Test Book

This book contains some special notebook cells that Open Education Project supports.

General cell tests are supported by [Jupyter Book](#).

1. Special Displays

In this part of this book we will cover some cells that have special displays.

List:

- 1 - A sample image that use customized styles
- 2 - Display String in customized styles
- 3 - Display terminal shell command results
- 4 - Display bash command in customized styles
- 5 - Use HTML and CSS to customize styles

1.1. A sample image that use customized styles

Figure: A Sample Image that use special style

1.2. Display String in customized styles

0b10101110 = 0xAE

1.3. Display terminal shell command results

```
$ hello

Command 'hello' not found, but can be installed with:

snap install hello          # version 2.10, or
apt  install hello          # version 2.10-2ubuntu2
apt  install hello-traditional  # version 2.10-5

See 'snap info hello' for additional versions.

$
```

1.4. Display bash command in customized styles

```
$ help
GNU bash, version 5.0.17(1)-release (x86_64-pc-linux-gnu)
These shell commands are defined internally.  Type `help' to see this list.
Type `help name' to find out more about the function `name'.
Use `info bash' to find out more about the shell in general.
Use `man -k' or `info' to find out more about commands not in this list.

A star (*) next to a name means that the command is disabled.

 job_spec [&]                            history [-c] [-d offset] [n] or hist>
 (( expression ))                        if COMMANDS; then COMMANDS; [ elif C>
 . filename [arguments]                  jobs [-lnprs] [jobspec ...] or jobs >
 :                                       kill [-s sigspec | -n signum | -sigs>
 [ arg... ]                              let arg [arg ...]
 [[ expression ]]                        local [option] name[=value] ...
 alias [-p] [name[=value] ... ]          logout [n]
 bg [job_spec ...]                       mapfile [-d delim] [-n count] [-O or>
 bind [-lpsvPSVX] [-m keymap] [-f file>  popd [-n] [+N | -N]
 break [n]                               printf [-v var] format [arguments]
 builtin [shell-builtin [arg ...]]       pushd [-n] [+N | -N | dir]
 caller [expr]                           pwd [-LP]
 case WORD in [PATTERN [| PATTERN]...)>  read [-ers] [-a array] [-d delim] [->
 cd [-L|[-P [-e]] [-@]] [dir]            readarray [-d delim] [-n count] [-O >
 command [-pVv] command [arg ...]        readonly [-aAf] [name[=value] ...] o>
 compgen [-abcdefgjksuv] [-o option] [>  return [n]
 complete [-abcdefgjksuv] [-pr] [-DEI]>  select NAME [in WORDS ... ;] do COMM>
 compopt [-o|+o option] [-DEI] [name .>  set [-abefhkmnptuvxBCHP] [-o option->
 continue [n]                            shift [n]
 coproc [NAME] command [redirections]    shopt [-pqsu] [-o] [optname ...]
 declare [-aAfFgilnrtux] [-p] [name[=v>  source filename [arguments]
 dirs [-clpv] [+N] [-N]                  suspend [-f]
 disown [-h] [-ar] [jobspec ... | pid >  test [expr]
 echo [-neE] [arg ...]                   time [-p] pipeline
 enable [-a] [-dnps] [-f filename] [na>  times
 eval [arg ...]                          trap [-lp] [[arg] signal_spec ...]
 exec [-cl] [-a name] [command [argume>  true
 exit [n]                                type [-afptP] name [name ...]
 export [-fn] [name[=value] ...] or ex>  typeset [-aAfFgilnrtux] [-p] name[=v>
 false                                   ulimit [-SHabcdefiklmnpqrstuvxPT] [l>
 fc [-e ename] [-lnr] [first] [last] o>  umask [-p] [-S] [mode]
 fg [job_spec]                           unalias [-a] name [name ...]
 for NAME [in WORDS ... ] ; do COMMAND>  unset [-f] [-v] [-n] [name ...]
 for (( exp1; exp2; exp3 )); do COMMAN>  until COMMANDS; do COMMANDS; done
 function name { COMMANDS ; } or name >  variables - Names and meanings of so>
 getopts optstring name [arg]            wait [-fn] [id ...]
 hash [-lr] [-p pathname] [-dt] [name >  while COMMANDS; do COMMANDS; done
 help [-dms] [pattern ...]               { COMMANDS ; }
runner@fv-az200-325:~$
```

1.5. Use HTML and CSS to customize styles

This is the example of image overlapping with backgrounds.

This is some sample texts.: This is some sample texts.This is some sample texts.This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts. This is some sample texts.

2. Animation Examples

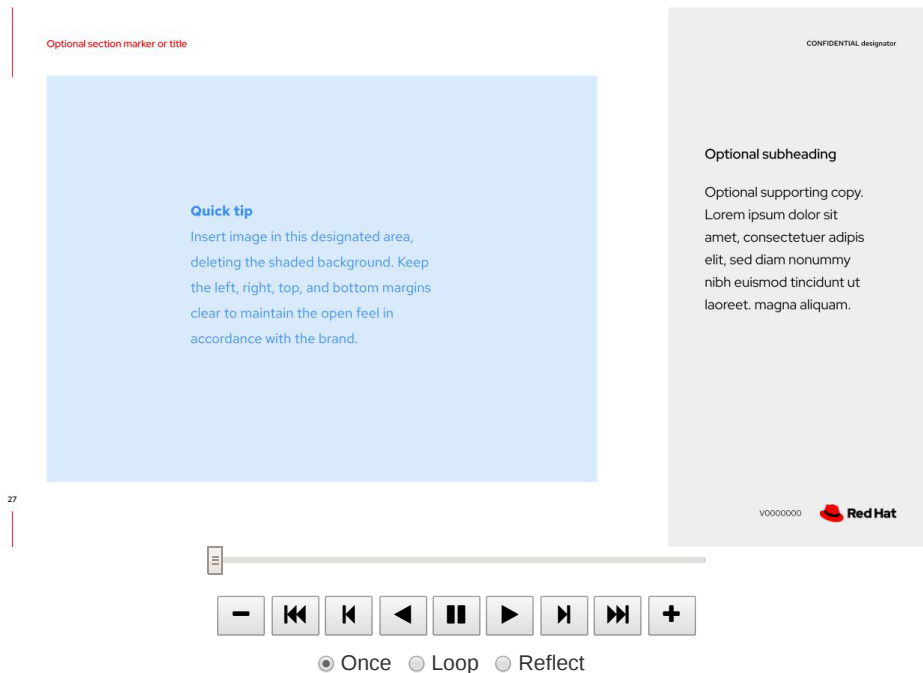In this part of this book we will cover some special animated cells.

List:

- 1 - Display bytes in special styles
- 2 - Display series of slide images

- 3 - Display html table
- 4 - Display iframe - other website
- 5 - Display iframe - other interactive media player
- 6 - Display iframe - interactive terminal media player

2.1. Display bytes in special styles

[b_7	b_6	b_5	b_4	b_3	b_2	b_1	b_0]
1	0	1	0	1	1	1	0

2.2. Display series of slide images

● Once ○ Loop ○ Reflect

2.3. Display html table

Table Shell Control Operators

Control Operator	Description
newline	End of line
||	Or list operator
&&	And list operator
;	Sequential list operator
|	Pipe Operator
&	Background Operator
(	Subshell list begin Operator
)	Subshell list end Operator
;;	Case statement end matching Operator
;&	Case statement fall through Operator
;;&	Case statement continue matching Operator

2.4. Display iframe - other website

```
display(IFrame("https://en.wikipedia.org/wiki/List_of_Unix_commands", height=600,
width="100%"))
```

List of Unix commands

This is a list of Unix commands as specified by IEEE Std 1003.1-2008, which is part of the Single UNIX Specification (SUS). These commands can be found on Unix operating systems and most Unix-like operating systems.

Utilities listed in POSIX.1-2017

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IEEE Std 1003.1-2008 utilities

Name	Category	Status (Option code)	Description	First appeared
admin	SCCS	Optional (XSI)	Create and administer SCCS files	PWB UNIX
alias	Misc	Mandatory	Define or display aliases	
ar	Misc	Mandatory	Create and maintain library archives	Version 1

2.5. Display iframe - other interactive media player

```
display(HTML('''
<iframe src="https://jappavoo.github.io/SOL6502/index.html", height="980px"
width="100%"></iframe>
'''))
```

CPU - SOL 6502

General Purpose Registers

Index X

Index Y

Accumulator A

Stack Pointer S

Procersor Status P

NV BDIZC

Operation

Addr Mode

The Loop!
Fetch

Execute   Decode

IR   PC 0000000000000000

Data Bus Buffer 00000000   Address Bus Buffer 0000000000000000

Memory Buses and Decoder

Input Device   **Output Device**

RAM/ROM (Memory)

help step run halt reset Load img: ▼

Animation On: ☑ Speed:

SOL6502 ASCII CONSOLE TERMINAL: device address 1111111100000000

Status:

clear

2.6. Display iframe - interactive terminal media player

Source code: https://jappavoo.github.io/SOL6502

```
display(HTML('''
<iframe src="https://jappavoo.github.io/SOL6502/asciinema/atest.html",
height="600x" width="100%"></iframe>
'''))
```

00:00