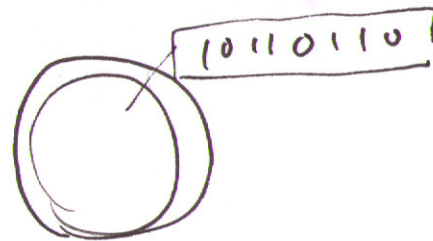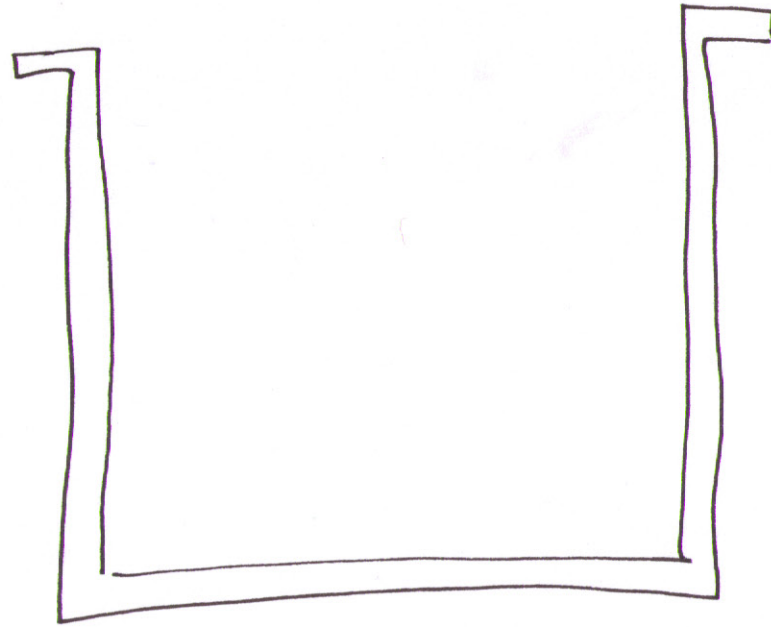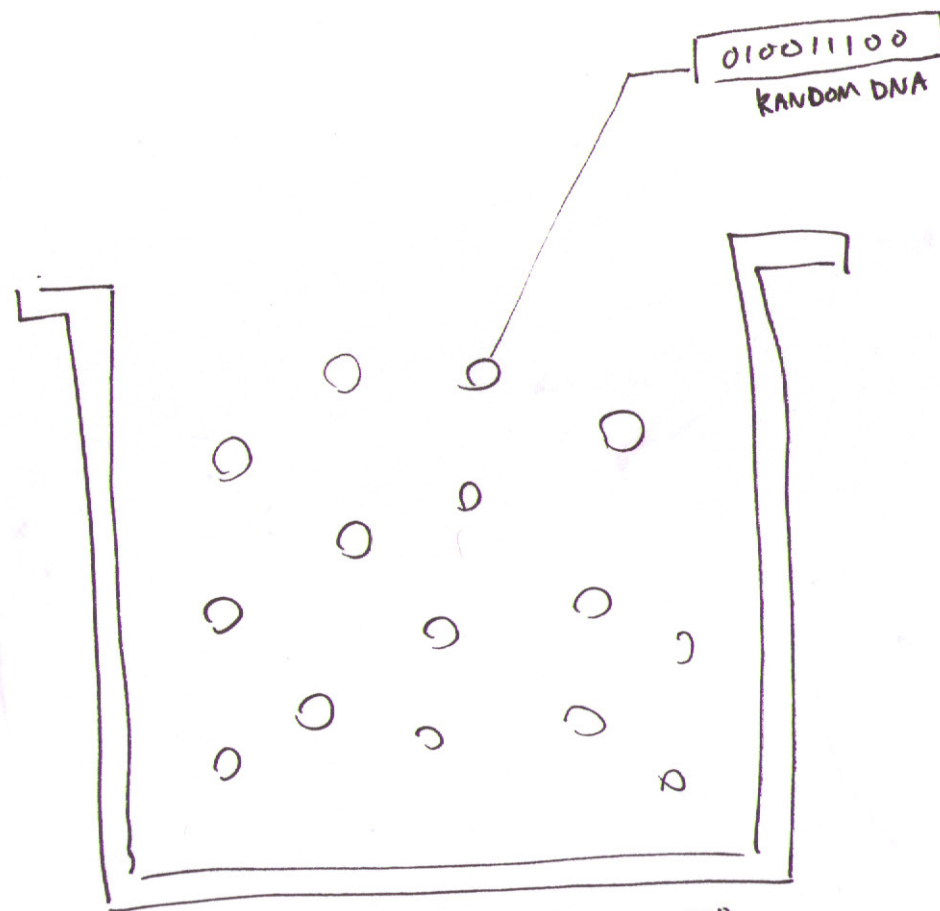# Genetic Algorithm

the basic method how to use the algorithm
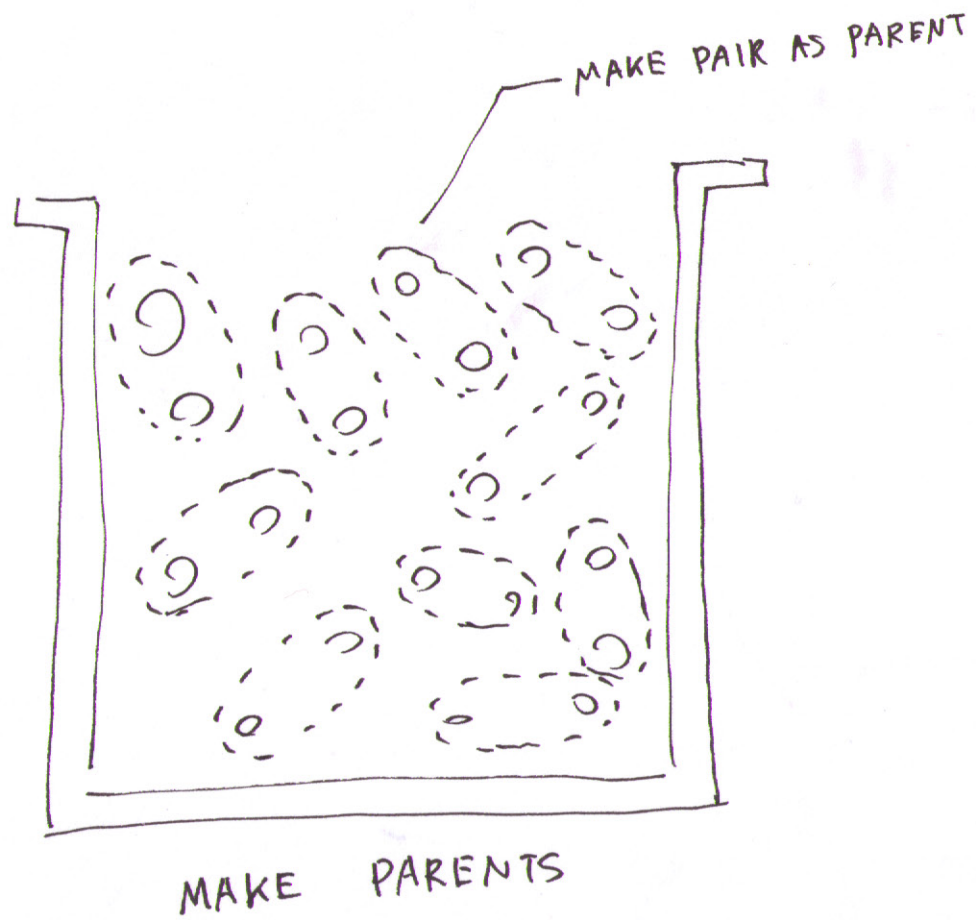
1011 0110

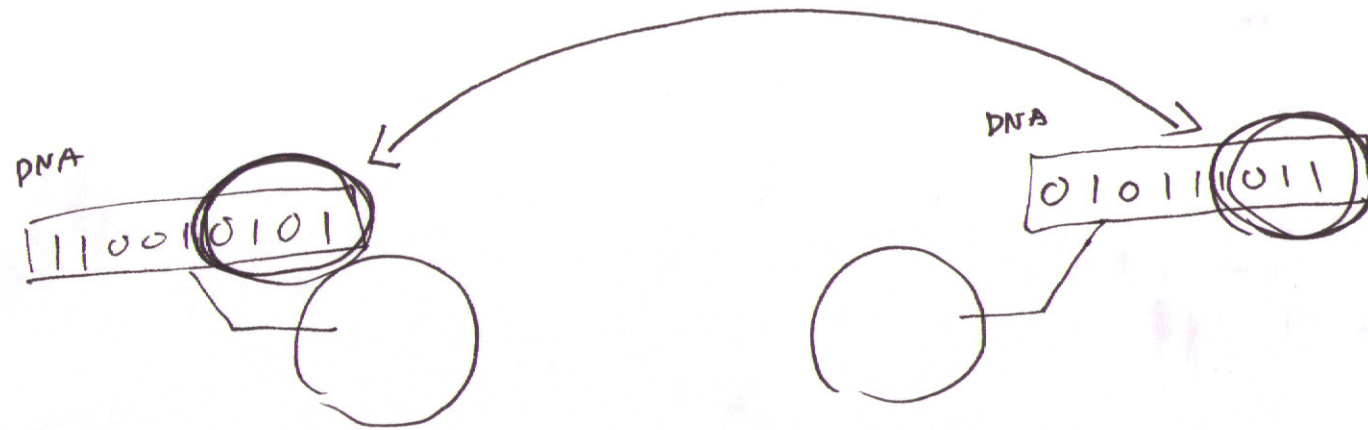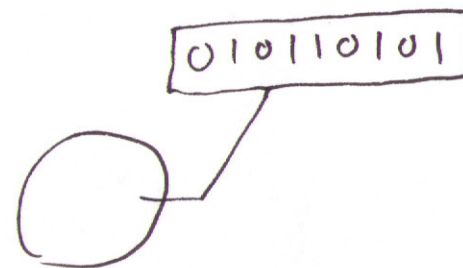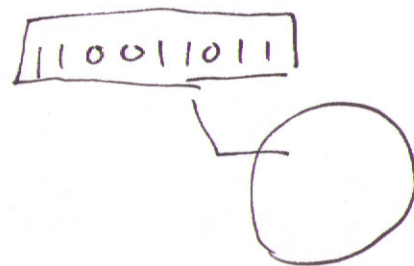SET TARGET DNA

MATING POOL

010011100
RANDOM DNA

FILL POOL WITH RANDOM DNA

MAKE PAIR AS PARENT

MAKE PARENTS

DNA

| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |

DNA

| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |

PARENTS

CROSSOVER

| 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |

| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |

CHILDREN

1011101

111000

COMPARE DNA

⇩

FITNESS f.

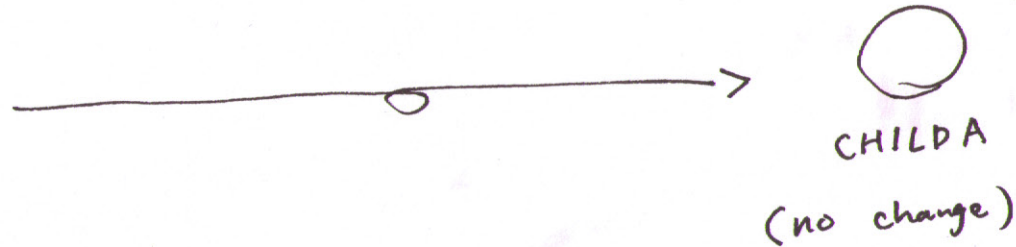1010001

01110

TARGET

101011

110011

1001110

11100

111000

111001
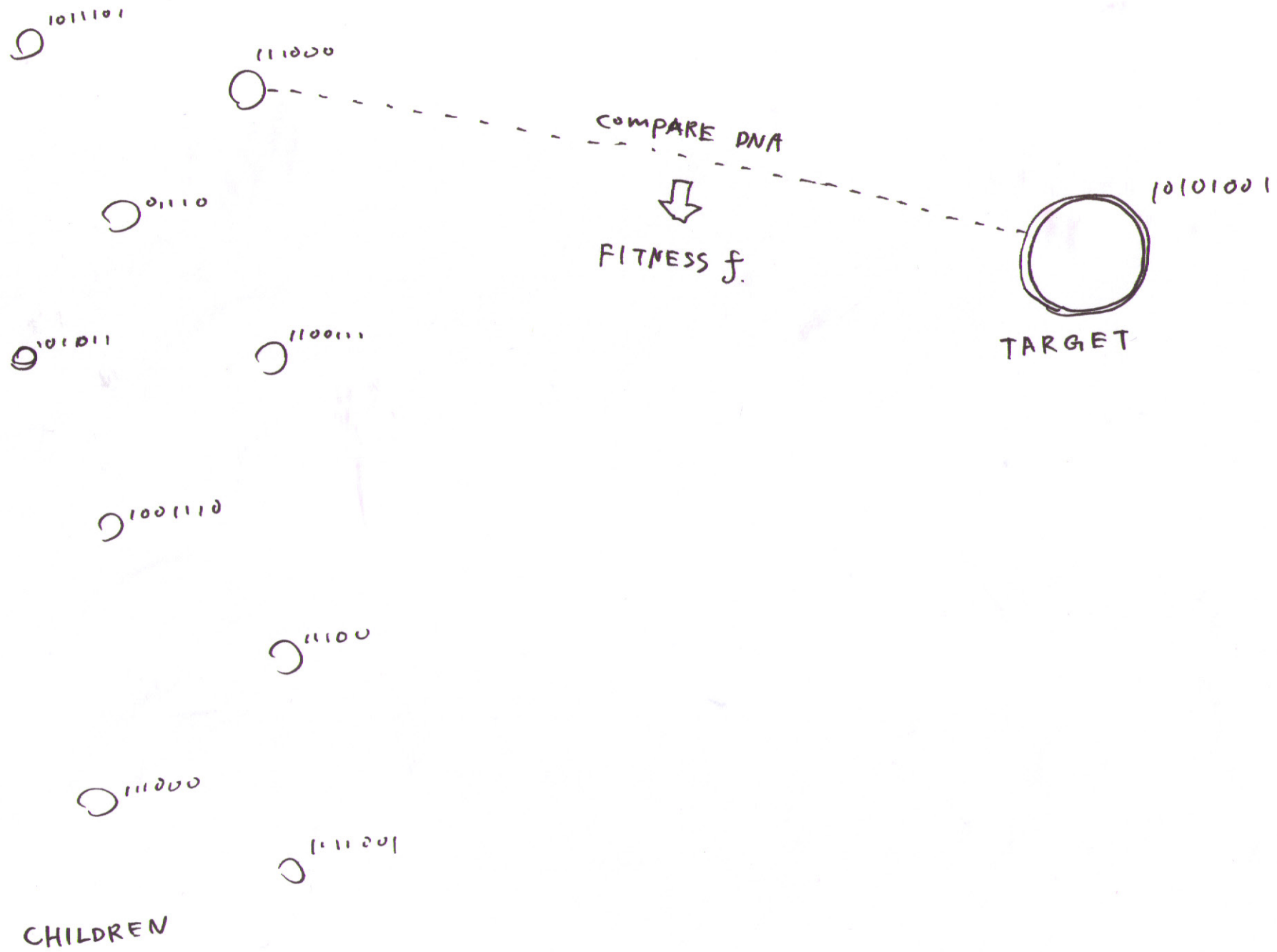
CHILDREN

CHANGE CHILDREN ACCORDING TO FITNESS.

$f > a$

CHILD A → CHILD A
(no change)

$a > f > b$

CHILD B → PARENT B
(bring up parent of child)

$b > f$

CHILD C. → CHILD D
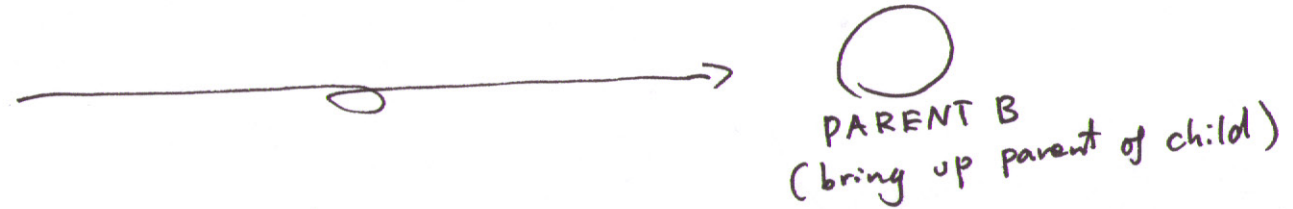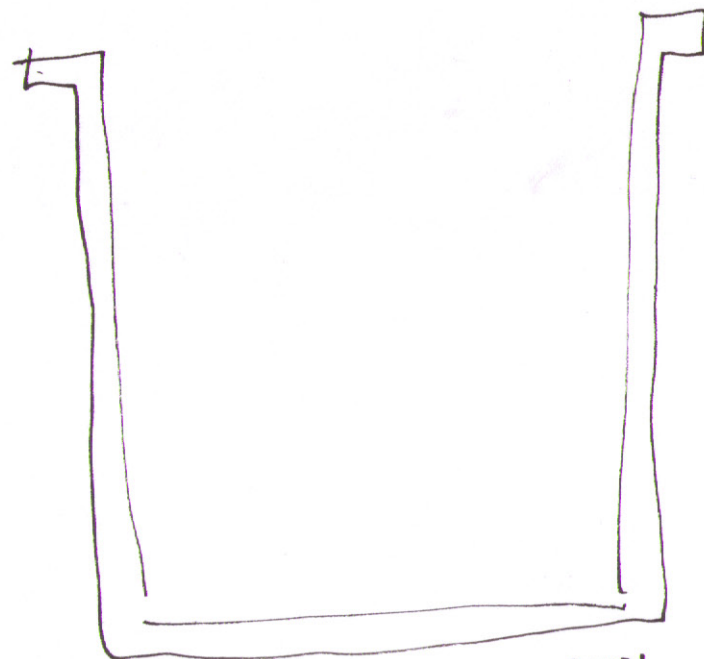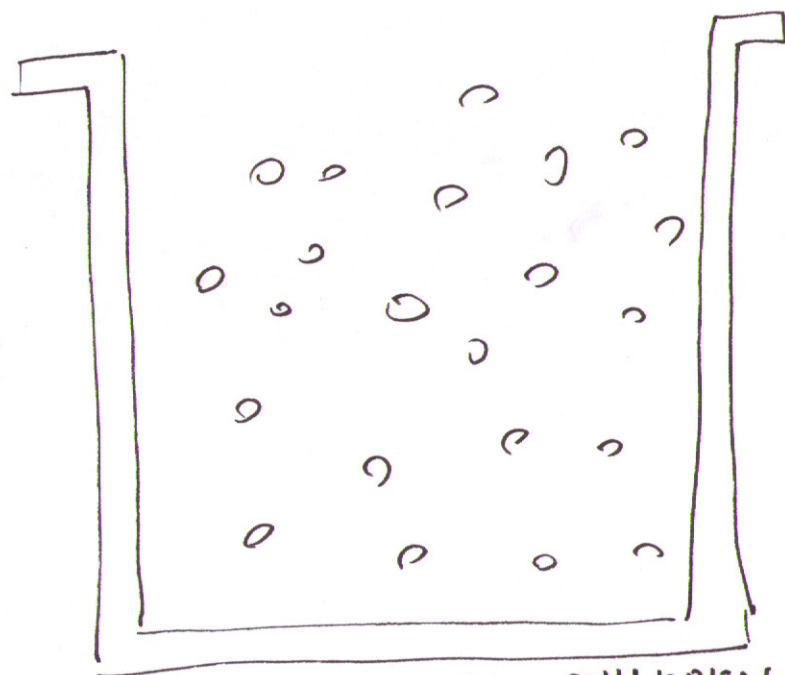(mutation)

MAKE NEW POOL

FILL WITH NEW CHILDREN

Looping....

till one of the children DNA get close to the target DNA