C1_python

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차 례

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```python
import numpy as np

def soda_simul(this_state):
  u=np.random.rand(1)
  if (this_state == "c"):
    if(u<=0.7):
      next_state = "c"
    else:
      next_state = "p"
  else:
    if(u<=0.5):
      next_state = "c"
    else:
      next_state = "p"
  return next_state
for i in range(5):
  path ="c"
  for i in range (9):
    this_state=path[-1]
    next_state=soda_simul(this_state)
    path=path+next_state

  print(path)
```

```
## ccppcccccp
## cpppccccpc
## cccpppccpp
## cppcccccpp
## ccpcpppccc
```

2

```python
def cost_eval(path):
    cost_one_path=path.count("c")*1.5+path.count("p")*1
    return cost_one_path


MC_N=100000
spending_records=np.arange(0,MC_N)
for i in range(MC_N):
    path="c"
    for t in range (9):
        this_state = path[-1]
        next_state = soda_simul(this_state)
        path=path+next_state
    spending_records[i]=cost_eval(path)


print(np.mean(spending_records))
```

```
## 13.11293
```