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Complier directives
    #include<c8051_SDCC.h>
    #include <stdio.h>
    #include<stdlib.h>
Function Prototypes
    Void Port_Init(void);
    Void Timer_Init(void);
    Void Interrupt_Init(void);
    Void Timer0_ISR(void) __interrupt 1;
    void PCA_Init (void)
    void read_driver(void)
    void readcompass(void)
    void readLED (void)
    void drive_motar(void)
    void steering servo(void)
    void LEDblink(void)
Global variables
    Sbit LED0 BUZZER SLDSW
    unsigned int MOTOR_PW = 0;
    unsigned int steering-servo
    unsigned int LED brightness
Main function
    Declare local variables
        (none)
    Initialize function
    Sys_Init();
    putchar(‘ ‘); //the quotes in this line may not format correctly
    Port_Init();
    XBR0_Init();
```

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     PCA_Init();
    Print some message to indicate start
    Begin infinite loop
    Motor task or compass task or LED task
End main function

Ranger  task
//we need to wait 80ms(different from compass) in the main function
    after 80ms
    call read ranger function
    start a ping
    reset the 80ms flag
    print the range

compass task
    wait 40ms
    call read compass
    start a ping
    reset the 40ms flag
    print the compass

LED task
    read the ranger
    start a ping
    reset the 80ms flag
    print the light

other important functions
unsigned int ReadRanger()  {
    unsigned char Data[1];
     unsigned int light = 0;
     unsigned char addr=0xE0;          // the address of the ranger is 0xE0
    i2c_read_data(addr, __, Data, _);  // read one byte, starting at reg 1
    light = Data[0]   return light;
}
```