## **Libraries List**

Basic operation:

- 1. add(e1, e2)
- 2. minus(e1, e2)
- 3. multiply(e1, e2)
- 4. divide(e1, e2)
- 5. =, <, >, <=, >=

Loop operation:

- 6. for\_Loop(;;)
- 7. condition\_Loop(boolean)

Basic sorting operation:

- 8. selectionSort(array)
- 9. bubbleSort(array)
- 10. insertionSort(array)
- 11. quickSort(array)
- 12. mergeSort(array)
- 13. heapSort(array)

Basic calculating operation:

- 14. fib(array)
- 15. power(base, powernum)
- 16. abs()
- 17. sin, sinh, arcsin, cos, cosh, arccos
- 18. tan, tanh, arctan, cot

Basic type transforming operation:

- 19. number2String()
- 20. string2Int()
- 21. string2Double()
- 22. string2Float()
- 23. string2Long()
- 24. string2Array()
- 25. char2String()

Basic file operation:

- 26. openfile(fileName)
- 27. readfile()
- 28. writefile()
- 29. scanFile()
- 30. printFile()

Condition if:

31. if, else

Examples: fibb.lw, count.lw, conway.lw

all files must be a .lw file, so the compiler can compile it.

run it with : java SimpleTuringMachine test.lw

fibb.lw:

with all APIs in the library, a simple fib number for test.

count.lw:

a simple example to count from 9 to 1.

conway.lw:

conway's Life Game. the game itself is a turing-complete model.