Problem 1:What is a Turing machine?

什么是图灵机？

Answer 1:The Turing machine is a mathematical model that defines a machine that executes instructions on an infinitely long strip of paper according to rules. The tape is divided into squares, with symbols on them and some without symbols. The machine has a read/write head, a status register, and a set of instructions based on symbols and states.

图灵机是一个数学模型，定义了一种机器，该机器根据规则在无限长的纸条上执行指令。 磁带分为正方形，上面有符号，有些没有符号。 该机器具有一个读/写头，一个状态寄存器以及一组基于符号和状态的指令。

Problem 2: how a Turing Machine executes a program?

图灵机如何执行程序？

Answer 2:The Turing machine has an infinitely long tape, a read/write head, a status register, and a command list. The default read/write head is at the far left. Initially, the head reads the symbol under the current block, operates against the instruction list according to the current state, (writes or erases the current symbol/holds or changes the current state), and the head moves according to the instruction list.

图灵机具有无限长的磁带，读/写头，状态寄存器和命令列表。 默认的读/写头位于最左边。 最初，磁头读取当前块下的符号，根据当前状态对指令列表进行操作（写入或擦除当前符号/保持或更改当前状态），然后磁头根据指令列表移动。