

Given,

a1 → a2, a3, a4, a5, a6, a7, a8, a9, a10, b1

b1 → b2, c1

c1 → c2, d1, l1

d1 → d2, l1

e1 → e2, e3, c1

a1, e1 → f1

g1 → g2, b1

h1 → h2, h3, h4, h5, g1, e1

i1 → i2, i3, i4

j1 → j2, j3

k1 → k2, k3

l1 → l2, l3, l4, l5, l6, l7, l8, l9, l10, l11, l12, l13, l14

l1 → m1

l1 → n1

l1 → o1

l1 → p1

q1 → q2, q3, q4, e1, l1

q1, r1 → r2, r3, r4, r5, r6, r7

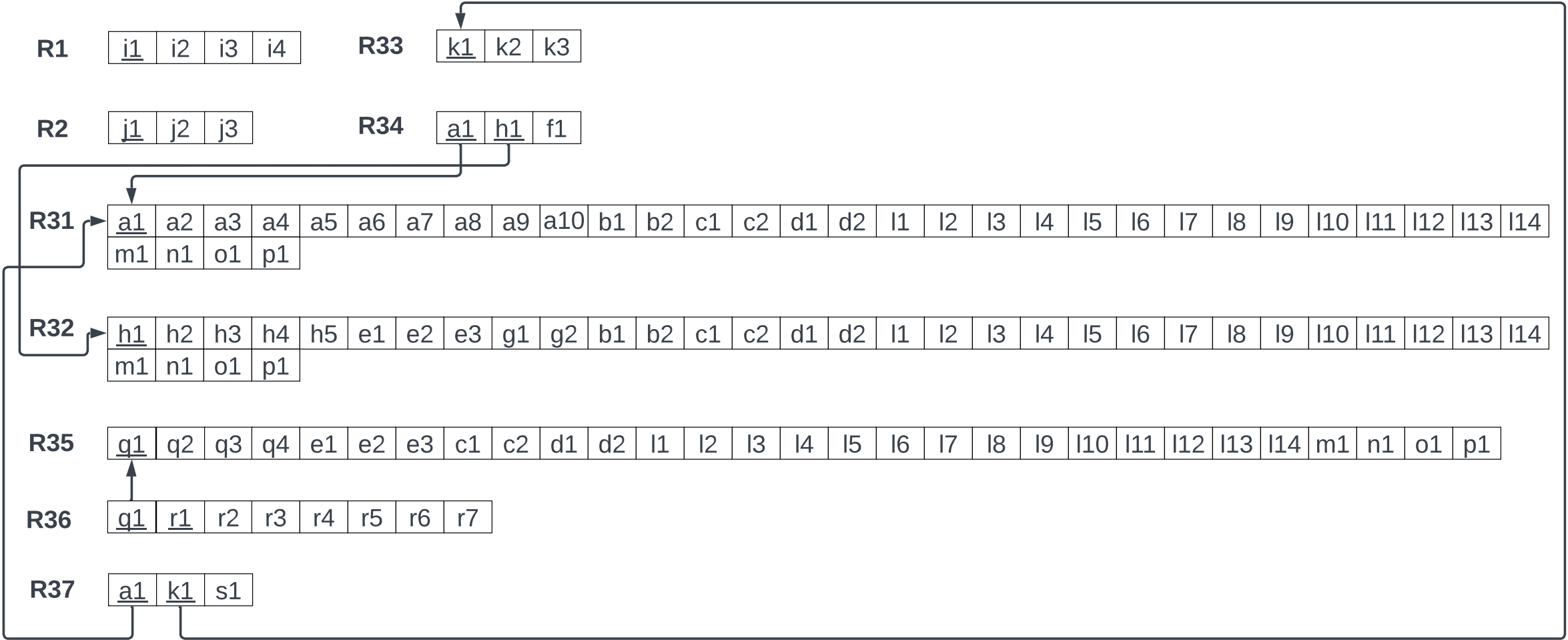
a1, k1 → s1

1NF

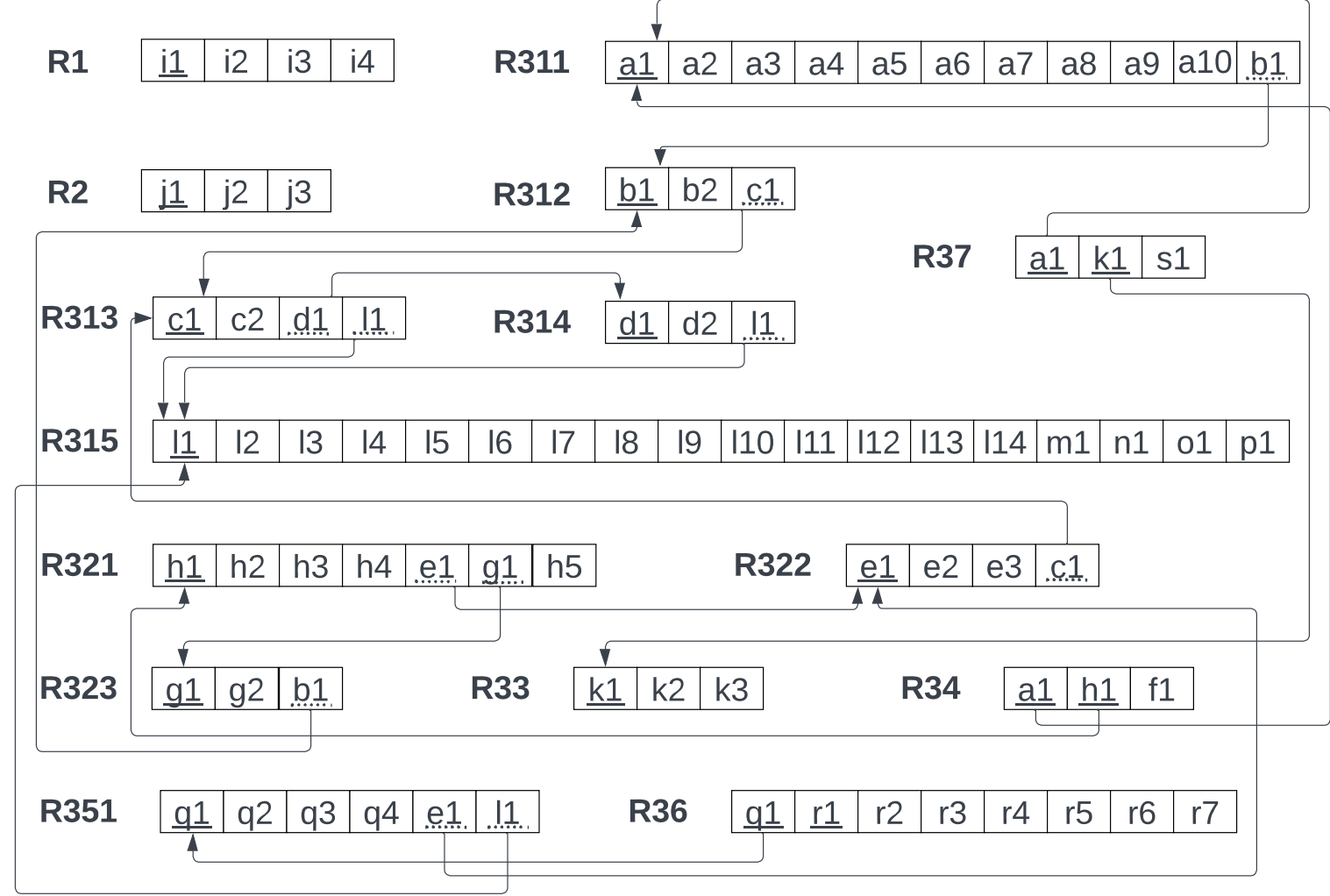
R1	<div><div>i1</div><div>i2</div><div>i3</div><div>i4</div></div>	R2	<div><div>j1</div><div>j2</div><div>j3</div></div>
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R3	<div><div>a1</div><div>a2</div><div>a3</div><div>a4</div><div>a5</div><div>a6</div><div>a7</div><div>a8</div><div>a9</div><div>a10</div><div>b1</div><div>b2</div><div>c1</div><div>c2</div><div>d1</div><div>d2</div><div>e1</div><div>e2</div><div>e3</div><div>f1</div><div>g1</div><div>g2</div><div>h1</div><div>h2</div><div>h3</div><div>h4</div><div>h5</div><div>k1</div><div>k2</div><div>k3</div></div>
	<div><div>l1</div><div>l2</div><div>l3</div><div>l4</div><div>l5</div><div>l6</div><div>l7</div><div>l8</div><div>l9</div><div>l10</div><div>l11</div><div>l12</div><div>l13</div><div>l14</div><div>m1</div><div>n1</div><div>o1</div><div>p1</div><div>q1</div><div>q2</div><div>q3</div><div>q4</div><div>r1</div><div>r2</div><div>r3</div><div>r4</div><div>r5</div><div>r6</div><div>r7</div><div>s1</div></div>

2NF



3NF



BCNF

There are no relations where a non-key identifies a primary key or part of primary key. Thus all relations are in BCNF.