

Sequence 1

A

C

T

T

G

G

A

C

T

G

A

G

Sequence 2

A

C

T

T

G

A

C

T

G

A

G

A

T

T

G

A

T

G

A

G

Longest Common Sequence

Sequence 3

A

T

T

G

A

G

T

G

A

G

A

C

T

T

G

G

A

C

T

G

A

A

C

T

T

G

G

A

C

T

G

A

G

A

C

T

T

G

A

C

T

G

A

G

A

C

T

T

G

Y

A

C

T

G

A

G

A

T

T

G

A

G

T

G

A

G

A

Y

T

T

G

Y

A

G

T

G

A

G

A

T

T

G

A

T

G

A

G

A

Y

T

T

G

Y

A

Y

T

G

A

G

Sequence 1 (Alignment)

A

C

T

T

G

G

A

C

T

G

A

G

Sequence 2 (Alignment)

A

C

T

T

G

Y

A

C

T

G

A

G

Sequence 3(Alignment)

A

Y

T

T

G

Y

A

G

T

G

A

G

Longest Common Sequence (Alignment)

A

2C1Y

T

T

G

2Y1G

A

2C1G

T

G

A

G

C

Y

C

(The Y here means the position is empty)

A

C

T

T

G

+

A

C

T

G

A

G

Ancestry Sequence

A

C

T

T

G

A

C

T

G

A

G