   IBM ASSIGNMENT -1

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Real time communication system powered by AI for specially abled Using IoT:

Code:

ine BLUE\_RGB\_PIN DDB2

#define VIBRATION\_MOTOR\_PIN DDD3

#define ULTRASONIC\_TRIGGER\_PIN DDD7

#define ULTRASONIC\_ECHO\_PIN DDD6

#define TEMPERATURE\_PIN A1

#define RED\_PIN DDD4

#define GREEN\_PIN DDD5

#define ORANGE\_PIN DDB5

#define PUSHBUTTON\_PIN DDD2

#define RED\_ON PORTD |= (1<<RED\_PIN)

#define RED\_OFF PORTD &= ~(1<<RED\_PIN)

#define GREEN\_ON PORTD |= (1<<GREEN\_PIN)

#define GREEN\_OFF PORTD &= ~(1<<GREEN\_PIN)

#define ORANGE\_ON PORTB |= (1<<ORANGE\_PIN)

#define ORANGE\_OFF PORTB &= ~(1<<ORANGE\_PIN)

#define RED\_RGB\_ON PORTB |= (1<<RED\_RGB\_PIN)

#define RED\_RGB\_OFF PORTB &= ~(1<<RED\_RGB\_PIN)

#define GREEN\_RGB\_O#include <stdio.h>

#define RED\_RGB\_PIN DDB3

#define GREEN\_RGB\_PIN DDB1

#defN PORTB |= (1<<GREEN\_RGB\_PIN)

#define GREEN\_RGB\_OFF PORTB &= ~(1<<GREEN\_RGB\_PIN)

#define BLUE\_RGB\_ON PORTB |= (1<<BLUE\_RGB\_PIN)

#define BLUE\_RGB\_OFF PORTB &= ~(1<<BLUE\_RGB\_PIN)

#define VIBRATION\_MOTOR\_ON PORTD |= (1<<VIBRATION\_MOTOR\_PIN)

#define VIBRATION\_MOTOR\_OFF PORTD &= ~(1<<VIBRATION\_MOTOR\_PIN)

#define THRESHOLD\_OPTION\_1 100

#define THRESHOLD\_OPTION\_2 200

// set threshold distance for safe distancing (in cm)

int distanceThreshold = THRESHOLD\_OPTION\_2;

// set threshold temperature for detecting fever (in degrees celcius)

double feverTemperatureThreshold=37.5;

//ISR triggered when push button is pressed

ISR(INT0\_vect)

{

if(distanceThreshold==THRESHOLD\_OPTION\_2)

{

distanceThreshold = THRESHOLD\_OPTION\_1;

ORANGE\_OFF;

}

else

{

distanceThreshold = THRESHOLD\_OPTION\_2;

ORANGE\_ON;

}