사물인터넷 중간고사

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```
#define SW1 11
#define SW2 12
#define GREEN 7
#define YELLOW 8

const int speakerPin = 9 ;
char noteNames[] = {'C', 'D', 'E', 'F', 'G', 'A'} ;
unsigned int frequencies[] = {262, 294, 330, 349, 392, 440} ;
const byte noteCount = sizeof(noteNames) ;

//나비야
char score[] =
"GEEFDDCDEFGGG GEEFDDCDEFGGG DDDDDEFEEEEEFG GEEFDDCEGGEEE";
const byte scoreLen = sizeof(score) ;

//작은별
char star[] =
"CCGGAAG FFEEDDC GGFFEED GGFFEED CCGGAAG FFEEDDC";
const byte starLen = sizeof(star) ;

void setup()
{
        pinMode(SW1, INPUT);
        pinMode(SW2, INPUT);
        pinMode(GREEN, OUTPUT);
        pinMode(YELLOW, OUTPUT);
}


void loop()
{
    if(digitalRead(SW1)== HIGH){
      //작은별
```

```
        digitalWrite(GREEN, HIGH);

                for(int i =0 ; i < starLen ; i++){
                        int duration = 333 ;
                        playNote(star[i], duration) ;
                }
        digitalWrite(GREEN, LOW);

    }

    if(digitalRead(SW2)== HIGH){
      //나비야
      digitalWrite(YELLOW, HIGH);

                for(int i =0 ; i < scoreLen ; i++)
                {
                        int duration = 333 ;
                        playNote(score[i], duration) ;
                }
        digitalWrite(YELLOW, LOW);
    }
}

void playNote(char note, int duration)
{
        for(int i =0 ; i < noteCount ; i++)
        {
                if(noteNames[i] == note)
                        tone(speakerPin, frequencies[i], duration);
        }
        delay(duration);
}
```