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//Code for Bedtime Board.


 int ledPin1 = 5;        //LED 1 is connected to digital oin 5
 int ledPin2 = 6;
 int ledPin3 = A2;
 int ledPin4 = 10;
 int ledPin5 = 11;
 int speakerPin = A5;     // speaker is connected to digital pin 10
 int ground = 1;         // negative petals of leds and speaker connected to digital pin
1


void setup()
{
 pinMode(ledPin1, OUTPUT);        //leds set as output
 pinMode(ledPin2, OUTPUT);
 pinMode(ledPin3, OUTPUT);
 pinMode(ledPin4, OUTPUT);
 pinMode(ledPin5, OUTPUT);
 pinMode(speakerPin, OUTPUT);     //speakerPin set as output
}

void loop()     // run over and over again
{
     scale();  // call the scale() function
     delay(1000);    // delay for 1 second
}

void beep (unsigned char speakerPin, int frequencyInHertz, long
timeInMilliseconds)    // the sound producing function
{
     int x;
     long delayAmount = (long)(1000000/frequencyInHertz);
     long loopTime = (long)((timeInMilliseconds*1000)/(delayAmount*2));
     for (x=0;x<loopTime;x++)
     {
       digitalWrite(speakerPin,HIGH);
       delayMicroseconds(delayAmount);
       digitalWrite(speakerPin,LOW);
       delayMicroseconds(delayAmount);
     }
}

void scale ()
{        digitalWrite (ledPin2, HIGH);
```

```
delay(1000);
digitalWrite(ledPin2, LOW);

digitalWrite(ledPin1, HIGH);   // turn LED 5 on (HIGH is the voltage level)
delay(1000);            // wait for a second
digitalWrite(ledPin3, HIGH);
beep(speakerPin,2637,400);  //E
digitalWrite(ledPin3, LOW);
digitalWrite (ledPin2, HIGH);

beep(speakerPin,2637,400);  //E
digitalWrite(ledPin2, LOW);
beep(speakerPin,3136,1600);//G
digitalWrite(ledPin1, LOW);    // turn the LED off by making the voltage LOW
{digitalWrite(ledPin5, HIGH);  //turn LED 6 on
beep(speakerPin,2637,400);  //E
digitalWrite(ledPin5, LOW);
beep(speakerPin,2637,400);  //E
 {digitalWrite(ledPin4, HIGH);
beep(speakerPin,3136,1600);//G
digitalWrite(ledPin4, LOW);
}
{digitalWrite(ledPin3, HIGH);
beep(speakerPin,2637,400);  //E
digitalWrite(ledPin3, LOW);
digitalWrite(ledPin1, HIGH);   // turn LED 5 on (HIGH is the voltage level)
beep(speakerPin,3136,400);  //G
digitalWrite(ledPin1, LOW);
beep(speakerPin,4186,800);  //C
{digitalWrite(ledPin3, HIGH);  //turn LED 6 on
beep(speakerPin,3951,800);  //B
digitalWrite(ledPin3, LOW);    //turn LED 6 off
digitalWrite (ledPin2, HIGH);
beep(speakerPin,3520,800);  //A
digitalWrite(ledPin2, LOW);
{digitalWrite(ledPin5, HIGH);
beep(speakerPin,3520,800);  //A
digitalWrite(ledPin5, LOW);    //turn off the LED
{digitalWrite(ledPin1, HIGH);  //turn LED 6 on
beep(speakerPin,3136,800);  //G
digitalWrite(ledPin1, LOW);

}
{digitalWrite(ledPin4, HIGH);
beep(speakerPin,2349,400);  //D
digitalWrite(ledPin2, HIGH);
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```
      beep(speakerPin,2637,400);   //E
      digitalWrite(ledPin4, LOW);
      beep(speakerPin,2793,800);   //F
      digitalWrite(ledPin2, LOW);
      {digitalWrite(ledPin3, HIGH);
      beep(speakerPin,2349,800);   //D
      digitalWrite(ledPin3, LOW);

     }
     {digitalWrite(ledPin5, HIGH);
      beep(speakerPin,2349,400);   //D
      digitalWrite(ledPin3, HIGH);

      beep(speakerPin,2637,400);   //E
      digitalWrite(ledPin3, LOW);
      beep(speakerPin,2793,1600);//F
      digitalWrite(ledPin5, LOW);
     }
      digitalWrite(ledPin1, HIGH);   // turn LED 5 on (HIGH is the voltage level)
      beep(speakerPin,2349,400);   //D
      digitalWrite(ledPin1, LOW);
      beep(speakerPin,2793,400);   //F
      beep(speakerPin,3951,400);   //B
    { digitalWrite(ledPin4, HIGH);

      beep(speakerPin,3520,400);   //A
      digitalWrite(ledPin4, LOW);
      digitalWrite(ledPin3, HIGH);  //turn LED 6 on

      beep(speakerPin,3136,800);   //G
      digitalWrite(ledPin3, LOW);
      digitalWrite(ledPin4, HIGH);

      beep(speakerPin,3951,800);   //B
      digitalWrite(ledPin4, LOW);
      digitalWrite(ledPin5, HIGH);
      beep(speakerPin,4186,1200);//C
      delay(200);
      digitalWrite(ledPin5, LOW);


}}}

      }
      }}}
```