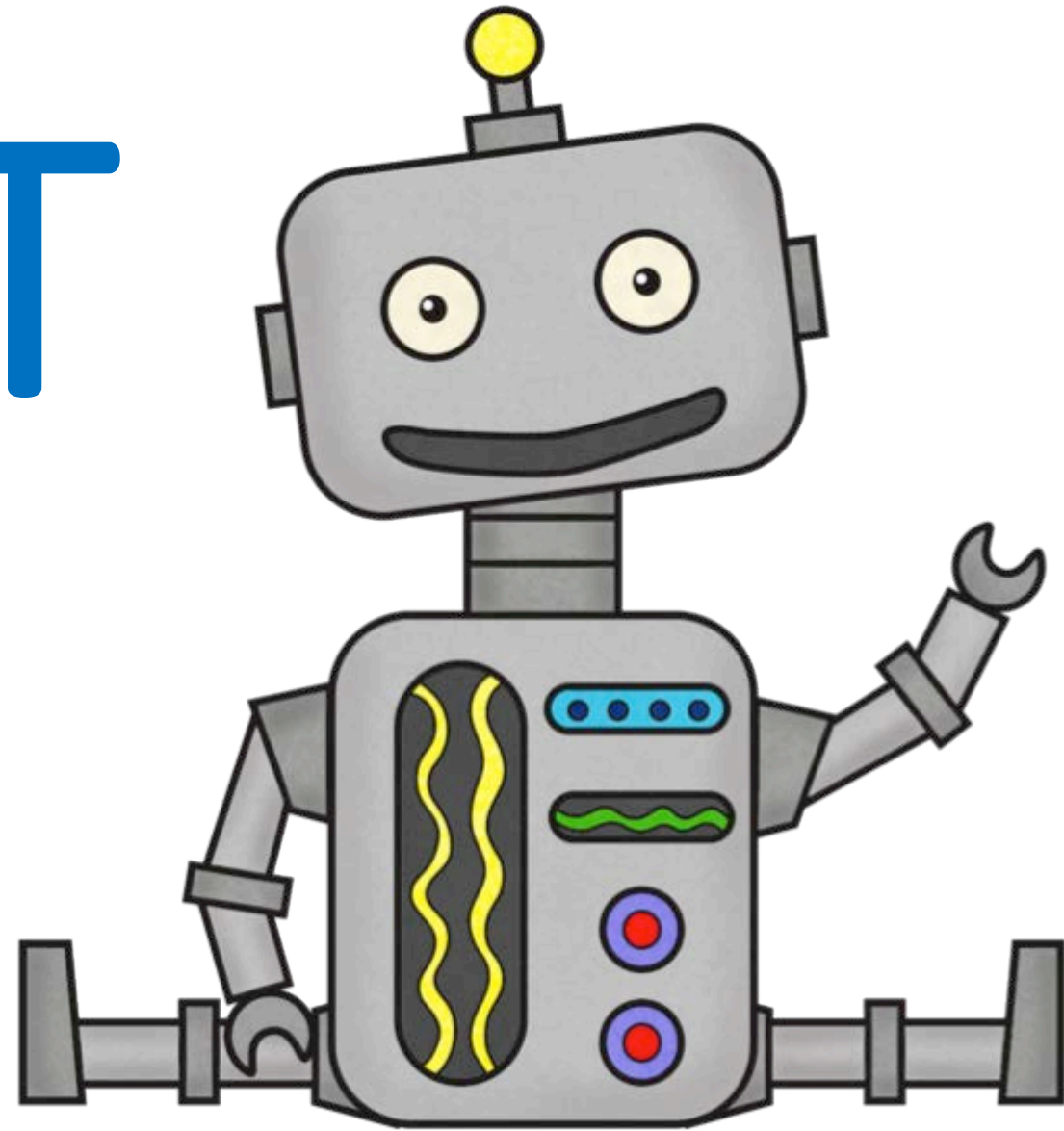


ROBOT



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What is a robot?

- A robot is just a computer that can perform a series of complex tasks automatically.
- Robots use a central computer to process information, as well as input and output devices to react and to carry out tasks.
- You may have robots in your home right now.



How do you program a robot?

Because a robot is a machine we have to program it to do things. It only does what we tell it to do.

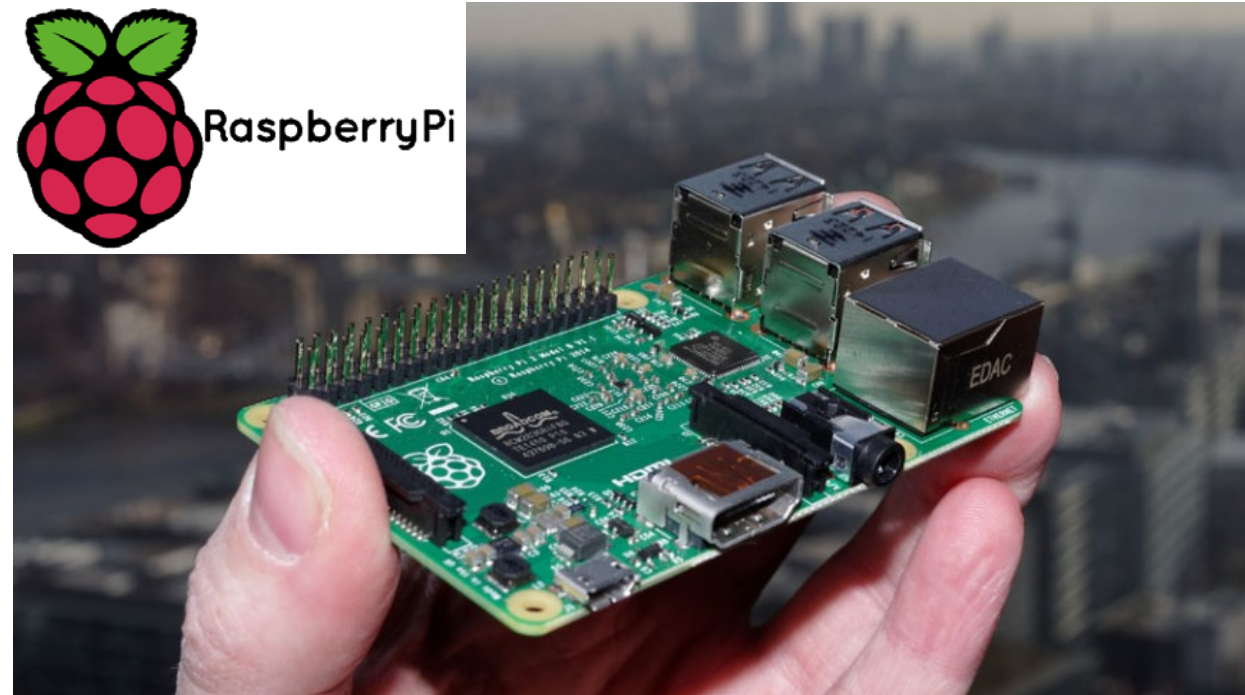
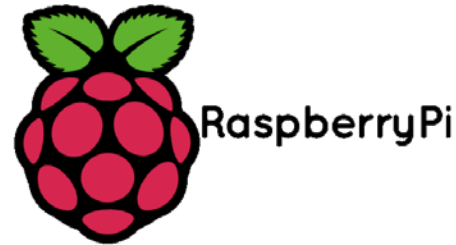


Programmable board

Arduino is used for building digital devices and interactive objects that can sense and control objects in the physical world.

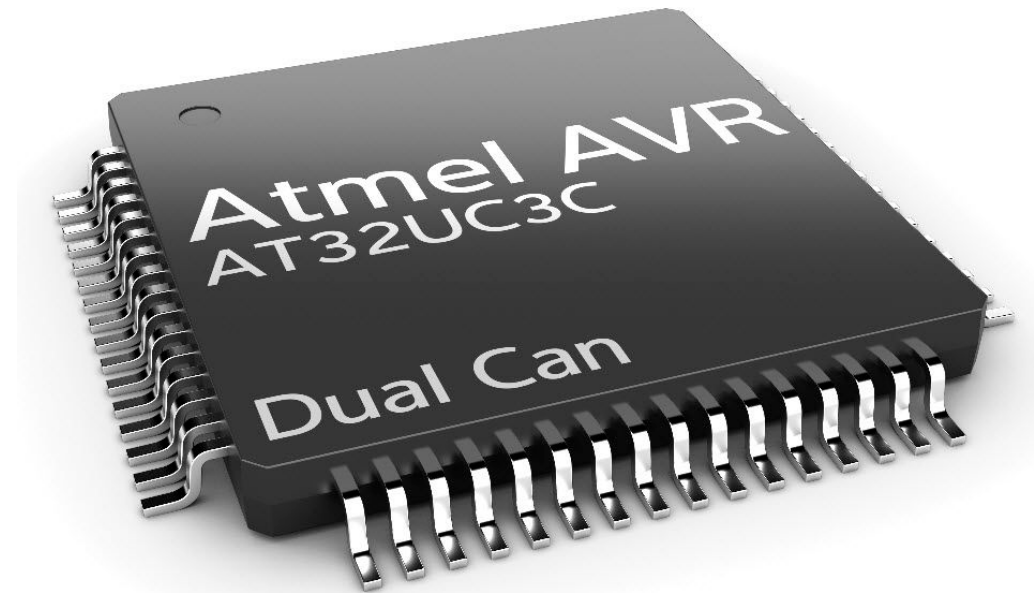


The Raspberry Pi is a credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse.



Microcontroller

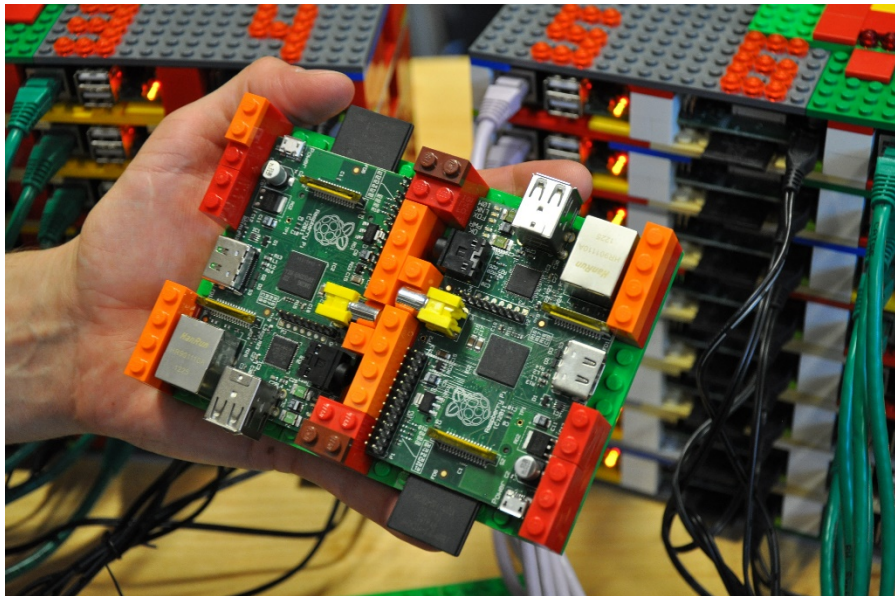
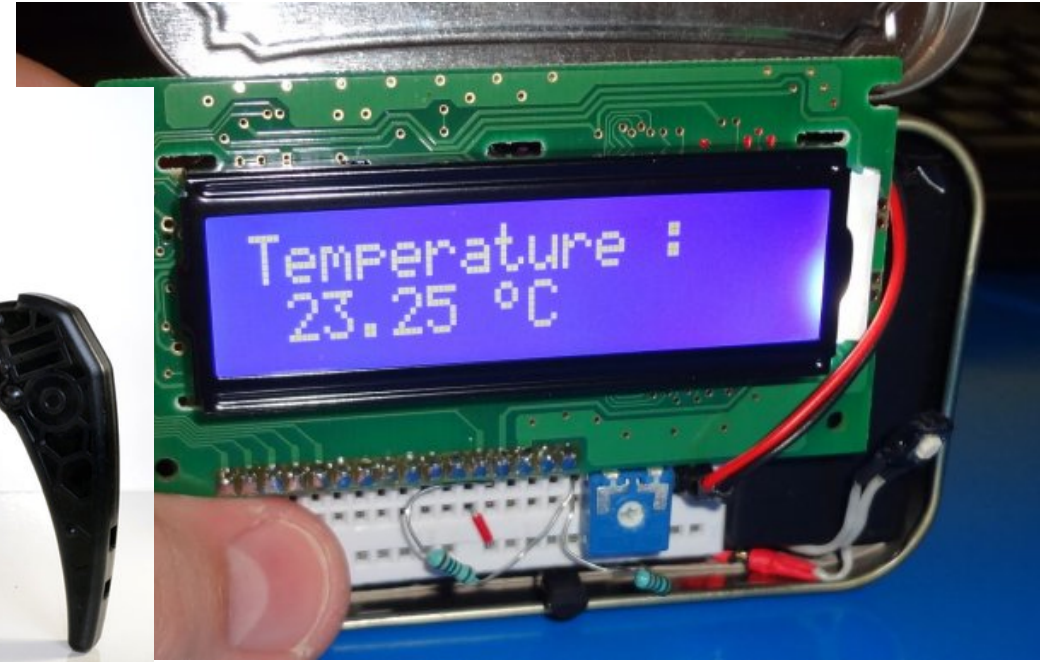
A microcontroller is an integrated circuit that is programmed to do a specific task.



Where do you find microcontrollers



Projects

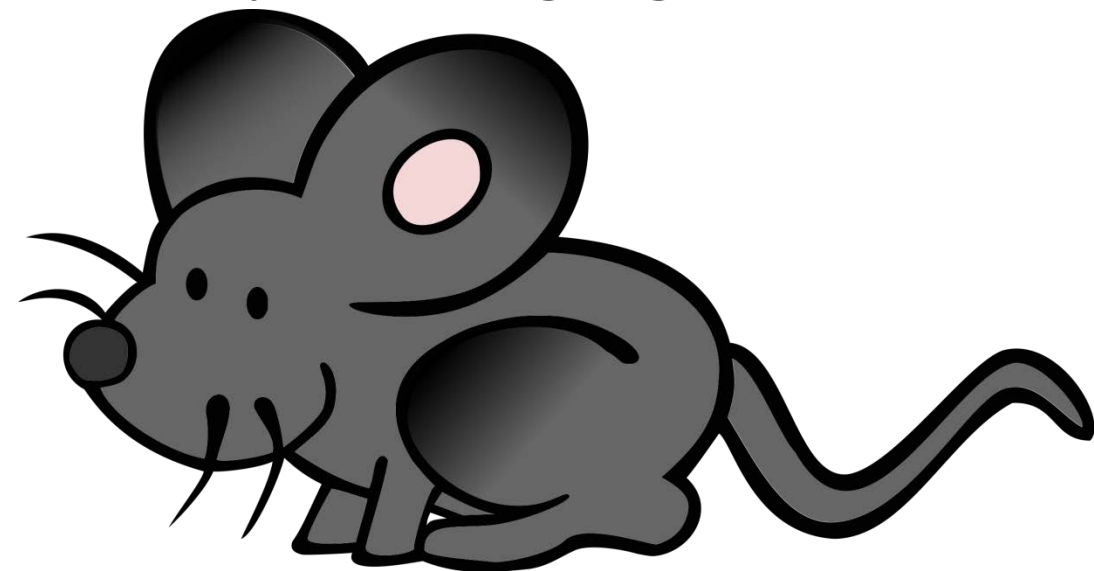


Making instructions

What is
Coding?

- When you learn to code you can make things happen on your computer.
- Computer code is a set of rules or instructions.
- Computer programs are made out of their own special language called code.

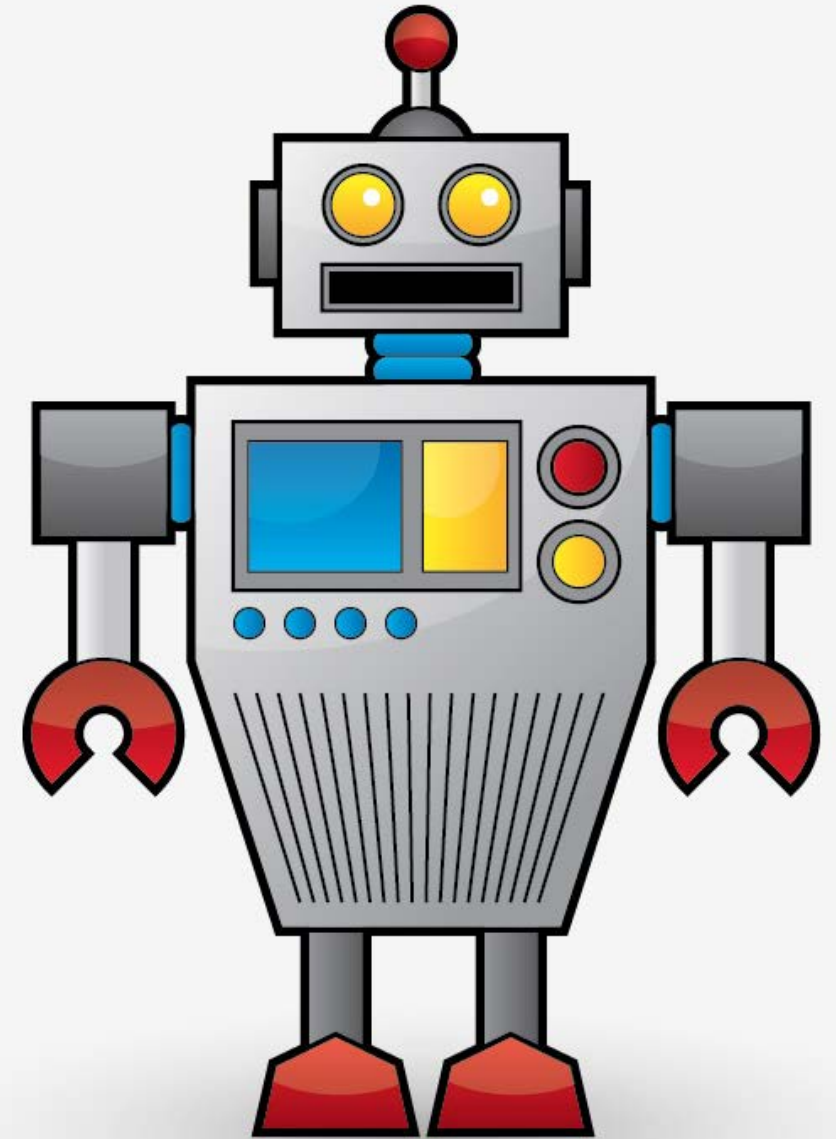
‘Please walk Mr Mouse’

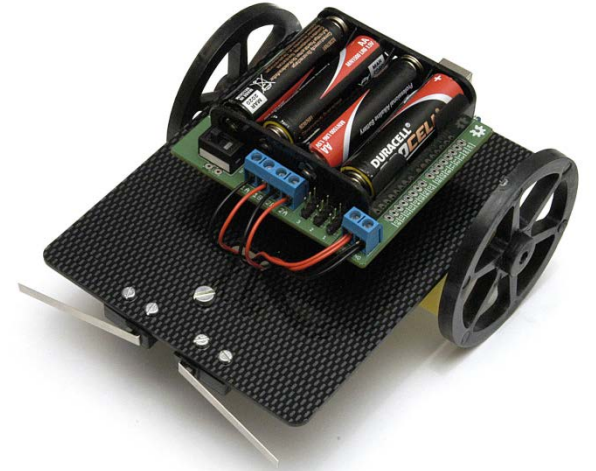
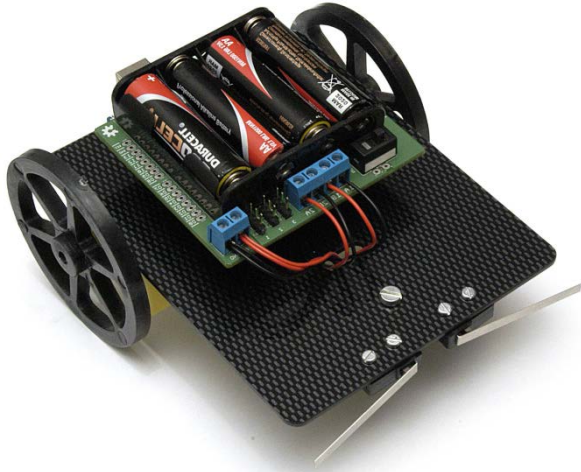



```
string  
if(parameters.contains("name"))  
    hql += " and p.name = :name";  
}  
7  
8  
9  
10  
11  
12  
13  
14  
if(parameters.contains("age")){  
    hql += " and p.age = :age";  
}  
TypedQuery<Person> query = em.createQuery(hql, Person.class);  
if(parameters.contains("name")){  
    query.setParameter("name", values[0].toString());  
}  
if(parameters.contains("age")){  
    query.setParameter("age", Integer.valueOf(values[1].toString()));  
}
```

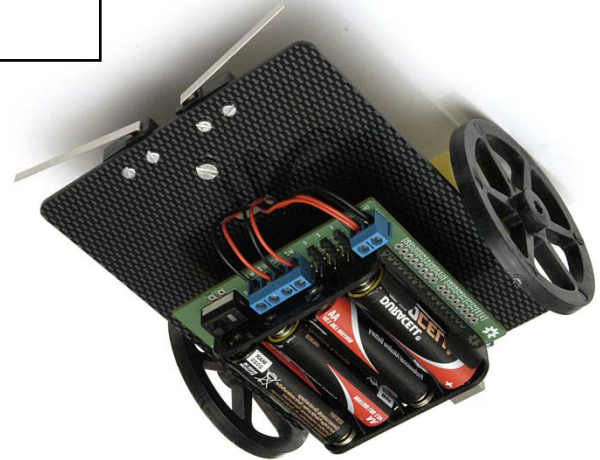
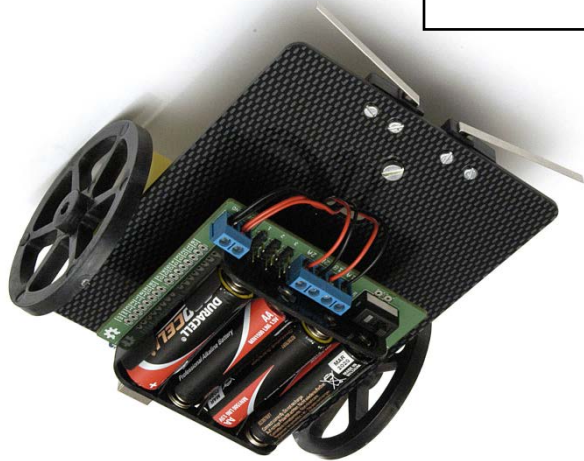
- A computer can't think for itself and you can't talk to it like a person. It needs computer programmes so it knows what to do.

‘Step 100, backwards’

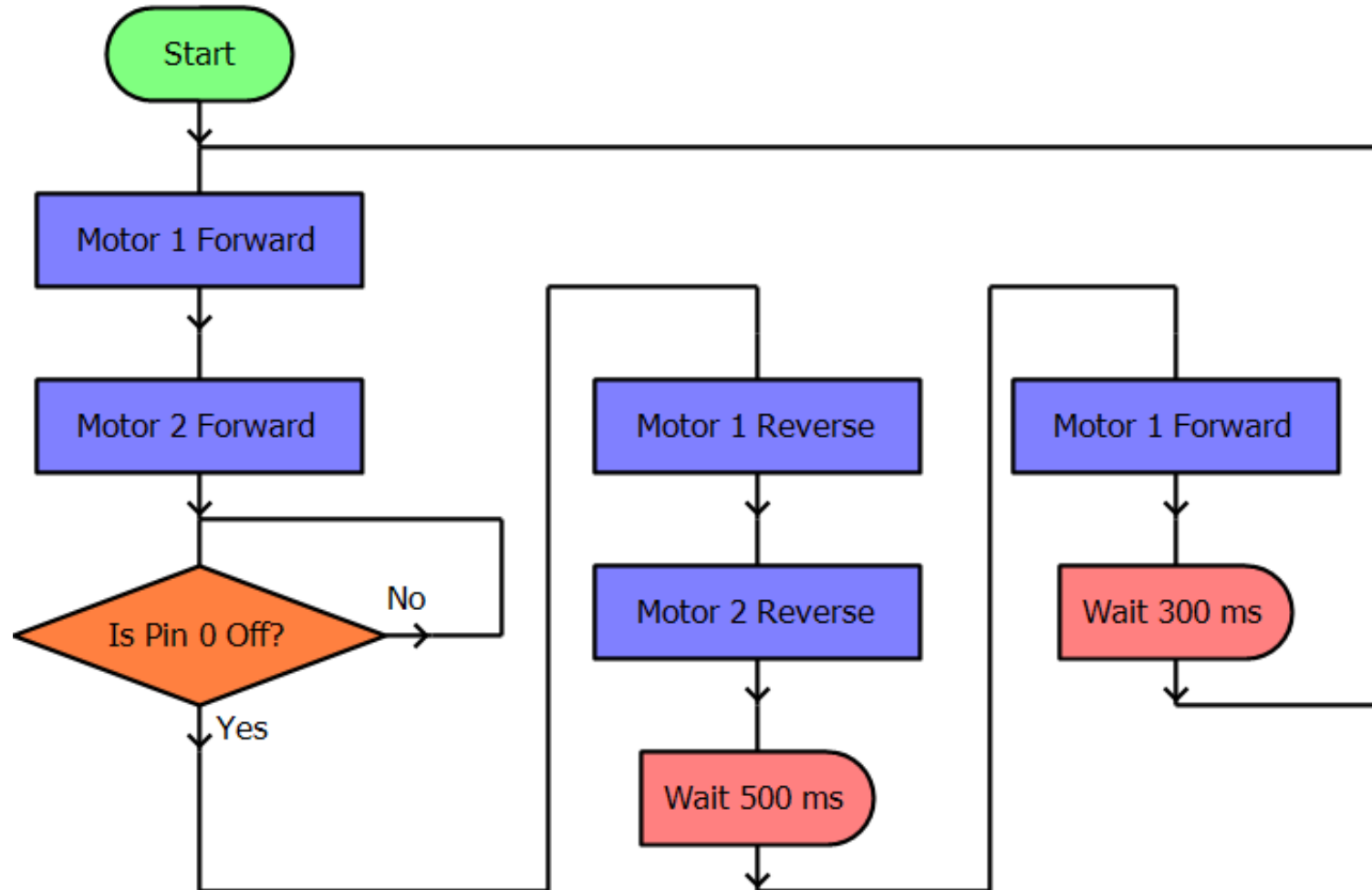




Robot war
game



Use Flowino to program the robot and ready for the fight



You have just programmed a robot

