

```
pip install simpy
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Collecting simpy
  Downloading simpy-4.0.1-py2.py3-none-any.whl (29 kB)
Installing collected packages: simpy
Successfully installed simpy-4.0.1
```

1. With the help of a example prove that processes are events, too.
2. Create a helper process that uses a timeout before actually starting a process.
3. Write a program to handle multiple events using AllOf and AnyOf.

```
import simpy
```

```
# (1) With the help of a example prove that processes are events, too.
```

```
def child(env):
    yield env.timeout(1)
    return f"hello sir"

def parent(env):
    ret = yield env.process(child(env))
    print(f"{ret}\n"*4)
```

```
env = simpy.Environment()
env.run(env.process(parent(env)))
```

```
hello sir
hello sir
hello sir
hello sir
```

```
from simpy.util import start_delayed
```

```
# (2) Create a helper process that uses a timeout before actually starting a process.
```

```
def helper(env):
    yield env.timeout(1)
    return f"hello ram!"

def main(env):
    sub_process = yield start_delayed(env, helper(env), delay=100)
    ret = yield sub_process
    print(f"{ret}\n"*5)
```

```
env.run(env.process(main(env)))
```

```
hello ram!
hello ram!
hello ram!
hello ram!
hello ram!
```

```
from simpy.events import AnyOf, AllOf, Event
from simpy.util import start_delayed
```

```
# (3) Write a program to handle multiple events using AllOf and AnyOf.
```

```
def test(env):
    t1, t2 = env.timeout(1, value='Obj1'), env.timeout(2, value='Obj2')
    ret = yield t1 | t2
    assert ret == {t1: 'Obj1'}, "Wrong Object detected"
    return "Obj1 found!"

def temp(env):
    t1, t2 = env.timeout(1, value='Obj1'), env.timeout(2, value='Obj2')
    ret = yield t1 & t2
    assert ret == {t1: 'Obj1', t2: 'Obj2'}, "Allof failed due to internal process"
    return "AllOf working properly"

def main(env):
    sub_process1 = yield env.process(test(env))
    ret = sub_process1
    print(f"{ret}\n")
```

```
sub_process2 = yield env.process(temp(env))
ret = sub_process2
print(f"{ret}\n")

env = simpy.Environment()
process = env.process(main(env))
env.run()

Obj1 found!

AllOf working properly
```

[Colab paid products](#) - [Cancel contracts here](#)

