

Information

RAM Info

```
In [0]: !cat /proc/meminfo
```

MemTotal:	13335276	kB
MemFree:	4100312	kB
MemAvailable:	11245716	kB
Buffers:	99588	kB
Cached:	6936900	kB
SwapCached:	0	kB
Active:	1691180	kB
Inactive:	6867788	kB
Active(anon):	1370056	kB
Inactive(anon):	12648	kB
Active(file):	321124	kB
Inactive(file):	6855140	kB
Unevictable:	0	kB
Mlocked:	0	kB
SwapTotal:	0	kB
SwapFree:	0	kB
Dirty:	308	kB
Writeback:	4	kB
AnonPages:	1522444	kB
Mapped:	983000	kB
Shmem:	13204	kB
Slab:	342624	kB
SReclaimable:	294580	kB
SUnreclaim:	48044	kB
KernelStack:	4656	kB
PageTables:	12836	kB
NFS_Unstable:	0	kB
Bounce:	0	kB
WritebackTmp:	0	kB
CommitLimit:	6667636	kB
Committed_AS:	3580880	kB
VmallocTotal:	34359738367	kB
VmallocUsed:	0	kB
VmallocChunk:	0	kB
AnonHugePages:	0	kB
ShmemHugePages:	0	kB
ShmemPmdMapped:	0	kB
HugePages_Total:	0	
HugePages_Free:	0	
HugePages_Rsvd:	0	
HugePages_Surp:	0	
Hugepagesize:	2048	kB
DirectMap4k:	280564	kB

DirectMap2M: 7059456 kB
DirectMap1G: 8388608 kB

In [0]:

CPU Info

```
In [0]: !cat /proc/cpuinfo
```

```

processor      : 0
vendor_id     : GenuineIntel
cpu family    : 6
model         : 79
model name    : Intel(R) Xeon(R) CPU @ 2.20GHz
stepping      : 0
microcode     : 0x1
cpu MHz       : 2200.000
cache size    : 56320 KB
physical id   : 0
siblings      : 2
core id       : 0
cpu cores     : 1
apicid        : 0
initial apicid : 0
fpu           : yes
fpu_exception : yes
cpuid level   : 13
wp            : yes
flags         : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mm
x fxsr sse sse2 ss ht syscall nx pdpe1gb rdtscp lm constant_tsc rep_good nopl xtopology nonstop_tsc
cpuid tsc_known_freq pni pclmulqdq ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe popcnt aes xsave a
vx fl6c rdrand hypervisor lahf_lm abm 3dnowprefetch invpcid_single pti ssbd ibrs ibpb stibp fsgsbase
tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm rdseed adx smap xsaveopt arat arch_capabilities
bugs          : cpu_meltdown spectre_v1 spectre_v2 spec_store_bypass l1tf
bogomips      : 4400.00
clflush size  : 64
cache_alignm  : 64
address sizes : 46 bits physical, 48 bits virtual
power management:

```

```

processor      : 1
vendor_id     : GenuineIntel
cpu family    : 6
model         : 79
model name    : Intel(R) Xeon(R) CPU @ 2.20GHz
stepping      : 0
microcode     : 0x1
cpu MHz       : 2200.000
cache size    : 56320 KB
physical id   : 0
siblings      : 2
core id       : 0

```

```

cpu cores      : 1
apicid         : 1
initial apicid : 1
fpu            : yes
fpu_exception  : yes
cpuid level    : 13
wp             : yes
flags          : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mm
x fxsr sse sse2 ss ht syscall nx pdpe1gb rdtscp lm constant_tsc rep_good nopl xtopology nonstop_tsc
cpuid tsc_known_freq pni pclmulqdq ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe popcnt aes xsave a
vx fl6c rdrand hypervisor lahf_lm abm 3dnowprefetch invpcid_single pti ssbd ibrs ibpb stibp fsgsbase
tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm rdseed adx smap xsaveopt arat arch_capabilities
bugs           : cpu_meltdown spectre_v1 spectre_v2 spec_store_bypass l1tf
bogomips       : 4400.00
clflush size   : 64
cache_alignment : 64
address sizes   : 46 bits physical, 48 bits virtual
power management:

```

GPU Info

In [0]: !nvidia-smi

Sat Jul 20 10:23:39 2019

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+									
NVIDIA-SMI 418.67				Driver Version: 410.79				CUDA Version: 10.0	
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+									
GPU	Name		Persistence-M		Bus-Id	Disp.A	Volatile Uncorr. ECC		
Fan	Temp	Perf	Pwr:Usage/Cap		Memory-Usage		GPU-Util	Compute M.	
=====+=====+=====+=====+=====+=====+=====+=====+=====+=====									
0	Tesla	T4	Off		00000000:00:04.0 Off				0
N/A	68C	P0	31W / 70W		464MiB / 15079MiB		0%	Default	
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+									
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+									
Processes:								GPU Memory	
GPU	PID	Type	Process name					Usage	
=====+=====+=====+=====+=====+=====+=====+=====+=====+=====									
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+									

Current Directory

```
In [0]: !pwd
```

```
/content
```

Download A File

```
In [0]: !wget http://nlp.stanford.edu/data/glove.6B.zip
```

```
--2019-07-20 10:33:46--  http://nlp.stanford.edu/data/glove.6B.zip
Resolving nlp.stanford.edu (nlp.stanford.edu)... 171.64.67.140
Connecting to nlp.stanford.edu (nlp.stanford.edu)|171.64.67.140|:80... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://nlp.stanford.edu/data/glove.6B.zip [following]
--2019-07-20 10:33:46--  https://nlp.stanford.edu/data/glove.6B.zip
Connecting to nlp.stanford.edu (nlp.stanford.edu)|171.64.67.140|:443... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: http://downloads.cs.stanford.edu/nlp/data/glove.6B.zip [following]
--2019-07-20 10:33:47--  http://downloads.cs.stanford.edu/nlp/data/glove.6B.zip
Resolving downloads.cs.stanford.edu (downloads.cs.stanford.edu)... 171.64.64.22
Connecting to downloads.cs.stanford.edu (downloads.cs.stanford.edu)|171.64.64.22|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 862182613 (822M) [application/zip]
Saving to: 'glove.6B.zip'

glove.6B.zip          100%[=====>] 822.24M  25.4MB/s   in 33s

2019-07-20 10:34:20 (24.9 MB/s) - 'glove.6B.zip' saved [862182613/862182613]
```

Git

```
In [0]: !rm -rf /content/docs
```



```
In [0]: !git clone https://github.com/tensorflow/docs.git
%cd docs
!ls

%cd
```

```
Cloning into 'docs'...
remote: Enumerating objects: 37, done.
remote: Counting objects: 100% (37/37), done.
remote: Compressing objects: 100% (25/25), done.
remote: Total 86773 (delta 19), reused 21 (delta 12), pack-reused 86736
Receiving objects: 100% (86773/86773), 64.93 MiB | 15.80 MiB/s, done.
Resolving deltas: 100% (65423/65423), done.
/root/docs
AUTHORS  CODEOWNERS  CONTRIBUTING.md  LICENSE  README.md  setup.py  site  tools
/root
```

Markdown

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

Paragraph text Inline Code text

~~Mistaken text.~~

Italics

Bold

Tasks

- ☐ a task list item
 - ☐ list syntax required
 - ☐ normal **formatting**
 - ☐ incomplete
 - ☒ completed
-

Code Blocks

4 space indentation
makes full-width
standard code blocks

```
var now = new Date();

var days = new Array('Sunday','Monday','Tuesday','Wednesday','Thursday','Friday','Saturday');

var months = new Array('January','February','March','April','May','June','July','August','September','October','November','December');

var date = ((now.getDate()<10) ? "0" : "")+ now.getDate();

function fourdigits(number) {
    return (number < 1000) ? number + 1900 : number;
}

today = days[now.getDay()] + ", " +
        months[now.getMonth()] + " " +
        date + ", " +
        (fourdigits(now.getYear())) ;

document.write(today);

#sc_drag_area {
    height:100px;
    left:150px;
    position: absolute;
    top:100px;
    width:250px;
    z-index: 9999;
}
```

-
- List item one
 - List item two
 - A nested item

1. Number list item one
 - 1.1. A nested item
2. Number list item two
3. Number list item three

Quote

Second line Quote

Standard link = <http://ghost.org> (<http://ghost.org>).

Custom Text Link (<http://ghost.org>).



TensorFlow

Table

Left-Aligned	Center Aligned	Right Aligned
col 3 is	some wordy text	\$1600
col 2 is	centered	\$12
zebra stripes	are neat	\$1

Equations

$$y_1$$

$$y_2 \mathfrak{t}_i$$

$$z_{3,4}$$

$$y_1$$

$$y_2 \mathfrak{t}_i$$

$$y_3$$

$$x' = x \sin \phi + z \cos \phi$$

$$z' = -x \cos \phi + z \sin \phi$$

$$x = 4$$

$$E = F \cdot s$$

Forms

Forms provide an easy way to parameterize code. From a code cell, select **Insert** → **Add form field**. When you change the value in a form, the corresponding value in the code will change.

In [0]: *##@title String fields*

```
text = 'value' #@param {type:"string"}
dropdown = '1st option' #@param ["1st option", "2nd option", "3rd option"]
text_and_dropdown = 'value' #@param ["1st option", "2nd option", "3rd option"] {allow-input: true}

print(text)
print(dropdown)
print(text_and_dropdown)
```

value
1st option
value

In [0]: *##@title Raw fields*

```
raw_input = None #@param {type:"raw"}
raw_dropdown = raw_input #@param [1, "raw_input", "False", "'string'"] {type:"raw"}

print(raw_input)
print(raw_dropdown)
```

None
None

In [0]: *##@title Date fields*

```
date_input = '2018-03-22' #@param {type:"date"}

print(date_input)
```

2018-03-22

```
In [0]: #@title Number fields
number_input = 10.0 #@param {type:"number"}
number_slider = 1 #@param {type:"slider", min:-1, max:1, step:0.1}

integer_input = 10 #@param {type:"integer"}
integer_slider = 0 #@param {type:"slider", min:0, max:100, step:1}

print(number_input)
print(number_slider)

print(integer_input)
print(integer_slider)
```

10.0
0
10
1

```
In [0]: #@title Boolean fields
boolean_checkbox = True #@param {type:"boolean"}
boolean_dropdown = True #@param ["False", "True"] {type:"raw"}

print(boolean_checkbox)
print(boolean_dropdown)
```

True
True

```
In [0]: #@title ## Markdown
#@markdown You can also include Markdown in forms.

#@markdown ---
#@markdown ### Enter a file path:
file_path = "" #@param {type:"string"}
#@markdown ---
```

Hiding code

You can change the view of the form by selecting **Edit** → **Show/hide code** or using the toolbar above the selected code cell. You can see both code and the form, just the form, or just the code.

```
In [0]: #@title Double click on this line in the code cell. { display-mode: "form" }

option1 = 'A' #@param ["A", "B", "C"]
print('You selected', option1)
```

```
In [0]: #@title After running this cell manually, it will auto-run if you change the selected value. { run:
        "auto" }

option2 = "A" #@param ["A", "B", "C"]
print('You selected', option2)
```

Mounting

```
In [0]: #@title ## Mounting Gdrive

USE_G_COLAB = True #@param {type:"boolean"}

if USE_G_COLAB:
    from google.colab import drive

    drive.mount('/content/drive', force_remount=True)
```



```
In [0]: #@title ## Project Root

root_dir = ''

if USE_G_COLAB:
    root_dir = '/content/drive/My Drive/workshops/2019_07_21/sessions_01/' #@param {type:"string"}
```