is a derivative of JSON format but with more readal
- Declarative syntax : what you write is what you get
- Parameterizable : variables and conditions are processed for rendering
- Templatable : one can define his own components
- Themable : uses a CSS like styling
- Composable : you can combine multiple components to build reusable
- Portable: works across platforms and environments with minimal setu

Hello World

Hello World

```
"Hello World"
```

- Hello World
- Hello World
- Hello World

```
"
    - Hello ##World##
    - Hello ###World###
    - Hello ####World####
"
```

● Hello World

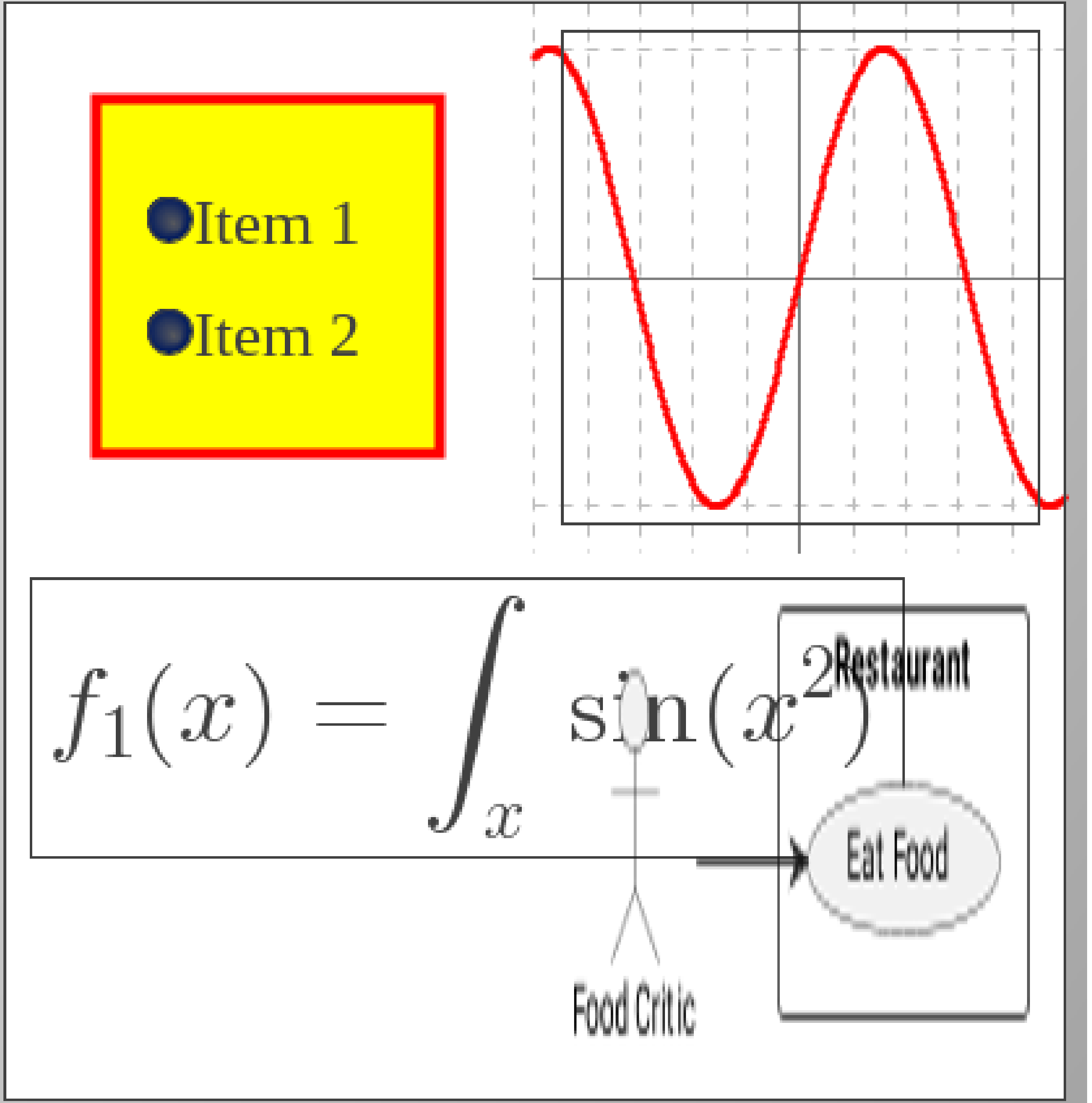
● Hello World

● Hello World

```
ul{
    ¶ Hello ##World##
    ¶ Hello ###World###
    ¶ Hello ####World####
}
```

More Elaborate Example

```
// this is a comment
page{
    grid(2,2){
        group{ // supports shapes
            rectangle(at:center,size:(90),
                background:yellow,
                color:red, stroke:4
            )
            ul(origin:left, position:(20,50)){
                "Item 1" "Item 2"
            }
        }
        plot2d(xmin:-5 , xmax: 5){
            curve{ // supports plot
                f(x):sin(x)
                title:'sin' , color:red
            }
        }
        // supports LATEX
        eq("f_1(x)=\int_x \sin(x^2)",font-size:5%P)
        uml(// supports PLANTUML
            """
                left to right direction
                actor "Food Critic" as fc
                rectangle Restaurant {
                  usecase "Eat Food" as UC1
                }
                fc --> UC1
            """
        )
    }
}
```



Simple Text

```
Hello World
```

```
plain("Hello World")
```

Hello World

```
plain("Hello World",font-italic)
```

Hello
World

```
plain(
          "
              Hello
              World
          "
     ,font-bold)
```

```
Hello  World
This    Is    Me
```

```
plain(
          "
              Hello
              World
          "
       font-family: monospaced
     )
```

NTF format

Hello World

```
ntf(
"""
##Hello## ### World ###
"""
)
```

color 1 color 2
color 3 color
italic hint

```
ntf(
"""
    ##:p1:color 1## ##:p2:color 2##
    ##:p3:color 3## ##:p10:color 4##
    ##:/:italic## ##:info hint##
"""
)
```

Latex Equations

$X^2 = \sin(\pi x)$

```
eq("X^2=\sin(\pi x)")
```

Latex math expressions are supported out of the box...

$X^2 = \sin(\pi x)$

```
eq("X²=\sin(πx)")
```

you can use superscripts and subscripts and custom symbols...

$X^2 = \sin(\pi x)$

```
"[[eq: X^2=\sin(x) ]]"
```

you can embed eq in a string...

Equation 1 (sup

$X^2 = \sin(\pi x)$

Equation 2 =

$X^2 = \sin(\pi x)$

Equation 3 =

$X^2 = \sin(x)$

```
"""
    ##Equation 1 (superscript)## =
    [[eq: X²=\sin(πx) ]]
    ###Equation 2### =
    [[eq: X^2=\sin \left( \pi x \rig
    ####Equation 3#### =
    [[eq: X^2=\sin(x) ]]
"""
```

you can embed eq in a string...

Source Code

```
public static class
MyClass{
    int value = 10;
    int add(int b){
        value++;
    }
}
```

```
source(java
"""
    public static class
    MyClass{
        int value = 10;
        int add(int b){
            value++;
        }
    }
"""
)
```

```
Select *
From Tab
Where 1=1
```

```
source(sql
"""
    Select *
    From Tab
    Where 1=1
"""
)
```

```
<a value="text">
  <b value="text"></b>
</a>
```

```
source(xml
"""
    <a value="text">
      <b value="text"></b>
    </a>
"""
)
```

```
text, java,
c#, c++
xml,html,json
bash,fish,cmd
sql,
hd, ntf,hadra,
tson,ntexup
```

Supported Languages

Rich Text

Hello World

Hello World

Hello World

Hello World

```
"Hello World"
text("Hello World")
text("Hello World",font-italic)
text("Hello World",font-bold)
```

Bold X
Italic Y
#Title 1#
Title 2
Title 3

```
"""
    **Bold X**
    __Italic Y__
    #Title 1#
    ##Title 2##
    ###Title 3###
"""
```

hello world

```
"""
    [[ntf: ##:p1: hello##]] world
"""
```

Equation 1 (with su

$X^2 = \sin(\pi x)$

Equation 2 =

$X^2 = \sin(\pi x)$

Equation 3 =

$X^2 = \sin(x)$

```
"""
    #Equation 1# =
    [[eq: X²=\sin(πx) ]]
    ##Equation 2## =
    [[eq: X^2=\sin \left( \pi x \righ
    ###Equation 3### =
    [[eq: X^2=\sin(x) ]]
"""
```

Bullets

- Hello World
- Hello World
- Hello World

```
ul{
    ¶ Hello ##World##
    ¶ Hello ###World###
    ¶ Hello ####World####
}
```

- Hello World
  - Sub 1
  - Sub 2
- Hello World
- Hello World

```
ul{
    ¶ Hello ##World##
    ul{
        ¶ Sub 1
        ¶ Sub 2
    }
    ¶ Hello ###World###
    ¶ Hello ####World####
}
```

I. Hello World

  1. Sub 1

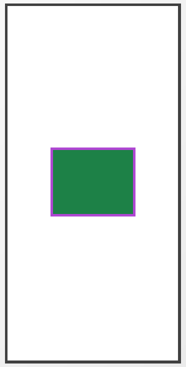
  2. Sub 2

II. Hello World

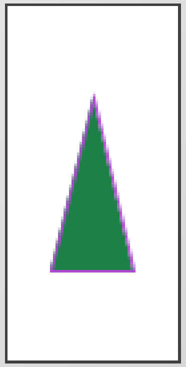
III. Hello World

```
ol{
    ¶ Hello ##World##
    ol{
        ¶ Sub 1
        ¶ Sub 2
    }
    ¶ Hello ###World###
    ¶ Hello ####World####
}
```

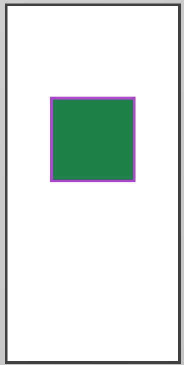
Shapes



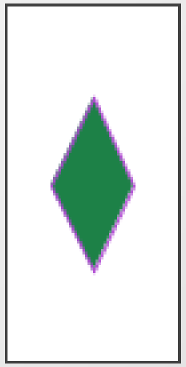
```
rectangle()
```



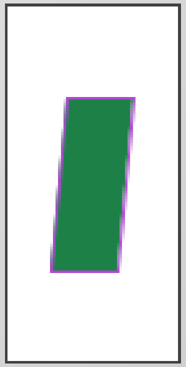
```
triangle()
```



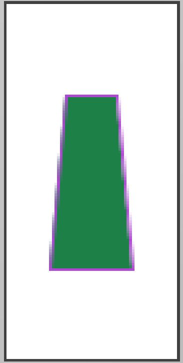
```
square()
```



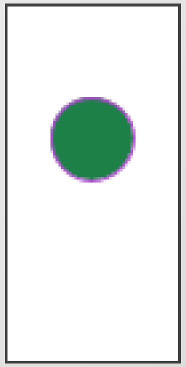
```
rhombus()
diamond()
```



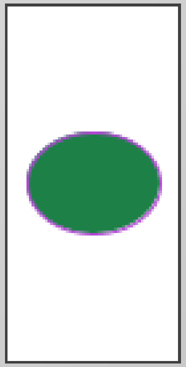
```
parallelogram()
```



```
trapezoid()
```

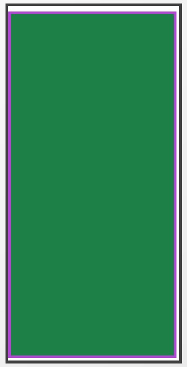


```
circle()
```

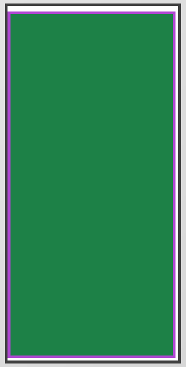


```
ellipse(size:(80,30))
```

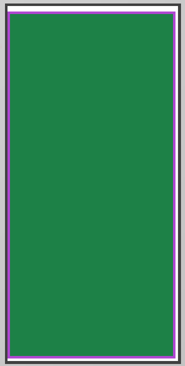
Sizes



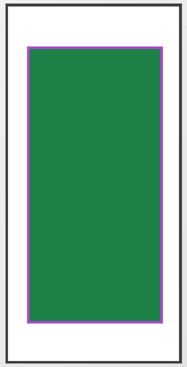
```
rectangle()
```



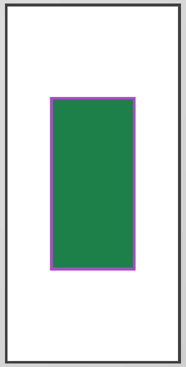
```
rectangle(size:(100,100))
```



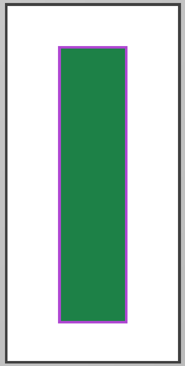
```
rectangle(size:100)
```



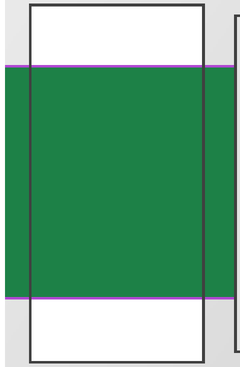
```
rectangle(size:80)
```



```
rectangle(size:50)
```

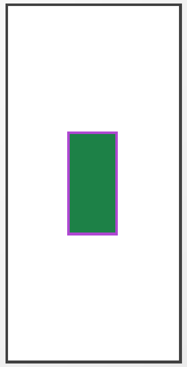


```
rectangle(size:(40,80))
```

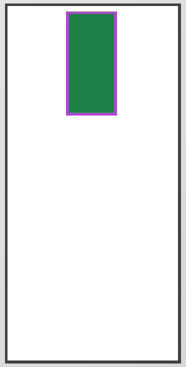


```
rectangle(size:15%P)
```

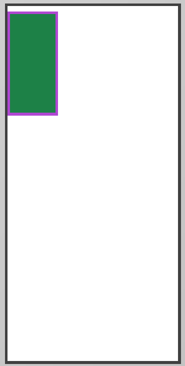
Positions



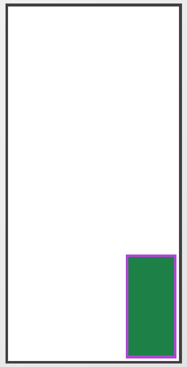
```
rectangle(at:center)
```



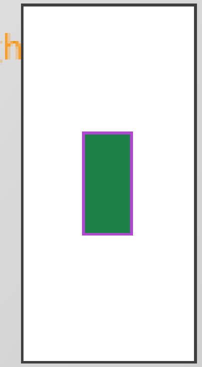
```
rectangle(at:top)
```



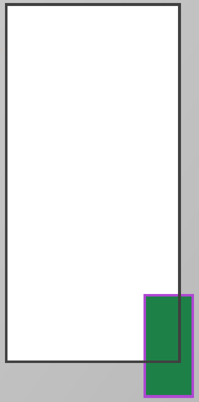
```
rectangle(at:top-left)
```



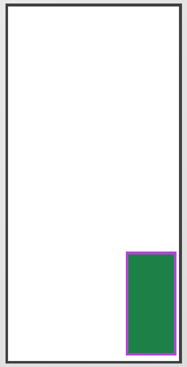
```
rectangle(at:bottom-righ
```



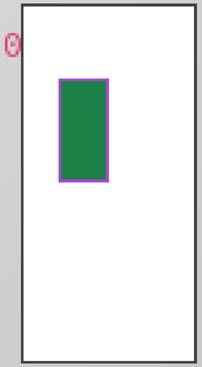
```
rectangle(origin:(50,50)
     position:(50,50))
```



```
rectangle(origin:(60,60)
     position:(100,100))
```

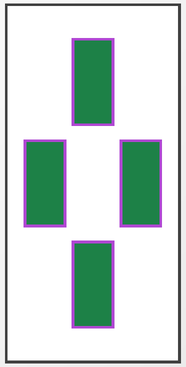


```
rectangle(origin:(100,10
     position:(100,100))
```

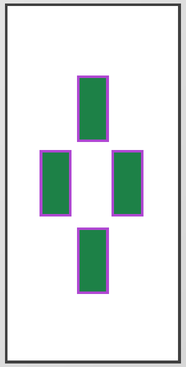


```
rectangle(origin:(100,100)
     position:(50,50))
```

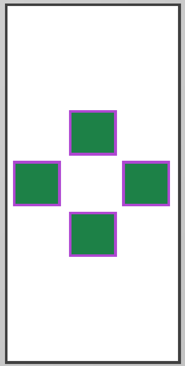
Margins



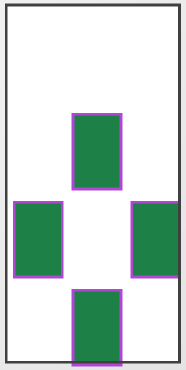
```
rectangle(margin:10)
```



```
rectangle(margin:20)
```

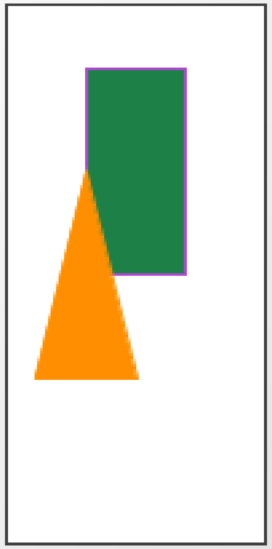


```
rectangle(margin:(5,30))
```

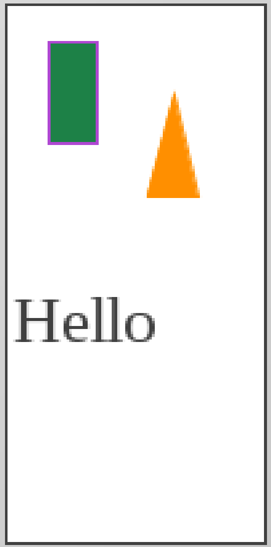


```
rectangle(margin:(5,30,0,0))
```

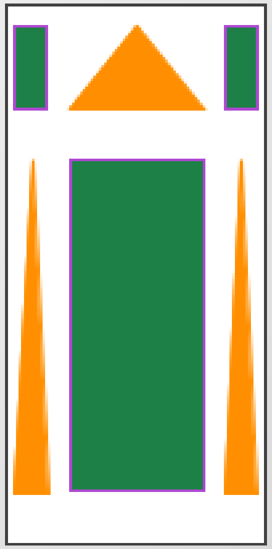
Layout



```
group{
    rectangle(at:top, size:(50,50),
        background:themeColors[4])
    triangle(at:left, size:(50,50),
        background:themeColors[5])
}
```

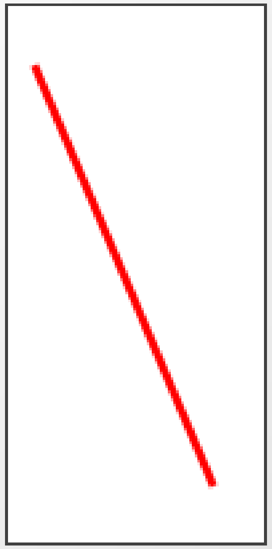


```
grid((2,2)){
    rectangle(at:top, size:(50,50),
        background:themeColors[4])
    triangle(at:left, size:(50,50),
        background:themeColors[5])
    "Hello"
}
```

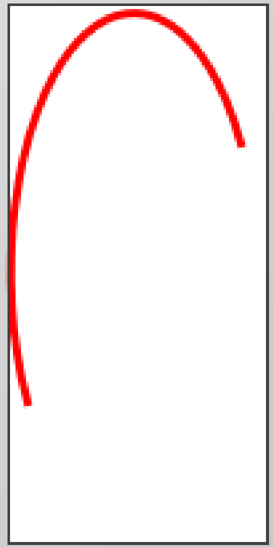


```
grid((3,2),
    columns-weight:[1,4],
    rows-weight:[1,4]){
        rectangle()
        triangle()
        rectangle()
        triangle()
        rectangle()
        triangle()
}
```

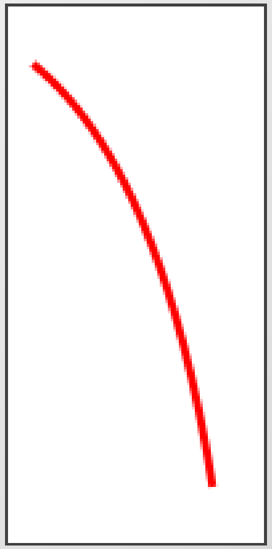
Lines



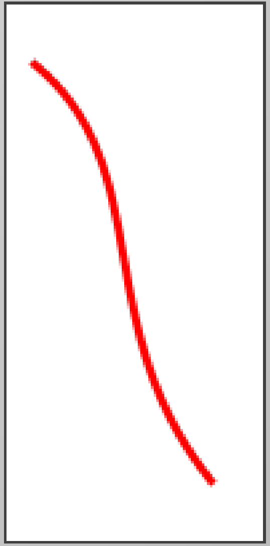
```
line(from:(0,0), to:(80,20))
```



```
arc(from:30, to:180)
```

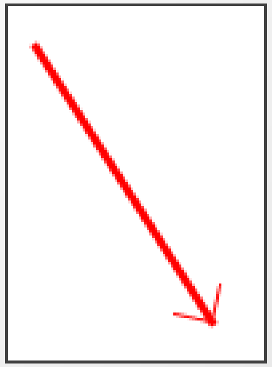


```
quad-curve(
    from:(10,10),
    ctrl:(60,30)
    to:(80,90),
)
```

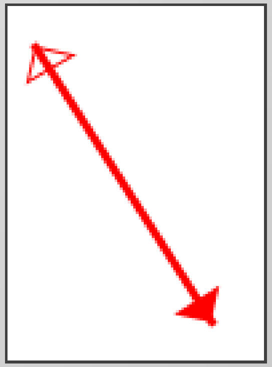


```
cubic-curve(
from:(10,10),
ctrl1:(60,30),
ctrl2:(30,60)
to:(80,90),
)
```

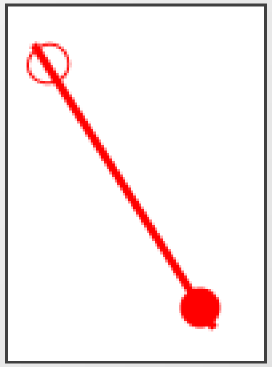
Arrows



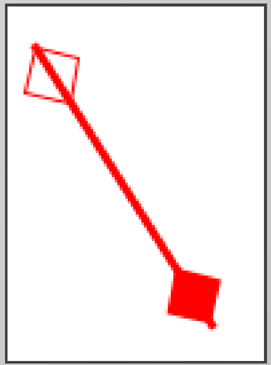
```
line(
    from:(10,10), to:(80,90)
    end-arrow:simple()
)
```



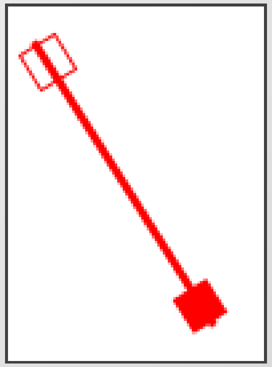
```
line(
    from:(10,10), to:(80,90)
    start-arrow:triangle()
    end-arrow:triangle-full()
)
```



```
line(
    from:(10,10), to:(80,90)
    start-arrow:circle()
    end-arrow:circle-full()
)
```

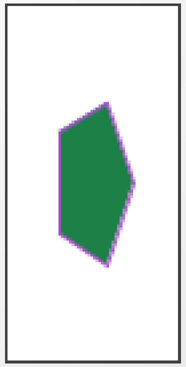


```
line(
    from:(10,10), to:(80,90)
    start-arrow:diamond()
    end-arrow:diamond-full()
)
```

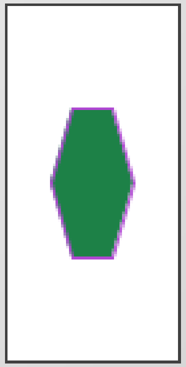


```
line(
    from:(10,10), to:(80,90)
    start-arrow:rectangle()
    end-arrow:rectangle-full()
)
```

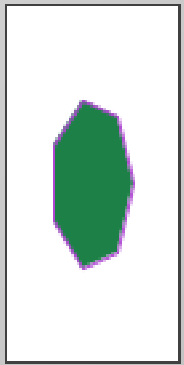
Polygons



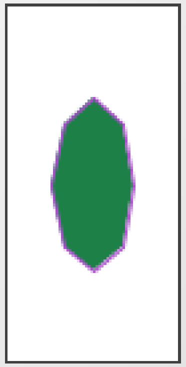
```
pentagon()
```



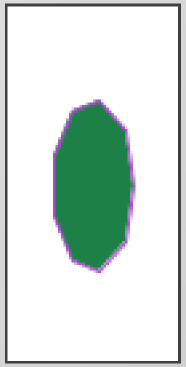
```
hexagon()
```



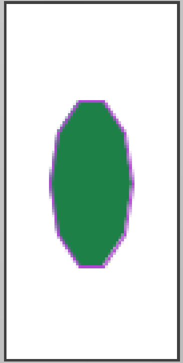
```
heptagon()
```



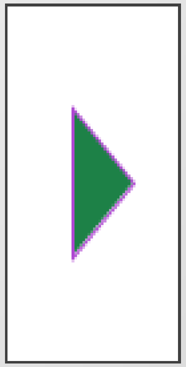
```
octagon()
```



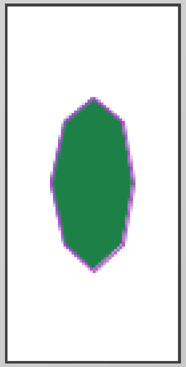
```
nonagon()
```



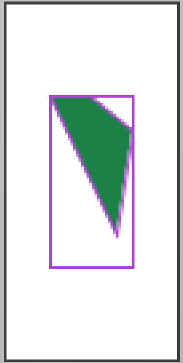
```
decagon()
```



```
polygon()
```

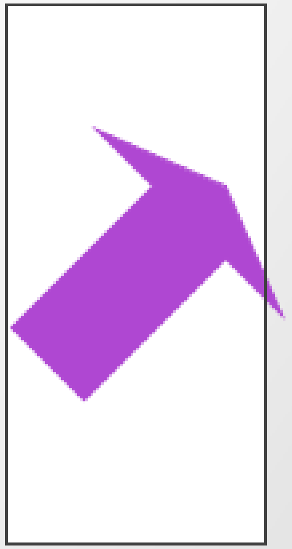


```
polygon(count:8)
```

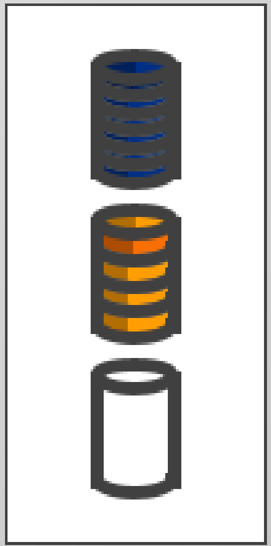


```
polygon(points:[
(0,0),(50,0),
(100,80),(50,50)
])
```

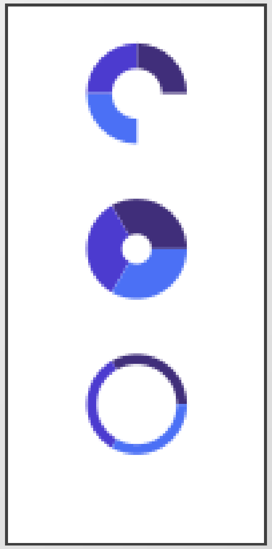
Other Shapes



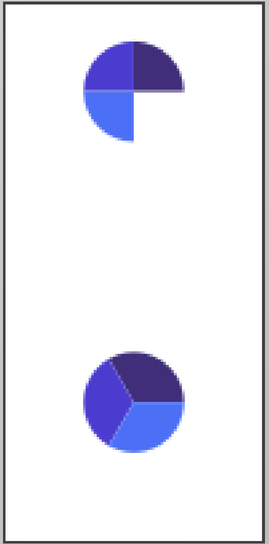
```
arrow(at: center,rotate:-45)
```



```
cylinder(ellipse-height:20,
  segment-count:5)
cylinder(ellipse-height:20,
  segment-count:3)
cylinder(ellipse-height:20)
```

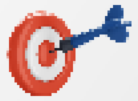


```
donut (inner-radius:50,
  start-angle:0,extent-angle:270)
donut (inner-radius:30)
donut (inner-radius:80)
```



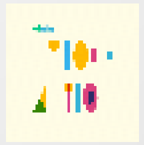
```
pie()
pie(start-angle:0,extent-angle:270)
```

Images



```
image("../../../images/image.png")
```

```
image("../../../images/image.jpg")
```



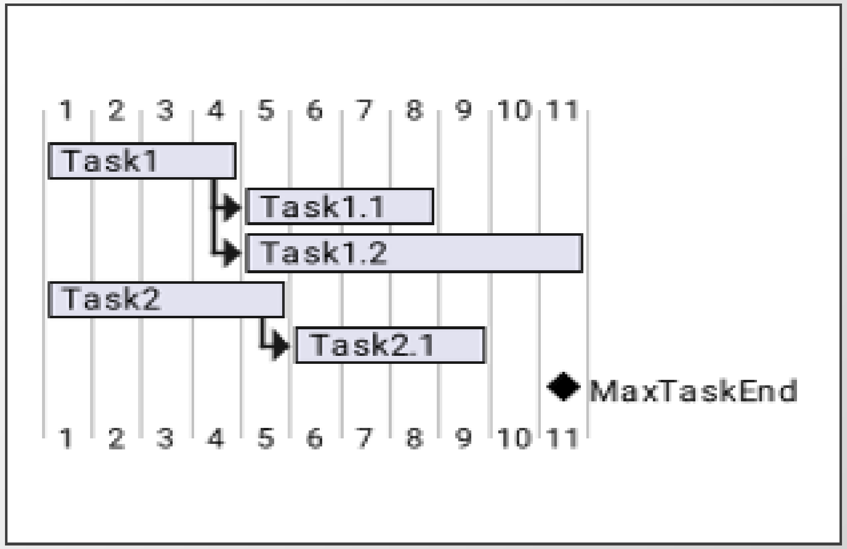
```
image("../../../images/image.gif")
```

```
image("../../../images/image.svg")
```

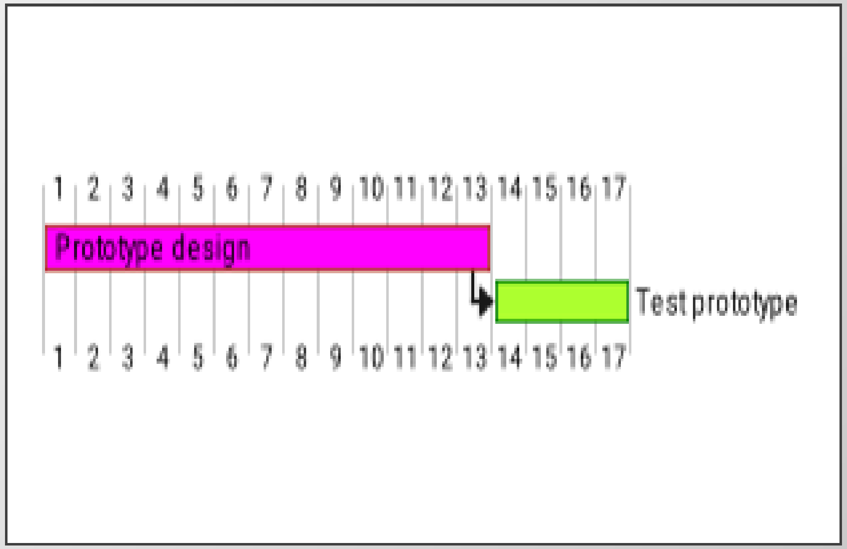
```
image("../../../images/image.avif")
```

```
image("../../../images/image.webp")
```

Gantt Diagrams

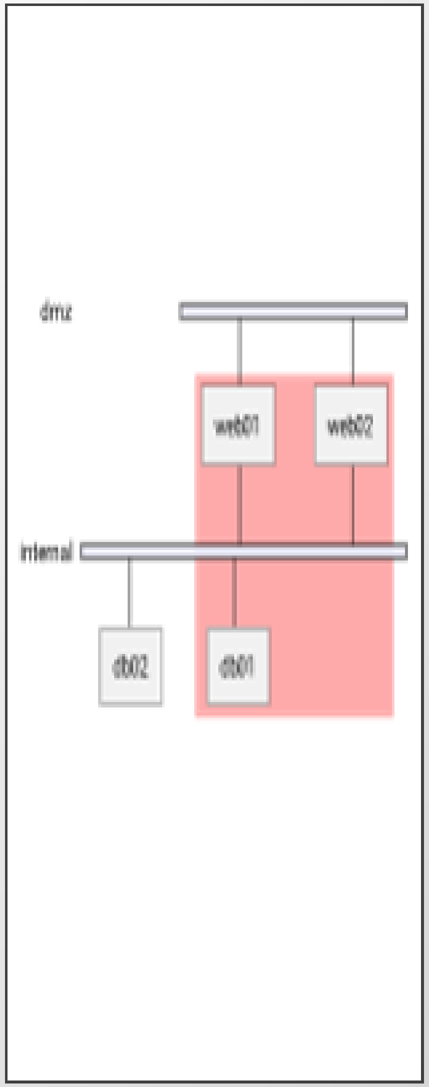


```
gantt(
    """
        [Task1] requires 4 days
        then [Task1.1] requires 4 days
        [Task1.2] starts at [Task1]'s end and requires 7 da
        [Task2] requires 5 days
        then [Task2.1] requires 4 days
        [MaxTaskEnd] happens at [Task1.1]'s end
        [MaxTaskEnd] happens at [Task1.2]'s end
        [MaxTaskEnd] happens at [Task2.1]'s end
    """
)
```

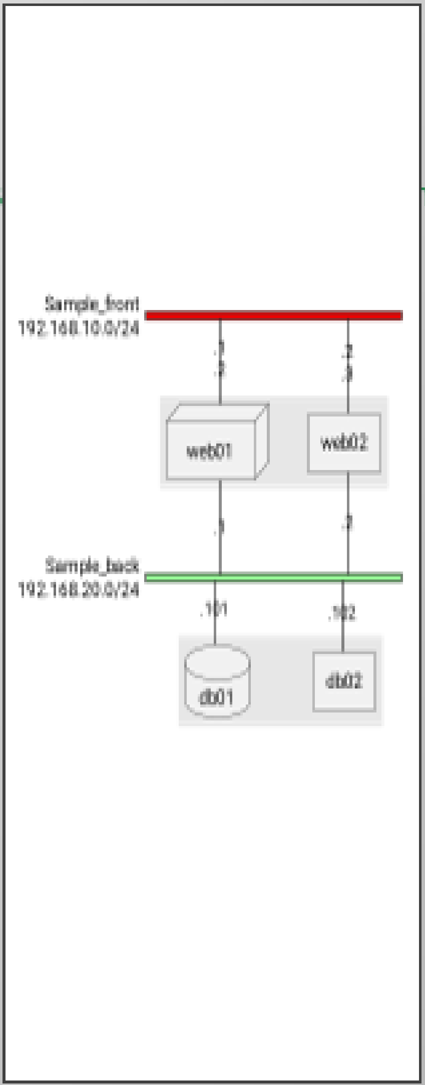


```
gantt(
    """
        [Prototype design] requires 13 days
        [Test prototype] requires 4 days
        [Test prototype] starts at [Prototype design]'s end
        [Prototype design] is colored in Fuchsia/FireBrick
        [Test prototype] is colored in GreenYellow/Green
    """
)
```

Network Diagrams

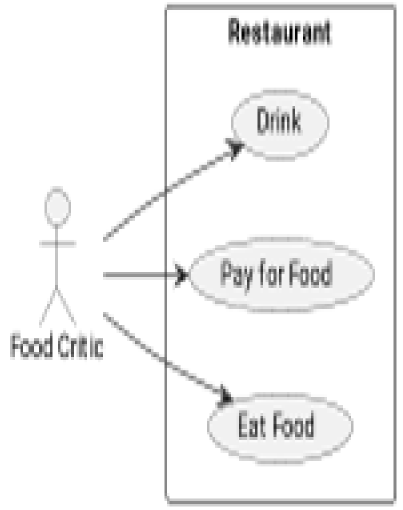


```
nwdiag(
    """
        // define group outs
        group {
          color = "#FFAAAA";
          web01;
          web02;
          db01;
        }
        network dmz {
          web01;
          web02;
        }
        network internal {
          web01;
          web02;
          db01;
          db02;
        }
    """
)
```

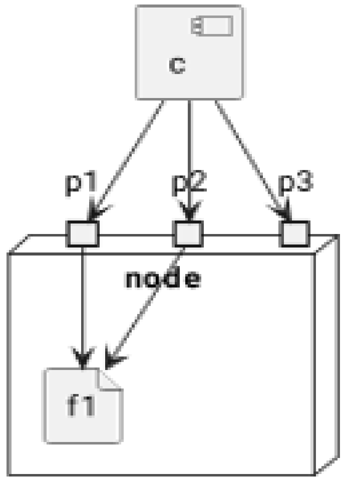


```
nwdiag(
    """
        network Sample_front {
          address = "192.168.
          color = "red"
          // define group
          group web {
            web01 [address =
            web02 [address =
          }
        }
        network Sample_back {
          address = "192.168.
          color = "palegreen"
          web01 [address = ".
          web02 [address = ".
          db01 [address = ".1
          db02 [address = ".1
          // define network
          group db {
            db01;
            db02;
          }
        }
    """
)
```

UML Use Case

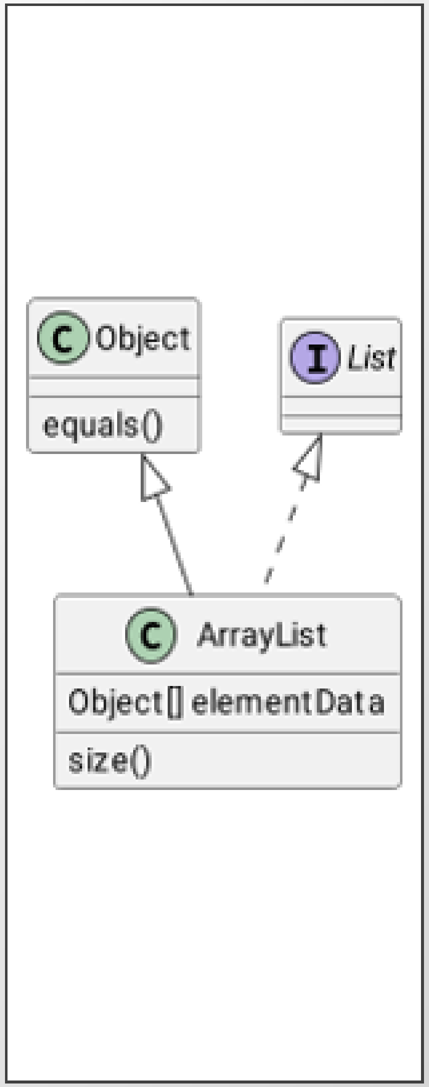


```
uml(
    """
        left to right directio
        actor "Food Critic" as
        rectangle Restaurant {
          usecase "Eat Food" a
          usecase "Pay for Foo
          usecase "Drink" as U
        }
        fc --> UC1
        fc --> UC2
        fc --> UC3
    """
)
```

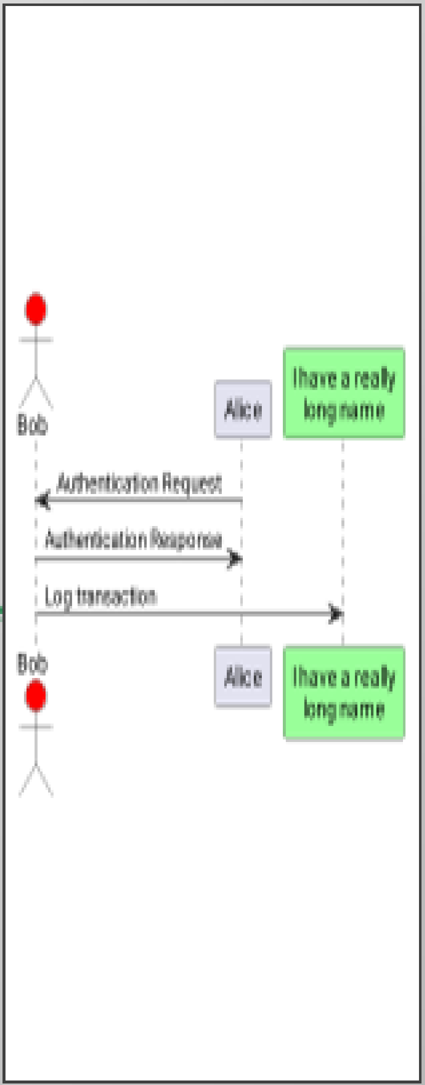


```
uml(
    """
        [c]
        node node {
          port p1
          port p2
          port p3
          file f1
        }
        c --> p1
        c --> p2
        c --> p3
        p1 --> f1
        p2 --> f1
    """
)
```

UML Classes

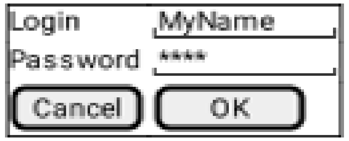


```
uml(
    """
        Object <|-- ArrayList
        List <|.. ArrayList
        interface List
        Object : equals()
        ArrayList : Object[] e
        ArrayList : size()
    """
)
```

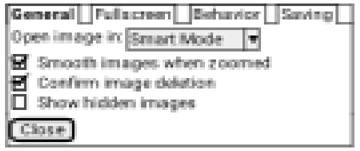


```
uml(
    """
        actor Bob #red
        ' The only difference b
        'and participant is the
        participant Alice
        participant "I have a r
        /' You can also declare
           participant L as "I
          '/
        Alice->Bob: Authenticat
        Bob->Alice: Authenticat
        Bob->L: Log transaction
    """
)
```

Wireframe Diagrams


Login MyName
Password ****

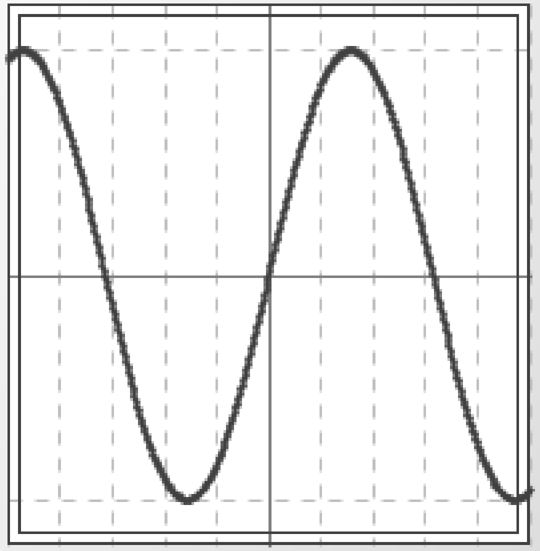
```
wireframe(
    """
       Login    | "MyName   "
       Password | "****     "
       [Cancel] | [   OK    ]
    """
)
```



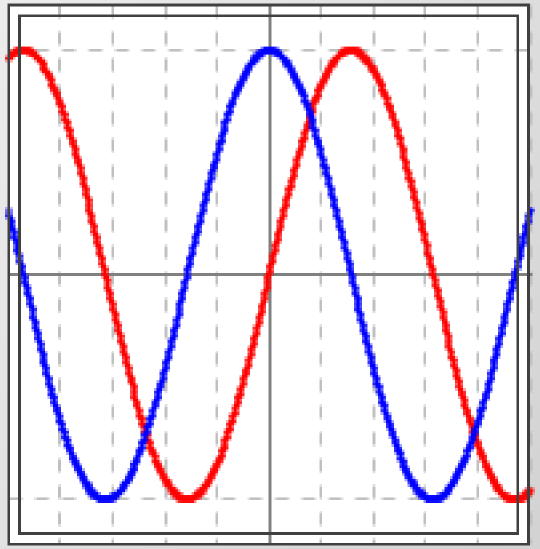
Open image in: Smart Mode
[X] Smooth images when zoomed
[X] Confirm image deletion
[ ] Show hidden images

```
wireframe(
    """
        {+
        {/ <b>General | Fullscr
        {
        { Open image in: | ^Sma
        [X] Smooth images when
        [X] Confirm image delet
        [ ] Show hidden images
        }
        [Close]
        }
     """
)
```

Plot lines



```
plot2d(xmin:-5 , xmax: 5){
    curve {
        f(x):sin(x)
    }
}
```



```
plot2d(xmin:-5 , xmax: 5){
    curve{
        f(x):sin(x)
        title:'sin'
        color:red
    }
    curve{
        f(x):cos(x)
        title:'cos'
        color:blue
    }
}
```

Test me

open the following file

<ntexup_gitroot>/documentation/ntexup-doc/02-pages/9999-conclusion/0110-te

and try to write some things there...

Thank you

taha.bensalah@gmail.com