1. Implement the Propositional basic logic gates along with implies and biconditional.

**PROGRAM**

## change a and b accordingly

a = True

b = True

print(('a and b is',a and b))

print(('a or b is',a or b))

print(('not a is',not a))

print(('not a or b is', not a or b))

print(('(not a or b) and (not b or a)', (not a or b) and (not b or a)))

## change a and b accordingly

a = True

b = false

print(('a and b is',a and b))

print(('a or b is',a or b))

print(('not a is',not a))

print(('not a or b is', not a or b))

print(('(not a or b) and (not b or a)', (not a or b) and (not b or a)))

## change a and b accordingly

a = false

b = True

print(('a and b is',a and b))

print(('a or b is',a or b))

print(('not a is',not a))

print(('not a or b is', not a or b))

print(('(not a or b) and (not b or a)', (not a or b) and (not b or a)))

## change a and b accordingly

a = false

b = false

print(('a and b is',a and b))

print(('a or b is',a or b))

print(('not a is',not a))

print(('not a or b is', not a or b))

print(('(not a or b) and (not b or a)', (not a or b) and (not b or a)))