

**Review – 1**

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**Topic -** Write C program to interface stepper and switch using LPC1768

Under The Guidance Of : Guide Signature

Prof. Swati M

**CODE**

#include <LPC17xx.h>

// Define GPIO pins for stepper motor control

#define MOTOR\_PIN\_A (1 << 26) // Example: P0.0

#define MOTOR\_PIN\_B (1 << 25) // Example: P0.1

#define MOTOR\_PIN\_C (1 << 24) // Example: P0.2

#define MOTOR\_PIN\_D (1 << 23) // Example: P0.3

// Define GPIO pins for switches

#define SWITCH\_CW (1 << 4) // Example: P0.4

#define SWITCH\_CCW (1 << 5) // Example: P0.5

void delay(int);

int main(void) {

SystemInit();

SystemCoreClockUpdate();

// Configure stepper motor pins as outputs

LPC\_GPIO0->FIODIR |= MOTOR\_PIN\_A | MOTOR\_PIN\_B | MOTOR\_PIN\_C | MOTOR\_PIN\_D;

// Configure switch pins as inputs

LPC\_GPIO0->FIODIR &= ~(SWITCH\_CW | SWITCH\_CCW);

while (1) {

// Check clockwise switch

if (!(LPC\_GPIO0->FIOPIN & SWITCH\_CW)) {

// Rotate stepper motor clockwise

// Your stepper motor control logic here

}

// Check counterclockwise switch

if (!(LPC\_GPIO0->FIOPIN & SWITCH\_CCW)) {

// Rotate stepper motor counterclockwise

// Your stepper motor control logic here

}

// Your main code here

delay(100000); // Adjust the delay as needed

}

}

void delay(int count) {

int i;

for (i = 0; i< count; i++);

}

**OUTPUT**

