Implement Sliding Window Protocol.

#include <stdio.h>

#include <stdlib.h>

#include <unistd.h> // For sleep function

#define WINDOW\_SIZE 4 // Sliding window size

#define TOTAL\_FRAMES 10 // Total frames to send

void sender();

void receiver(int frame);

int main() {

sender();

return 0;

}

void sender() {

int base = 0, next\_frame = 0;

char ack;

while (base < TOTAL\_FRAMES) {

// Sending frames within the window size

for (int i = 0; i < WINDOW\_SIZE && (next\_frame < TOTAL\_FRAMES); i++) {

printf("Sender: Sending frame %d\n", next\_frame);

receiver(next\_frame);

next\_frame++;

}

// Simulating waiting for acknowledgment

for (int i = base; i < next\_frame; i++) {

printf("Receiver: Enter 'y' to acknowledge frame %d (or 'n' to reject): ", i);

scanf(" %c", &ack);

if (ack == 'y' || ack == 'Y') {

printf("Sender: Acknowledgment received for frame %d\n", i);

base++; // Move window forward

} else {

printf("Sender: Acknowledgment not received for frame %d. Resending from frame %d\n", i, base);

next\_frame = base; // Reset next frame to resend from base

break; // Exit the acknowledgment loop and start resending

}

}

printf("\n");

}

}

void receiver(int frame) {

printf("Receiver: Frame %d received successfully.\n", frame);

}