

---

---

# Hello “Datetime”

---

---

# datetime Library

hello\_datetime.py

```
#!/usr/bin/python3
from datetime import datetime

now = datetime.now()
print('The dateformat: {}'.format(now))
print ('The year is = {}'.format(now.year))
print ('The month is = {}'.format(now.month))
print ('The day is = {} '.format(now.day))

#           datetime(year, month, day[, hour[, minute[, second[, microsecond[,tzinfo]]]])
#           Y M d h m s ms
that_day = datetime(2017, 3, 1, 17, 9, 21, 832092)
print('The dateformat: {}'.format(that_day))
print ('The year is = {}'.format(that_day.year))
print ('The month is = {}'.format( that_day.month))
print ('The day is = {} '.format(that_day.day))

var = 25
print ("This is .....{}".format(var))
```

# datetime - Library (Cont ...)

[hello\\_datetime.py](#)

```
$ python hello_datetime.py
The dateformat: 2017-06-28 17:49:13.167208
The year is = 2017
The month is = 6
The day is = 28
The dateformat: 2017-03-01 17:09:21.832092
The year is = 2017
The month is = 3
The day is = 1
This is .....25
```

# Difference - datetime

```
root@6879840ae648:/datascience/sessions/eleven# more delta.py
#!/usr/bin/python3
from datetime import datetime
#         datetime(year, month, day[, hour[, minute[, second[, microsecond[, tzinfo]]]])
#         Y M d h m s ms Y M d h m s ms
delta = datetime(2017, 3, 25, 18, 21, 1, 123000) - datetime(2016, 1, 1, 18, 51, 51, 123000)
print(delta)
print (delta.days)
print (delta.seconds)
```

```
root@6879840ae648:/datascience/sessions/eleven# ./delta.py
448 days, 23:29:10
448
84550
```

# timedelta

```
root@6879840ae648:/datascience/sessions/eleven# more timedelta.py
```

```
#!/usr/bin/python3
```

```
from datetime import datetime, timedelta
```

```
start = datetime(2017, 4, 1)
```

```
print (start)
```

```
new_s = start + timedelta (12)
```

```
print (new_s)
```

```
prev_s = start - 2 * timedelta(12)
```

```
print (prev_s)
```

```
root@6879840ae648:/datascience/sessions/eleven# ./timedelta.py
```

```
2017-04-01 00:00:00
```

```
2017-04-13 00:00:00
```

```
2017-03-08 00:00:00
```

```
root@6879840ae648:/datascience/sessions/eleven#
```

# strings and datetime

```
root@6879840ae648:/datascience/sessions/eleven# more str_1.py
#!/usr/bin/python3
from datetime import datetime

d_stamp = datetime(2017, 3, 31)
print(d_stamp)
print (str(d_stamp))
print ("-----\n")

# Use of strftime - datetime to string
print (d_stamp.strftime('%Y/%m/%d'))
print (d_stamp.strftime('%Y-%m-%d'))
print (d_stamp.strftime('%Y, %d %m'))
print ("-----\n")

# Use of.strptime - strings to datetime
d = '2017-03-31'

print (datetime.strptime(d, '%Y-%m-%d'))
print ("-----\n")

datestrs = ['01/Jan/2017', '01/Feb/2017', '01/Mar/2017', '01/Apr/2017']
print ([datetime.strptime(x, '%d/%b/%Y') for x in datestrs])
print ("-----\n")
```

# strings and datetime (cont..)

```
root@6879840ae648:/datascience/sessions/eleven# ./str_1.py
```

```
2017-03-31 00:00:00
```

```
2017-03-31 00:00:00
```

```
-----
```

```
2017/03/31
```

```
2017-03-31
```

```
2017, 31 03
```

```
-----
```

```
2017-03-31 00:00:00
```

```
-----
```

```
[datetime.datetime(2017, 1, 1, 0, 0), datetime.datetime(2017, 2, 1, 0, 0), datetime.datetime(2017, 3, 1, 0, 0), datetime.datetime(2017, 4, 1, 0, 0)]
```

```
-----
```



# dateutil

```
[root@6879840ae648:/datascience/sessions/eleven# more pars_util.py
#!/usr/bin/python3
from dateutil.parser import parse

d1 = parse('2017-01-25')
print (type(d1))
print (d1)
print ("-----\n")

d2 = parse('Jan 01, 2017 10:30 AM')
print (type(d2))
print (d2)
print ("-----\n")

d3 = parse('01/01/2017', dayfirst=True)
print (type(d3))
print (d3)
print ("-----\n")

[root@6879840ae648:/datascience/sessions/eleven# ./pars_util.py
<class 'datetime.datetime'>
2017-01-25 00:00:00
-----

<class 'datetime.datetime'>
2017-01-01 10:30:00
-----

<class 'datetime.datetime'>
2017-01-01 00:00:00
```



**Thank You**