LKP 6

- Agen berada pada [1,1], agen tidak merasakan apapun baik breeze, stench ataupun goldmaka [1,2] dan [2,1] pasti aman tidak ada pit ataupun Wumpus, dan bisa jadi ada gold.

- Agen ke depan ke [1,2], agen merasakan adanya stench sehingga bisa dipastikan pasti ada Wumpus diantara [1.3] atau [2,2], dan tidak merasa adanya breeze ataupun gold sehingga bisa dipastikan [1,3] [2,2] pasti PIT tidak ada.

- Agen pun bergerak ke [2,1] disana dia merasakan breeze sehingga bisa bisa dipastikan ada PIT diantara [3,1] dan [2,2], nah berdasarkan informasi yang telah didapatkan dari sebelumnya, jika di [1,2] dia merasa ada stench pasti ada di Wumpus antara [1.3] atau [2,2], dan disini dapat dilihat bahwa ada PIT diantara [3,1] dan [2,2], maka dapat disimpulkan di [2,2] aman. Sementara di [1,3] ada Wumpus, sementara di [3,1], ada PIT

- Selanjutnya agen pun bergerak ke [2,2], di situ agen tidak merasakan apa apa, sehingga maka [2,3] dan [3,2] bebas dari PIT ataupun Wumpus

- Lalu agen ke [2,3] di situ dia merasakan breeze, stench, dan gold. Kita sudah mengetahui dari awal ada Wumpus di [3,1], karena sudah ada gold di [2,3], maka agen akan mengambil gold tersebut, dan mendapatkan 1000 point, dan game pun berakhir

```
from utils import *
from logic import *
kb_wumpus = PropKB() # Inisialisasi Knowledge Base
P = {}; B = {}; G = {}; # Init pit, breeze, gliter, wumpus, dan stench
W = {}; S = {}
P[1, 1] = Symbol("P[1,1]");P[1, 2] = Symbol("P[1,2]"); P[1, 3] =
Symbol("P[1,3]");
P[1, 4] = Symbol("P[1,4]");P[2, 1] = Symbol("P[2,1]");P[2, 2] =
Symbol("P[2,2]");
P[2, 3] = Symbol("P[2,3]");P[2, 4] = Symbol("P[2,4]");P[3, 1] =
Symbol("P[3,1]");
P[3, 2] = Symbol("P[3,2]");
B[1, 1] = Symbol("B[1,1]");B[1, 2] = Symbol("B[1,2]");B[1, 3] =
Symbol("B[1,3]");
B[1, 4] = Symbol("B[1,4]");B[2, 1] = Symbol("B[2,1]");B[2, 2] =
Symbol("B[2,2]");
B[2, 3] = Symbol("B[2,3]");B[2, 4] = Symbol("B[2,4]");B[3, 1] =
Symbol("B[3,1]");
B[3, 2] = Symbol("B[3,2]")
G[1, 1] = Symbol("G[1,1]");G[1, 2] = Symbol("G[1,2]");G[2, 1] =
Symbol("G[2,1]");
G[2, 2] = Symbol("G[2,2]");G[2, 3] = Symbol("G[2,3]");G[3, 2] =
Symbol("G[3,2]")
W[1, 3] = Symbol("W[1,3]");W[1, 1] = Symbol("W[1,1]");W[1, 2] =
Symbol("W[1,2]");
W[2, 2] = Symbol("W[2,2]");W[3, 3] = Symbol("W[3,3]");W[3, 1] =
Symbol("W[3,1]");
W[2, 4] = Symbol("W[2,4]");W[2, 1] = Symbol("W[2,1]");W[3, 2] =
```

```python
Symbol("W[3,2]");
W[2, 3] = Symbol("W[2,3]")
S[2, 1] = Symbol("S[2,1]");S[1, 2] = Symbol("S[1,2]");S[3, 1] =
Symbol("S[3,1]");
S[2, 2] = Symbol("S[2,2]");S[3, 2] = Symbol("S[3,2]");S[2, 3] =
Symbol("S[2,3]");
S[1, 4] = Symbol("S[1,4]");S[1, 1] = Symbol("S[1,1]")
# Menambahkan kalimat fakta kedalam knowledge base
kb_wumpus.tell(G[2, 3])
kb_wumpus.tell(~P[1, 1])
kb_wumpus.tell(~W[1, 1])
kb_wumpus.tell(S[1, 1] | '<=>' | ((W[1, 2] | W[2, 1])))
kb_wumpus.tell(S[1, 2] | '<=>' | ((W[1, 1] | W[1, 3] | W[2, 2])))
kb_wumpus.tell(B[1, 1] | '<=>' | ((P[1, 2] | P[2, 1])))
kb_wumpus.tell(B[2, 1] | '<=>' | ((P[1, 1] | P[2, 2] | P[3, 1])))
kb_wumpus.tell(~B[1, 1])
kb_wumpus.tell(~S[1, 1])
kb_wumpus.tell(B[2, 1])
kb_wumpus.tell(S[1, 2])
# Menanyakan kedalam KB yang sudah didefinisikan diatas
#Ada pit/wumpus di [1,1] --> Salah
print(kb_wumpus.ask_if_true(P[1, 1] | W[1, 1]))
#Ada gold di [1,1] --> Salah
print(kb_wumpus.ask_if_true(G[1, 1]))
#Ada pit/wumpus di P[1,2] --> Salah
print(kb_wumpus.ask_if_true(P[1, 2] | W[1, 2]))
#Ada gold di [1,2] --> Salah
print(kb_wumpus.ask_if_true(G[1, 2]))
#Tidak ada pit di P[1,2] dan P[2,1] --> Benar
print(kb_wumpus.ask_if_true(~P[1, 2] & ~P[2, 1]))
#Ada pit di P[2,2] atau P[3, 1] --> Benar
print(kb_wumpus.ask_if_true(P[2, 2] | P[3, 1]))
#Ada pit/wumpus di P[2,1] --> Salah
print(kb_wumpus.ask_if_true(P[2, 1] | W[2, 1]))
#Ada gold di [2,1] --> Salah
print(kb_wumpus.ask_if_true(G[2, 1]))
#Ada pit/wumpus di [1,3] atau [2,2] --> Benar
print(kb_wumpus.ask_if_true(P[1, 3] | W[1, 3] | P[2, 2] | W[2, 2]))
#Ada pit di [2,2] atau [1,3] --> Salah
print(kb_wumpus.ask_if_true(P[1, 3] | P[2, 2]))
#Ada wumpus di [2,2] atau [1,3] --> Benar
print(kb_wumpus.ask_if_true(W[1, 3] | W[2, 2]))
#Ada gold di [2,2] --> Salah
print(kb_wumpus.ask_if_true(G[2, 2]))
#Ada pit/wumpus di [3,2] --> Salah
print(kb_wumpus.ask_if_true(P[3, 2] | W[3, 2]))
#Ada gold di [3,2] --> Salah
print(kb_wumpus.ask_if_true(G[3, 2]))
#Ada pit/wumpus di [2,3] atau [2,3] --> Salah
print(kb_wumpus.ask_if_true(P[2, 3] | W[2, 3]))
#Ada gold di [2,3] --> Salah
print(kb_wumpus.ask_if_true(G[2, 3]))
print("Gold ditemukan pada G[2, 3]")
```