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#include<stdio.h>
#include<pthread.h>
#include<stdlib.h>
struct shmem {
    int field1;
    int field2;
};

int produceNext() {
    return 1;
}

void consumeNext(int x) {
    printf("%d", x);
}

struct shmem get_shared() {
    struct shmem temp;
    temp.field1=0;
    temp.field2=0;
    return temp;
}

void* producer() {
    struct shmem shptr = get_shared();
    while(1) {
        sleep(1);

        int produced = produceNext();
        shptr.field1=produced;
        shptr.field2 = 1; //indicating ready
        while(shptr.field2 == 1){printf("hello");}; //do nothing
        printf("hello1");
    }
}

void* consumer() {
    struct shmem shptr = get_shared();
    while(1) {
        sleep(1);

        int consumed;
        while(shptr.field2 == 0){printf("hello2");}; //do nothing
        consumed=shptr.field1;
        consumeNext(consumed);
        shptr.field2 = 0; //indicating done
        printf("hi2");
    }
}

int main() {
    pthread_t pro,con;
    pthread_create(&pro,NULL,*producer,NULL);
    pthread_create(&con,NULL,*consumer,NULL);
    pthread_join(pro,NULL);
    pthread_join(con,NULL);}
```

