```
#include "Wire.h"

const int MPU_ADDR = 0x68;

int16_t accelerometer_x, accelerometer_y, accelerometer_z;
int16_t gyro_x, gyro_y, gyro_z;
int16_t temperature;

char tmp_str[7];

char* convert_int16_to_str(int16_t i) {
 sprintf(tmp_str, "%6d", i);
 return tmp_str;
}

void setup() {
 Serial.begin(9600);
 Wire.begin();
 Wire.beginTransmission(MPU_ADDR);
 Wire.write(0x6B);
 Wire.write(0);
 Wire.endTransmission(true);
}


void loop() {
 Wire.beginTransmission(MPU_ADDR);
 Wire.write(0x3B);
 Wire.endTransmission(false);
```

```
 Wire.requestFrom(MPU_ADDR, 7*2, true);

 accelerometer_x = Wire.read()<<8 | Wire.read();
 accelerometer_y = Wire.read()<<8 | Wire.read();
 accelerometer_z = Wire.read()<<8 | Wire.read();
 temperature = Wire.read()<<8 | Wire.read();
 gyro_x = Wire.read()<<8 | Wire.read();
 gyro_y = Wire.read()<<8 | Wire.read();
 gyro_z = Wire.read()<<8 | Wire.read();

 Serial.print("aX = "); Serial.print(convert_int16_to_str(accelerometer_x));
 Serial.print(" | aY = "); Serial.print(convert_int16_to_str(accelerometer_y));
 Serial.print(" | aZ = "); Serial.print(convert_int16_to_str(accelerometer_z));
 Serial.print(" | tmp = "); Serial.print(temperature/340.00+36.53);
 Serial.print(" | gX = "); Serial.print(convert_int16_to_str(gyro_x));
 Serial.print(" | gY = "); Serial.print(convert_int16_to_str(gyro_y));
 Serial.print(" | gZ = "); Serial.print(convert_int16_to_str(gyro_z));
 Serial.println();

 delay(1000);
}
```