print("Akash ks ")

print("1BM22CS028")

class VacuumCleaner:

def \_\_init\_\_(self, room\_a\_dirt, room\_b\_dirt, starting\_room):

self.current\_state = (room\_a\_dirt, room\_b\_dirt, starting\_room)

def is\_goal\_state(self):

return self.current\_state[0] == 0 and self.current\_state[1] == 0

def clean(self):

if self.current\_state[0] == 1:

self.current\_state = (0, self.current\_state[1], self.current\_state[2])

print("Cleaned room A.")

elif self.current\_state[1] == 1:

self.current\_state = (self.current\_state[0], 0, self.current\_state[2])

print("Cleaned room B.")

def move(self):

if self.current\_state[2] == 'A':

self.current\_state = (self.current\_state[0], self.current\_state[1], 'B')

print("Moved to room B.")

else:

self.current\_state = (self.current\_state[0], self.current\_state[1], 'A')

print("Moved to room A.")

def run(self):

while not self.is\_goal\_state():

print(f"Current state: {self.current\_state}")

self.clean()

if not self.is\_goal\_state():

self.move()

print("Both rooms are clean!")

def get\_initial\_state():

room\_a\_dirt = int(input("Is room A dirty? (1 for yes, 0 for no): "))

room\_b\_dirt = int(input("Is room B dirty? (1 for yes, 0 for no): "))

starting\_room = input("Which room is the vacuum cleaner in? (A or B): ").strip().upper()

if starting\_room not in ['A', 'B'] or room\_a\_dirt not in [0, 1] or room\_b\_dirt not in [0, 1]:

print("Invalid input. Please enter the correct values.")

return get\_initial\_state()

return room\_a\_dirt, room\_b\_dirt, starting\_room

initial\_state = get\_initial\_state()

vacuum = VacuumCleaner(\*initial\_state)

vacuum.run()