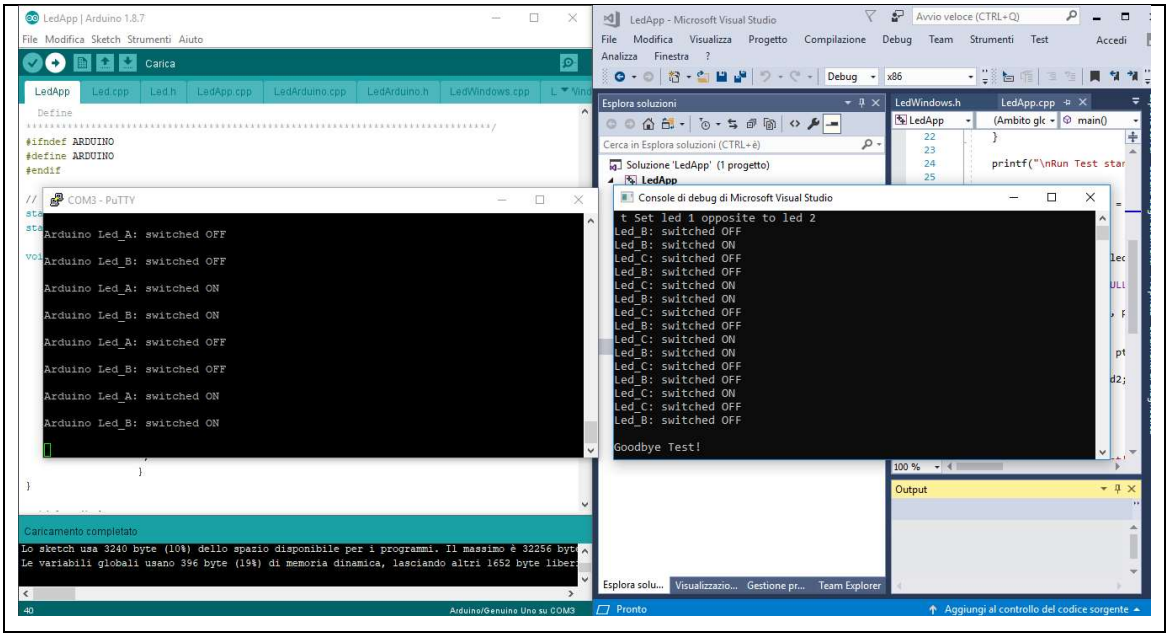
LedArduino project note: from previous project have been added *LedArduino.h/cpp* files (for *LedArduino* class) and the main file *LedApp.ino* with led resources allocation, *Init* and *Run* routines call.

- the *LedArduino* class, contains the *digital_output* private member. If a single led is not considered a shared resource, it should not exist 2 instances of *LedArduino* class that owns the same *digital_output* (anyway this consistency control has not been introduced);
- inside the doSwitch* methods, some trace debug messages have been added;
- the same project compiles with both Visual Studio and Arduino IDE; it has been defined "*ARDUINO*" symbol in combination with compilation switches;
- the Arduino sketch has been tested on real target (*Arduino UNO*) using the internal led on pin 13 and debug trace on PuTTY console. The Figure below shows the same project running between the two different environments:



- from previous project implementation, the method *Toggle()* is inherited by base class *Led*:

```
// Toggle the led status
void Led::Toggle()
{
    if (m_state == Status::On)
     {
        doSwitchOff();
     }
     else
     {
        doSwitchOn();
     }
}
```

this method performs the real hardware toggling (into doSwitch* methods of *LedArduino* class) using the "simulated" status led feedback (*m_state*). In order to use the real led feedback, the *Toggle* method of *Led* class should be override.

Into *Led* class:

```
virtual void Toggle();
```

Into *LedArduino* class:

```
// Toggle the led status
void LedArduino::Toggle()
{
  if (digitalRead(digital_output) == HIGH)
  {
    doSwitchOff();
  }
  else
  {
    doSwitchOn();
  }
}
```

(this variant has been tested but modification is not contained in the actual project)

- a *LedArduino* class can be instantiated and simulated also by *LedApp.cpp* module;
- inside *Init* and *Run* routines is performed the *late binding*.