

# Data Management and File Organization

Sample B+Tree

# B+Tree Example

- Assume data records contain ID and Name values
- The degree of the nodes is 2 ( $N=2$ )
- A B+Tree will be created by adding records one by one

# Sample Data

ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (25)

25	A
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ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (11)

11	B
25	A

ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (26)

11	B
25	A
26	C

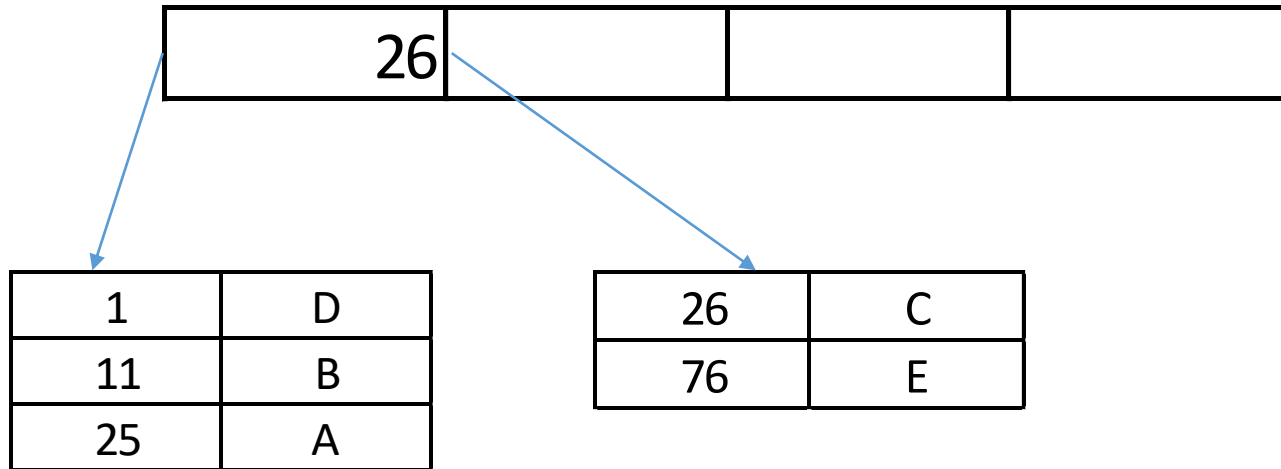
ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (1)

1	D
11	B
25	A
26	C

ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

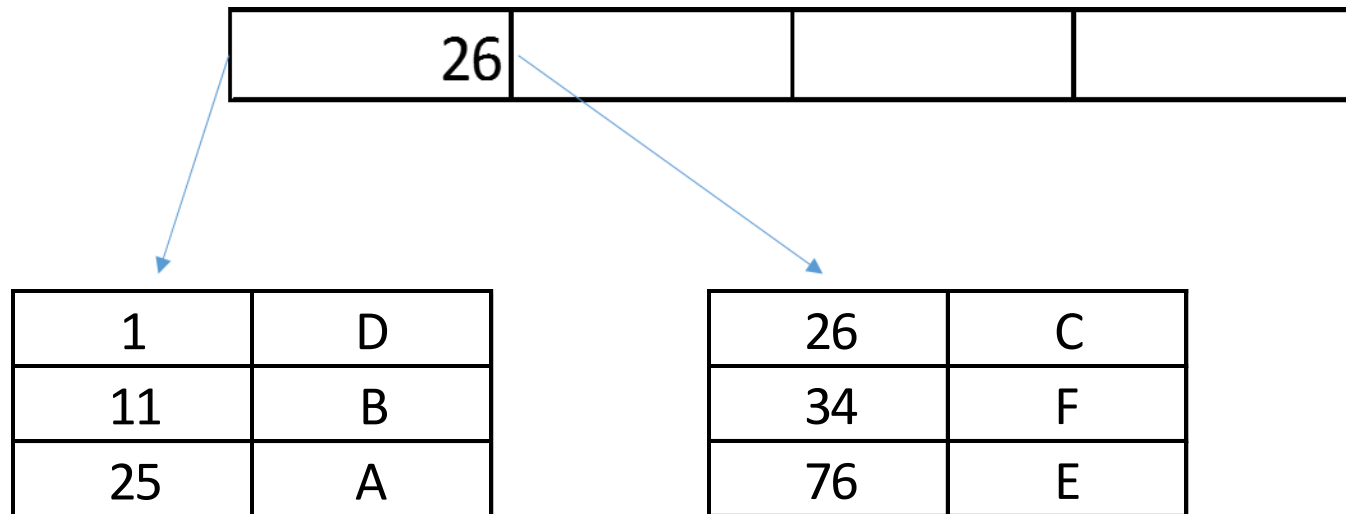
# Insert Records (76)



ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U



# Insert Records (34)



ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (65)



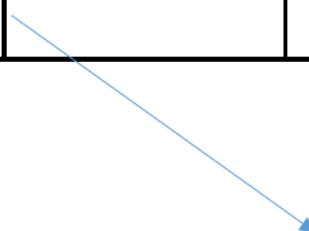
1	D
11	B
25	A

26	C
34	F
65	G
76	E

ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (10)

26			
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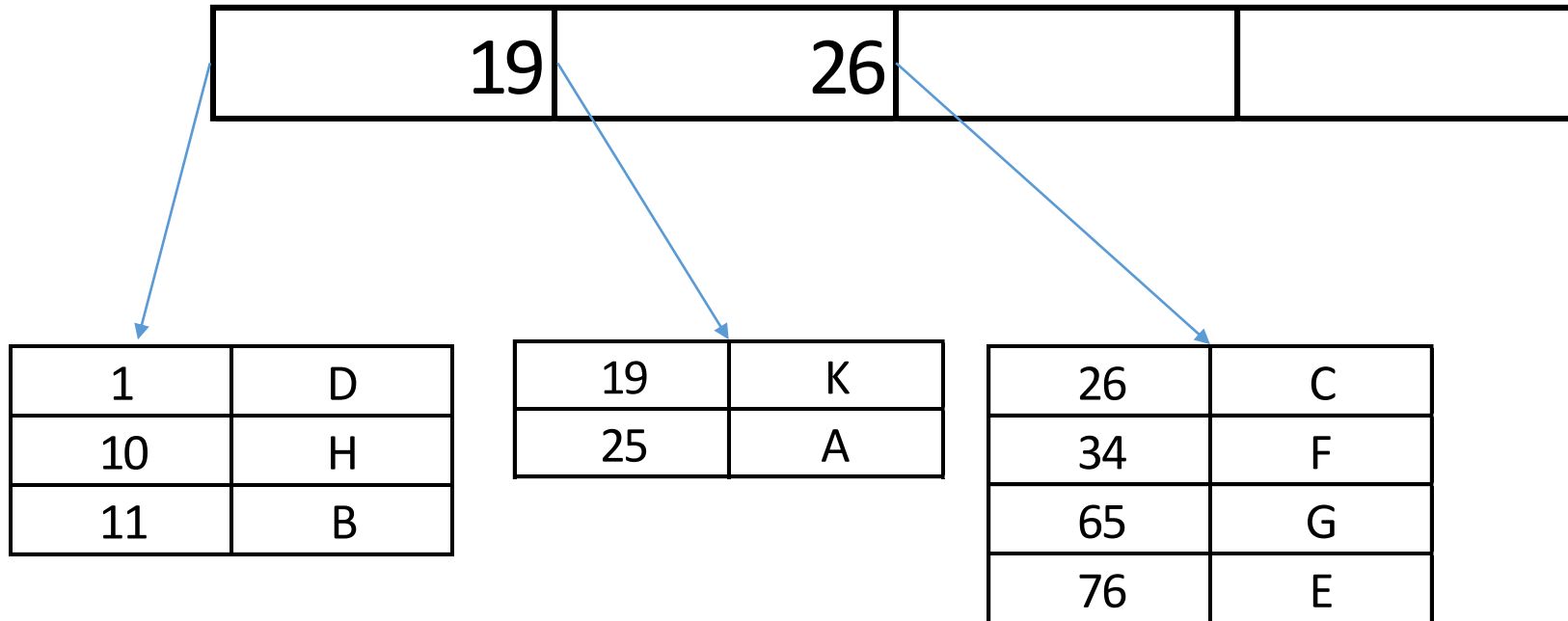


1	D
10	H
11	B
25	A

26	C
34	F
65	G
76	E

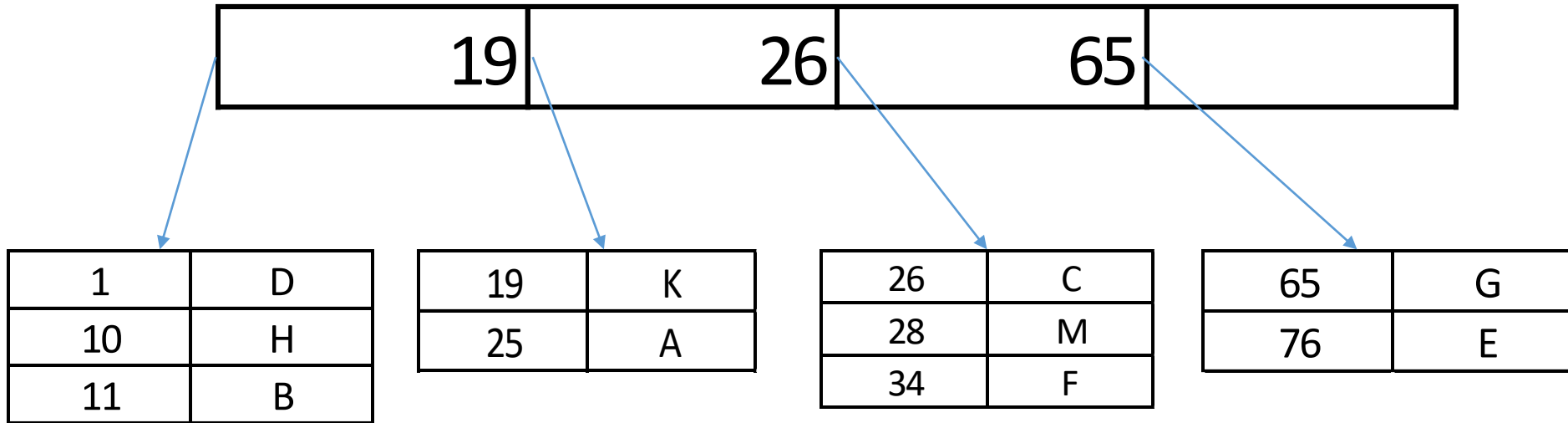
ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (19)



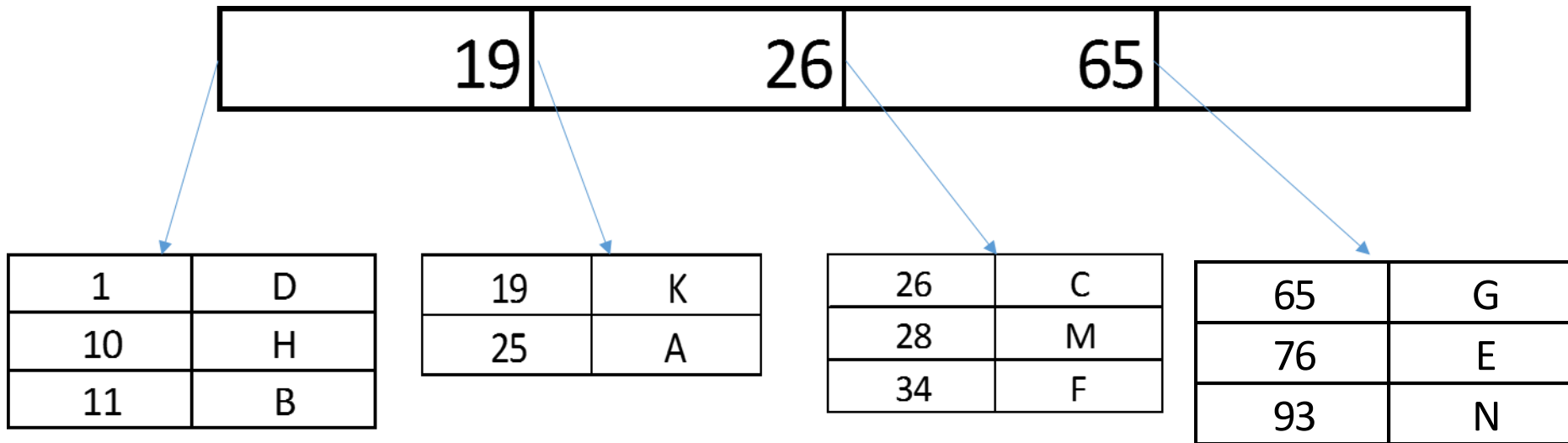
ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (28)



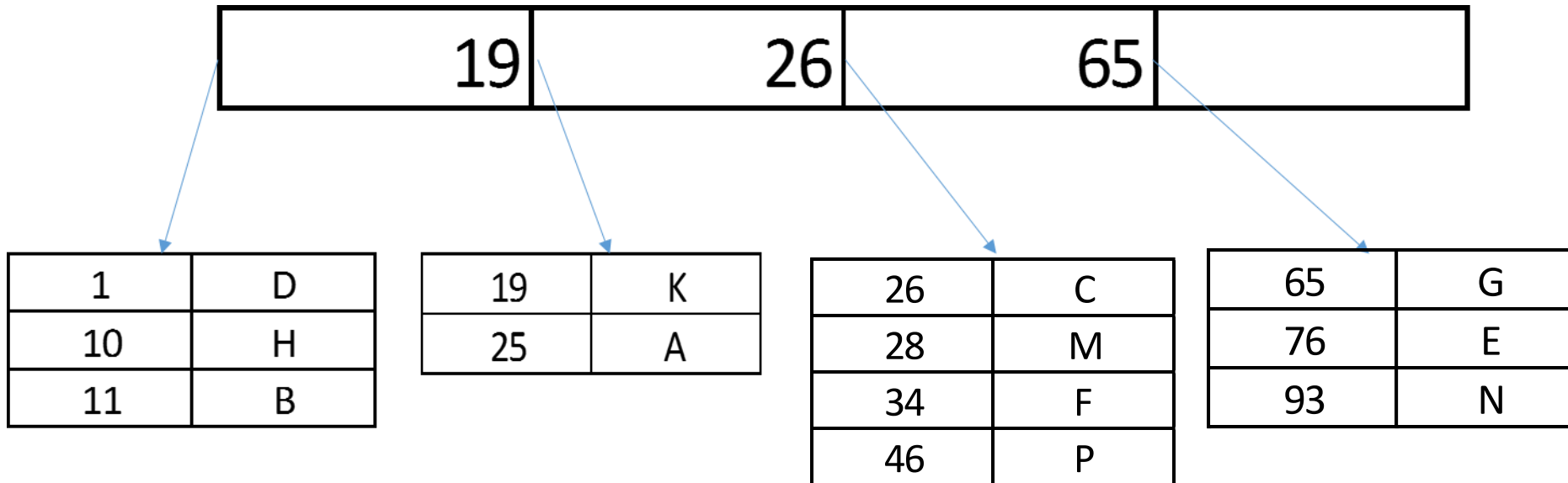
ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (93)



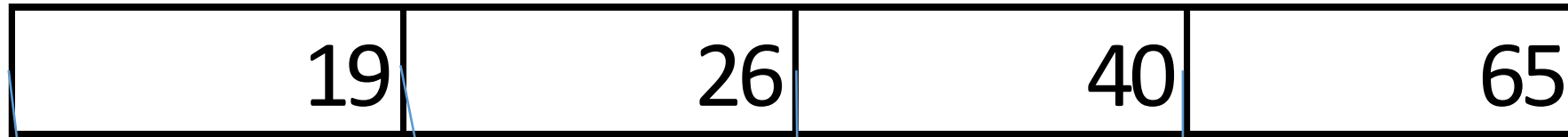
ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (46)



ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (40)



1	D
10	H
11	B

19	K
25	A

26	C
28	M
34	F

40	W
46	P

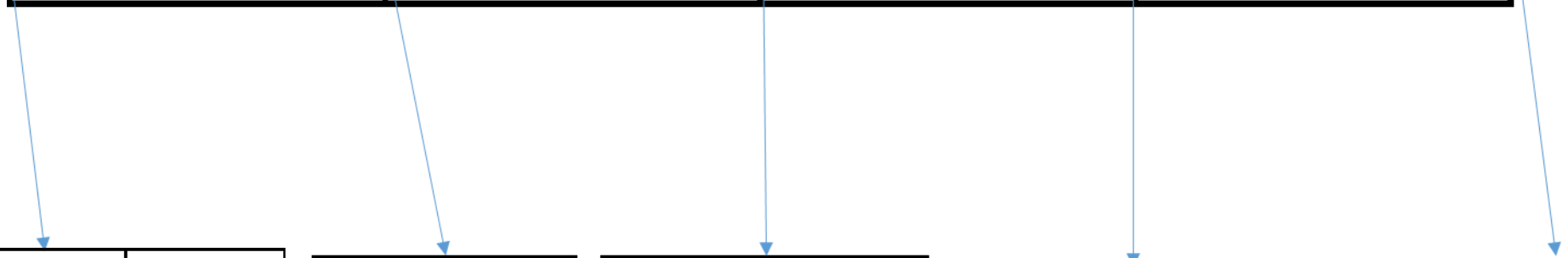
65	G
76	E
93	N

ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U



# Insert Records (79)

19	26	40	65
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1	D
10	H
11	B

19	K
25	A

26	C
28	M
34	F

40	W
46	P

65	G
76	E
79	S
93	N

ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (33)

19	26	40	65
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1	D
10	H
11	B

19	K
25	A

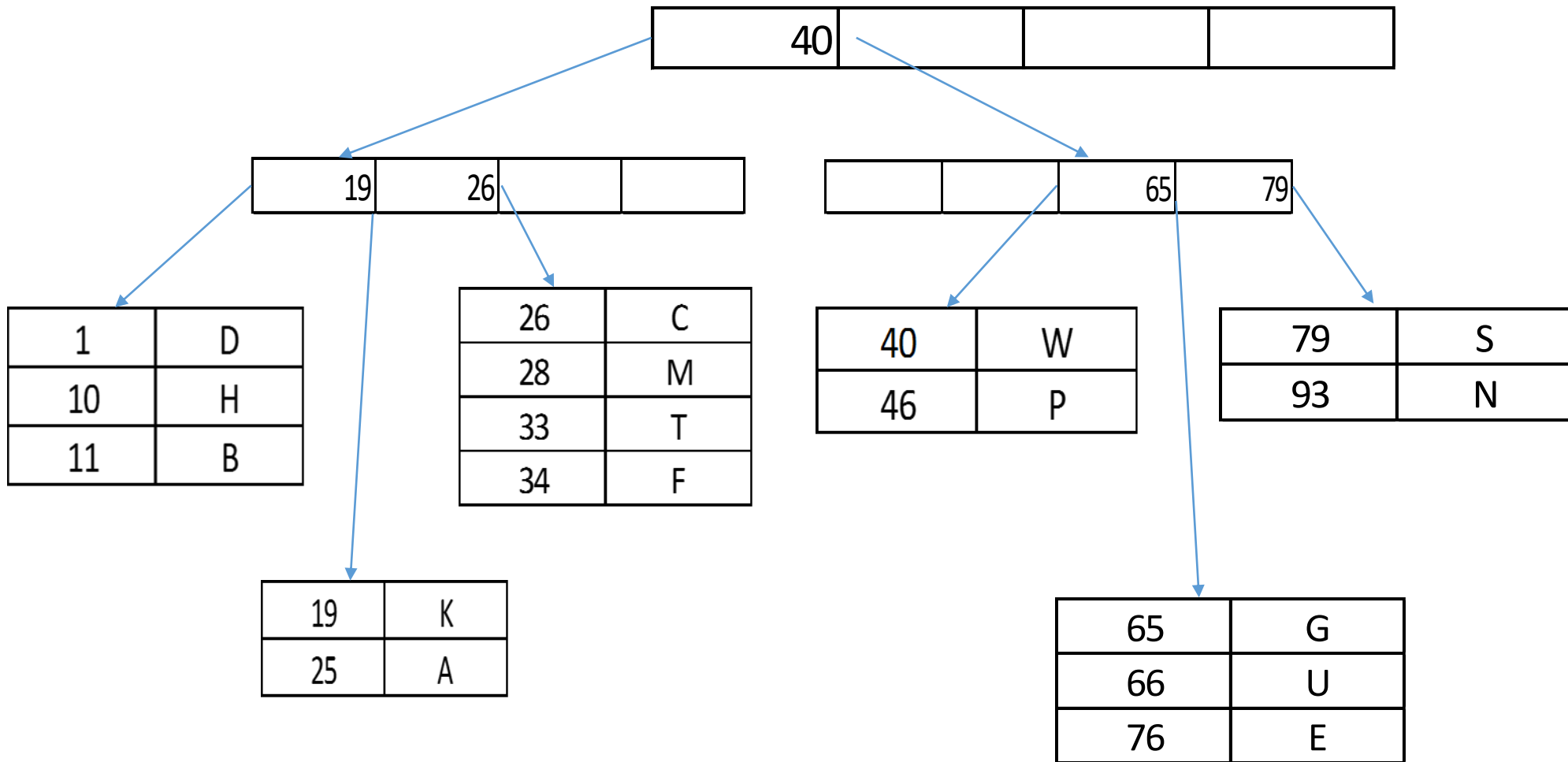
26	C
28	M
33	T
34	F

40	W
46	P

65	G
76	E
79	S
93	N

ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U

# Insert Records (66)



ID	Name
25	A
11	B
26	C
1	D
76	E
34	F
65	G
10	H
19	K
28	M
93	N
46	P
40	W
79	S
33	T
66	U