



Globalcode

INSTALLING LIBRARIES AND UPDATING THE FIRMWARE



FILES FOR THIS CLASS

[HTTPS://PORTALALUNO.TOOLSCLOUD.NET/REDMINE/PROJECTS/IOTSURFBOARD/FILES](https://portalaluno.toolscloud.net/redmine/projects/IOTsurfboard/files)

- PRESENTATION: IOT_SURFING_CLASS_4_EN.PDF
- IOT SURFBOARD LIBRARIES FOR ARDUINO: ARDUINO.ZIP



THE FIRMWARE OF YOUR SURFBOARD



THE FIRMWARE OF YOUR SURFBOARD

- ❑ THIS FIRMWARE HAS A STANDARD COMMUNICATION STRUCTURE FOR WIFI, BLUETOOTH, 2G, 3G AND ZIGBEE!
- ❑ ALLOWS YOU TO CREATE THE FIRMWARE EXTENSIONS INSTEAD OF REPLACING IT



WHY TO UPDATE THE FIRMWARE?

- THE FIRMWARE IS EVOLVING FAST AND BRINGS NEW CAPABILITIES AND FEATURES IN EACH NEW RELEASE. TO GET THE BEST FROM YOUR SURFBOARD IT'S IMPORTANT TO KEEP IT UPDATED!



WHY TO UPDATE THE FIRMWARE?

- IF YOU UPLOAD YOUR OWN PROGRAM DIRECTLY TO ARDUINO NANO YOU LOOSE THE FIRMWARE AND THE SURFING PROTOCOL, BUT DON'T WORRY IT'S EASY TO RESTORE THE FIRMWARE.



WHY TO UPDATE THE FIRMWARE?

- WHEN YOU EXTEND THE FIRMWARE BY ADDING YOUR OWN FUNCTIONALITIES / NEW MODES YOU WILL NEED TO UPDATE THE FIRMWARE ON YOUR BOARD



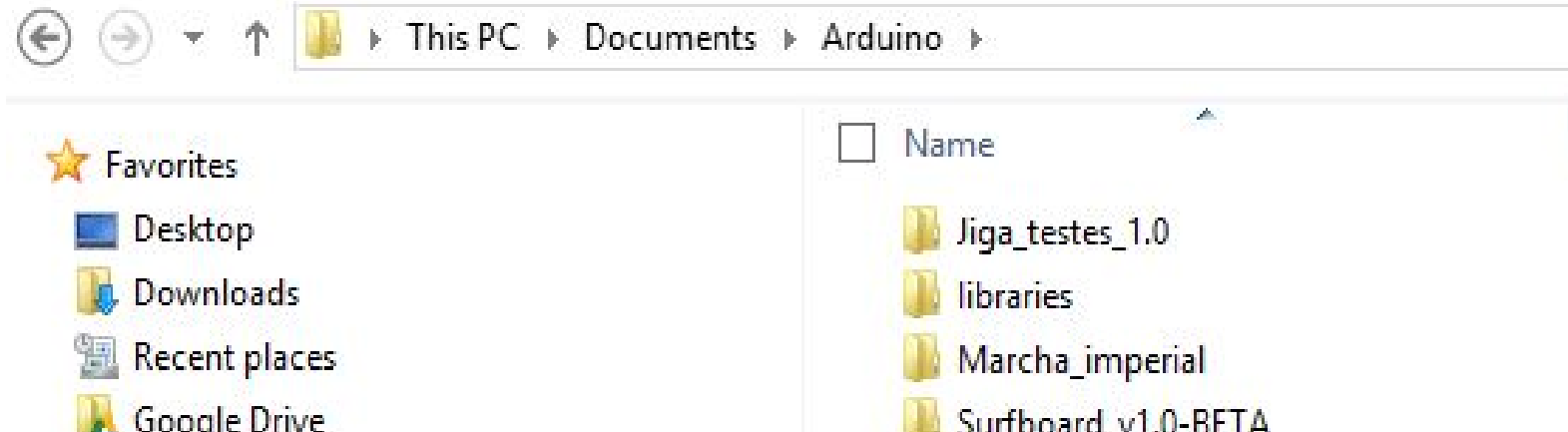
ARDUINO LIBRARIES

- ❑ THE IOT SURFBOARD FIRMWARE REQUIRES SOME **COMPONENT LIBRARIES** FOR ACCESSING IT'S SENSORS THAT MUST BE INSTALLED
- ❑ WE ALSO NEED THE **IOT SURFBOARD API FOR ARDUINO** (DEVELOPED BY GLOBALCODE) THAT FACILITATES PROGRAMMING YOUR BOARD
- ❑ ALL FILES AND LIBRARIES ARE IN **ARDUINO.ZIP**



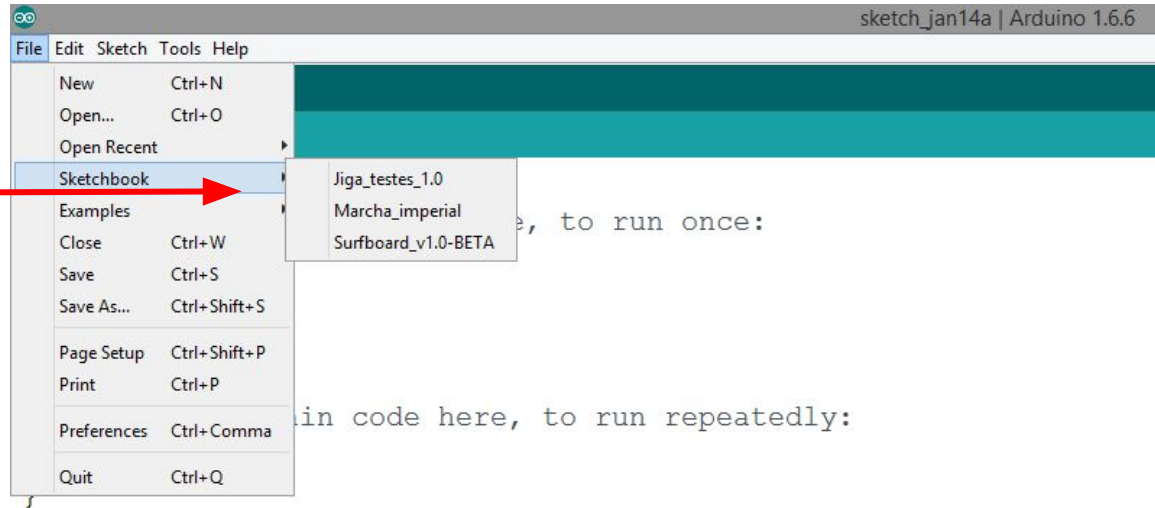
FIRMWARE AND LIBRARIES INSTALLATION

1. DOWNLOAD **ARDUINO.ZIP** AND UNZIP IN THE **ARDUINO** FOLDER
2. LINUX & MAC USERS: /HOME/<USER>/ARDUINO
3. WINDOWS USERS: UNDER THE **DOCUMENTS** FOLDER



CHECK THE FILES ON YOUR ARDUINO IDE

- ❑ AFTER UNZIP THE FILES RESTART YOUR ARDUINO IDE
- ❑ YOUR SKETCHBOOK SHOULD LOOK LIKE THIS:

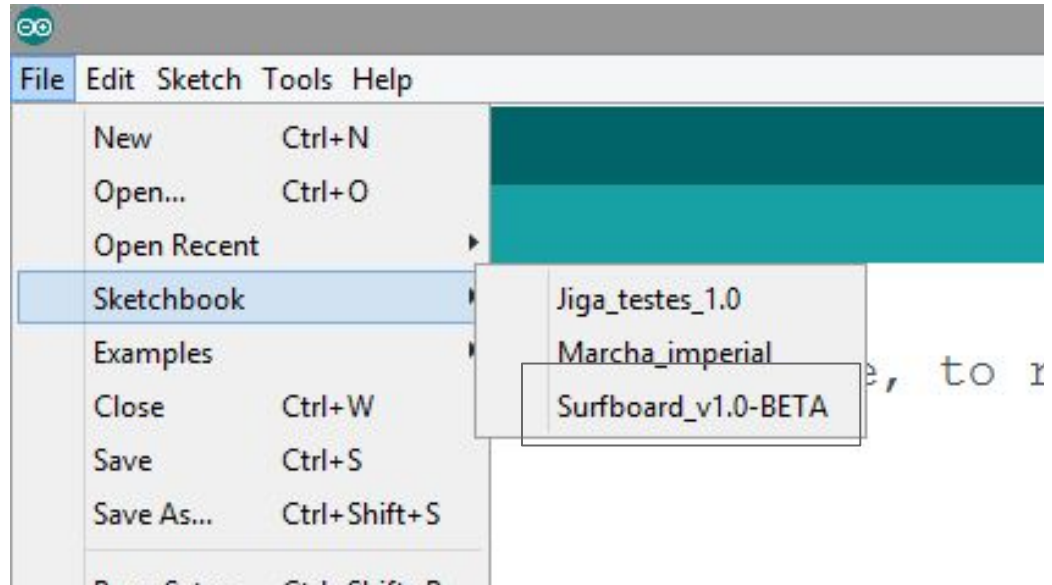


UPDATING THE FIRMWARE & LIBRARIES

1. OPEN ARDUINO IDE AND GO TO MENU **FILE** -> **SKETCHBOOK** AND SELECT

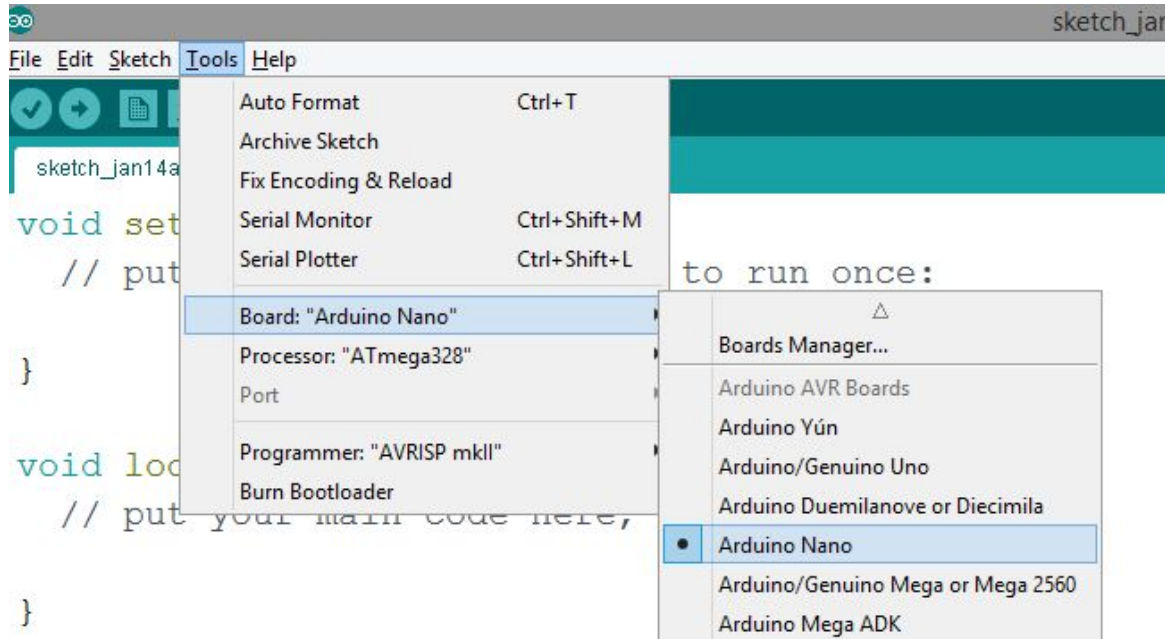
SURFBOARD_V1.0-BETA

2. CONNECT YOUR SURFBOARD
TO THE COMPUTER VIA USB

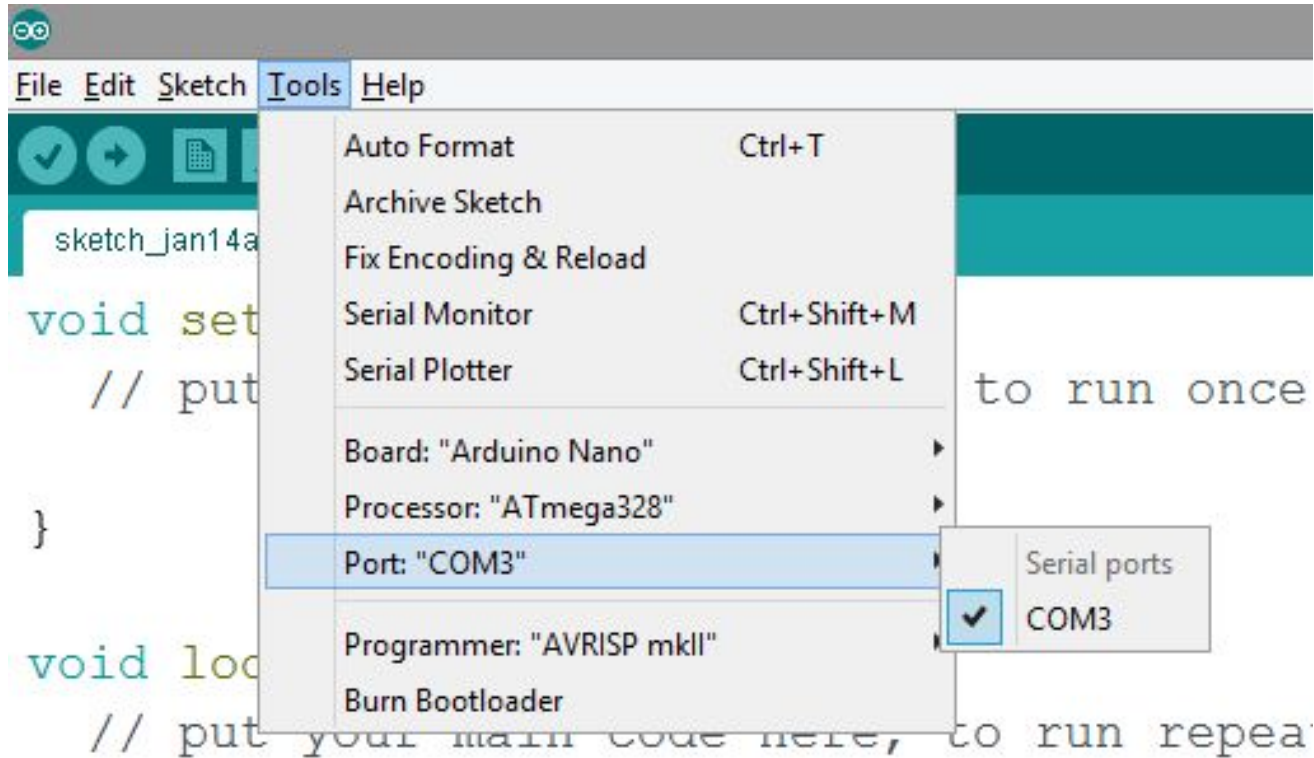


2. CONNECT YOUR BOARD TO THE COMPUTER USING THE USB CABLE

3. ON THE TOOLS MENU -> BOARD AND SELECT ARDUINO NANO



4. ON THE TOOLS MENU GO TO PORT AND SELECT THE PORT (NOT NECESSARILY THE COM3)



5. CLICK THE **UPLOAD** BUTTON ON ARDUINO IDE TO SEND THE NEW FIRMWARE AND ALL LIBRARIES IT NEEDS TO YOUR BOARD



6. OPEN THE SERIAL MONITOR AND TYPE ? AND THEN PRESS ENTER.

THE SURFING PROTOCOL WILL DESCRIBE THE BOARD AND THE **FIRMWARE VERSION**

YOU CAN CHECK IF YOU HAVE SUCCESSFULLY UPDATE THE FIRMWARE



LIVE DEMOS



SUMMARY

- ❑ THE IOT SURFBOARD FIRMWARE REQUIRES SOME COMPONENT LIBRARIES AND ALSO IOT SURFBOARD API FOR ARDUINO
- ❑ YOUR LEARNED HOW TO UPDATE THE FIRMWARE
- ❑ THE IOT SURFBOARD FIRMWARE IS EVOLVING FAST AND IT'S IMPORTANT THAT YOU ALWAYS UPDATE IT TO THE LATEST VERSION.



IOT SURFBOARD + ARDUINO = SUCCESS!

