1- Arduino

Advantages:

1- easy to use (a ready to use circuit, an easy programming language, an easy to use IDE)

2- huge amount of resources

3- most of us can use it

Disadvantages:

1- costs 300 L.E for Arduino mega

2-we won't learn much when using it

Resources:

1- https://www.youtube.com/watch?v=fCxzA9_kg6s&list=PLA567CE235D39FA84

2- https://www.youtube.com/watch?v=d8_xXNcGYgo&ind-ex=1&list=PLGs0VKk2DiYx6CMdOQR_hmJ2NbB4mZQn

2- AVR

Advantages:

1- costs about 40 L.E for the chip

2-the size could be smaller than Arduino and with the same performance

3- we will learn a lot from using it

Disadvantages:

1- we will need some time to learn about it

2- we will need to make a pcb

Resources:

1- https://www.youtube.com/watch?v=JMMamSVy1Zs&list=PLE72E4CFE73BD1DE1

2- https://www.youtube.com/watch?v=dT0xxaG1DhM&list=PLD7F7ED1F3505D8D5

3-Tiva-c

Advantages:

1- higher performance

2- we will learn a lot from using it

Disadvantages:

1- we will need much time to learn about it

2-

Resources:

1- https://www.youtube.com/watch?v=Pfvr9ZWWrQE

2- https://www.youtube.com/watch?v=u9cAgLuVMf4&list=PLW60rZ86fz4carh026dY8nEVoBuqo3ZHJ

3- https://www.edx.org/course/embedded-systems-shape-world-utaustinx-ut-6-10x

MY OPINION :

I think we should use avr but I suggest using ATmega16A instead of ATmega328P as it has more pins