#include <stdio.h>

void wait(int \*s) {

while (\*s <= 0);

\*s--;

}

void signal(int \*s) {

\*s++;

}

void dining(int n) {

int chopstick[n];

for (int i = 0; i < n; i++)

chopstick[i] = 1;

int i = 0;

do {

wait(&chopstick[i]);

wait(&chopstick[(i+1) % n]);

printf("Philosopher %d is reading\n", i + 1);

signal(&chopstick[i]);

signal(&chopstick[(i+1) % n]);

printf("Philosopher %d is writing\n", i+1);

i = (i+1) % n;

} while(i);

}

int main() {

int n;

printf("Enter number of processes: ");

scanf("%d", &n);

dining(n);

}