Rajs-MacBook-Pro:Assignment\_3 raj$ python3 -u "/Users/raj/Downloads/Assignment\_3/resolve.py"

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

Migraine(Alice)

Migraine(Bob)

HighBP(Bob)

OldAge(John)

HighBP(John)

Take(John, Timolol)

Take(Bob, Warfarin)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

search: [~Alert(Alice, VitE)]

trying: [~Alert(Alice, VitE)]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

trying: [~Alert(Alice, VitE)]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

0

removed Alert(p\_1, VitE) ~Alert(Alice, VitE)

Clause

(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol)) ------ ~Alert(Alice, VitE)

resolvant: [(~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))]

\* subst :{p\_1: Alice}

\*before :[(~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))]

\*after :[(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]

------------------------------------------------

search: [(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]

trying: [(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

1

removed Take(p\_0, Timolol) ~Take(Alice, Timolol)

Clause

(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0)) ------ (~Take(Alice, Warfarin) | ~Take(Alice, Timolol))

resolvant: [(~Take(Alice, Warfarin) | ~HighBP(p\_0) | ~Migraine(p\_0))]

\* subst :{p\_0: Alice}

\*before :[(~Take(Alice, Warfarin) | ~HighBP(p\_0) | ~Migraine(p\_0))]

\*after :[(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]

------------------------------------------------

search: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]------Migraine(Alice)

2

removed Migraine(Alice) ~Migraine(Alice)

Clause

Migraine(Alice) ------ (~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))

resolvant: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]

search: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------Migraine(Alice)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------Migraine(Bob)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------HighBP(Bob)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------OldAge(John)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------HighBP(John)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------Take(John, Timolol)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------Take(Bob, Warfarin)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------~Alert(Alice, VitE)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice))]------(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))

BACKTRACKING .......

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]------Migraine(Bob)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]------HighBP(Bob)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]------OldAge(John)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]------HighBP(John)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]------Take(John, Timolol)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]------Take(Bob, Warfarin)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]------~Alert(Alice, VitE)

trying: [(~Take(Alice, Warfarin) | ~HighBP(Alice) | ~Migraine(Alice))]------(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))

BACKTRACKING .......

trying: [(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

trying: [(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]------Migraine(Alice)

trying: [(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]------Migraine(Bob)

trying: [(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]------HighBP(Bob)

trying: [(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]------OldAge(John)

trying: [(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]------HighBP(John)

trying: [(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]------Take(John, Timolol)

trying: [(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]------Take(Bob, Warfarin)

trying: [(~Take(Alice, Warfarin) | ~Take(Alice, Timolol))]------~Alert(Alice, VitE)

BACKTRACKING .......

trying: [~Alert(Alice, VitE)]------Migraine(Alice)

trying: [~Alert(Alice, VitE)]------Migraine(Bob)

trying: [~Alert(Alice, VitE)]------HighBP(Bob)

trying: [~Alert(Alice, VitE)]------OldAge(John)

trying: [~Alert(Alice, VitE)]------HighBP(John)

trying: [~Alert(Alice, VitE)]------Take(John, Timolol)

trying: [~Alert(Alice, VitE)]------Take(Bob, Warfarin)

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search: [~Alert(Bob, VitE)]

trying: [~Alert(Bob, VitE)]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

trying: [~Alert(Bob, VitE)]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

3

removed Alert(p\_1, VitE) ~Alert(Bob, VitE)

Clause

(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol)) ------ ~Alert(Bob, VitE)

resolvant: [(~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))]

\* subst :{p\_1: Bob}

\*before :[(~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))]

\*after :[(~Take(Bob, Warfarin) | ~Take(Bob, Timolol))]

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search: [(~Take(Bob, Warfarin) | ~Take(Bob, Timolol))]

trying: [(~Take(Bob, Warfarin) | ~Take(Bob, Timolol))]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

4

removed Take(p\_0, Timolol) ~Take(Bob, Timolol)

Clause

(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0)) ------ (~Take(Bob, Warfarin) | ~Take(Bob, Timolol))

resolvant: [(~HighBP(p\_0) | ~Take(Bob, Warfarin) | ~Migraine(p\_0))]

\* subst :{p\_0: Bob}

\*before :[(~HighBP(p\_0) | ~Take(Bob, Warfarin) | ~Migraine(p\_0))]

\*after :[(~HighBP(Bob) | ~Take(Bob, Warfarin) | ~Migraine(Bob))]

------------------------------------------------

search: [(~HighBP(Bob) | ~Take(Bob, Warfarin) | ~Migraine(Bob))]

trying: [(~HighBP(Bob) | ~Take(Bob, Warfarin) | ~Migraine(Bob))]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

trying: [(~HighBP(Bob) | ~Take(Bob, Warfarin) | ~Migraine(Bob))]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

trying: [(~HighBP(Bob) | ~Take(Bob, Warfarin) | ~Migraine(Bob))]------Migraine(Alice)

trying: [(~HighBP(Bob) | ~Take(Bob, Warfarin) | ~Migraine(Bob))]------Migraine(Bob)

5

removed Migraine(Bob) ~Migraine(Bob)

Clause

Migraine(Bob) ------ (~HighBP(Bob) | ~Take(Bob, Warfarin) | ~Migraine(Bob))

resolvant: [(~HighBP(Bob) | ~Take(Bob, Warfarin))]

search: [(~HighBP(Bob) | ~Take(Bob, Warfarin))]

trying: [(~HighBP(Bob) | ~Take(Bob, Warfarin))]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

trying: [(~HighBP(Bob) | ~Take(Bob, Warfarin))]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

trying: [(~HighBP(Bob) | ~Take(Bob, Warfarin))]------Migraine(Alice)

trying: [(~HighBP(Bob) | ~Take(Bob, Warfarin))]------Migraine(Bob)

trying: [(~HighBP(Bob) | ~Take(Bob, Warfarin))]------HighBP(Bob)

6

removed HighBP(Bob) ~HighBP(Bob)

Clause

HighBP(Bob) ------ (~HighBP(Bob) | ~Take(Bob, Warfarin))

resolvant: [~Take(Bob, Warfarin)]

search: [~Take(Bob, Warfarin)]

trying: [~Take(Bob, Warfarin)]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

trying: [~Take(Bob, Warfarin)]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

trying: [~Take(Bob, Warfarin)]------Migraine(Alice)

trying: [~Take(Bob, Warfarin)]------Migraine(Bob)

trying: [~Take(Bob, Warfarin)]------HighBP(Bob)

trying: [~Take(Bob, Warfarin)]------OldAge(John)

trying: [~Take(Bob, Warfarin)]------HighBP(John)

trying: [~Take(Bob, Warfarin)]------Take(John, Timolol)

trying: [~Take(Bob, Warfarin)]------Take(Bob, Warfarin)

7

removed Take(Bob, Warfarin) ~Take(Bob, Warfarin)

Clause

Take(Bob, Warfarin) ------ ~Take(Bob, Warfarin)

resolvant: []

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\* subst :{}

BACKTRACKING .......

BACKTRACKING .......

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BACKTRACKING .......

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search: [~Alert(John, VitE)]

trying: [~Alert(John, VitE)]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

trying: [~Alert(John, VitE)]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

8

removed Alert(p\_1, VitE) ~Alert(John, VitE)

Clause

(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol)) ------ ~Alert(John, VitE)

resolvant: [(~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))]

\* subst :{p\_1: John}

\*before :[(~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))]

\*after :[(~Take(John, Warfarin) | ~Take(John, Timolol))]

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search: [(~Take(John, Warfarin) | ~Take(John, Timolol))]

trying: [(~Take(John, Warfarin) | ~Take(John, Timolol))]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

9

removed Take(p\_0, Timolol) ~Take(John, Timolol)

Clause

(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0)) ------ (~Take(John, Warfarin) | ~Take(John, Timolol))

resolvant: [(~HighBP(p\_0) | ~Take(John, Warfarin) | ~Migraine(p\_0))]

\* subst :{p\_0: John}

\*before :[(~HighBP(p\_0) | ~Take(John, Warfarin) | ~Migraine(p\_0))]

\*after :[(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]

------------------------------------------------

search: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]

trying: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

trying: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

trying: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]------Migraine(Alice)

trying: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]------Migraine(Bob)

trying: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]------HighBP(Bob)

trying: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]------OldAge(John)

trying: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]------HighBP(John)

10

removed HighBP(John) ~HighBP(John)

Clause

HighBP(John) ------ (~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))

resolvant: [(~Take(John, Warfarin) | ~Migraine(John))]

search: [(~Take(John, Warfarin) | ~Migraine(John))]

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------Migraine(Alice)

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------Migraine(Bob)

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------HighBP(Bob)

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------OldAge(John)

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------HighBP(John)

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------Take(John, Timolol)

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------Take(Bob, Warfarin)

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------~Alert(John, VitE)

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------(~Take(John, Warfarin) | ~Take(John, Timolol))

trying: [(~Take(John, Warfarin) | ~Migraine(John))]------(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))

BACKTRACKING .......

trying: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]------Take(John, Timolol)

trying: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]------Take(Bob, Warfarin)

trying: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]------~Alert(John, VitE)

trying: [(~HighBP(John) | ~Take(John, Warfarin) | ~Migraine(John))]------(~Take(John, Warfarin) | ~Take(John, Timolol))

BACKTRACKING .......

trying: [(~Take(John, Warfarin) | ~Take(John, Timolol))]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

trying: [(~Take(John, Warfarin) | ~Take(John, Timolol))]------Migraine(Alice)

trying: [(~Take(John, Warfarin) | ~Take(John, Timolol))]------Migraine(Bob)

trying: [(~Take(John, Warfarin) | ~Take(John, Timolol))]------HighBP(Bob)

trying: [(~Take(John, Warfarin) | ~Take(John, Timolol))]------OldAge(John)

trying: [(~Take(John, Warfarin) | ~Take(John, Timolol))]------HighBP(John)

trying: [(~Take(John, Warfarin) | ~Take(John, Timolol))]------Take(John, Timolol)

11

removed Take(John, Timolol) ~Take(John, Timolol)

Clause

Take(John, Timolol) ------ (~Take(John, Warfarin) | ~Take(John, Timolol))

resolvant: [~Take(John, Warfarin)]

search: [~Take(John, Warfarin)]

trying: [~Take(John, Warfarin)]------(Take(p\_0, Timolol) | ~Migraine(p\_0) | ~HighBP(p\_0))

trying: [~Take(John, Warfarin)]------(Alert(p\_1, VitE) | ~Take(p\_1, Warfarin) | ~Take(p\_1, Timolol))

trying: [~Take(John, Warfarin)]------Migraine(Alice)

trying: [~Take(John, Warfarin)]------Migraine(Bob)

trying: [~Take(John, Warfarin)]------HighBP(Bob)

trying: [~Take(John, Warfarin)]------OldAge(John)

trying: [~Take(John, Warfarin)]------HighBP(John)

trying: [~Take(John, Warfarin)]------Take(John, Timolol)

trying: [~Take(John, Warfarin)]------Take(Bob, Warfarin)

trying: [~Take(John, Warfarin)]------~Alert(John, VitE)

trying: [~Take(John, Warfarin)]------(~Take(John, Warfarin) | ~Take(John, Timolol))

BACKTRACKING .......

trying: [(~Take(John, Warfarin) | ~Take(John, Timolol))]------Take(Bob, Warfarin)

trying: [(~Take(John, Warfarin) | ~Take(John, Timolol))]------~Alert(John, VitE)

BACKTRACKING .......

trying: [~Alert(John, VitE)]------Migraine(Alice)

trying: [~Alert(John, VitE)]------Migraine(Bob)

trying: [~Alert(John, VitE)]------HighBP(Bob)

trying: [~Alert(John, VitE)]------OldAge(John)

trying: [~Alert(John, VitE)]------HighBP(John)

trying: [~Alert(John, VitE)]------Take(John, Timolol)

trying: [~Alert(John, VitE)]------Take(Bob, Warfarin)

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[False, True, False]

Rajs-MacBook-Pro:Assignment\_3 raj$