Inhaltsverzeichnis

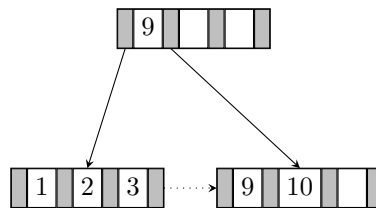# 1 Initial B$^+$ tree

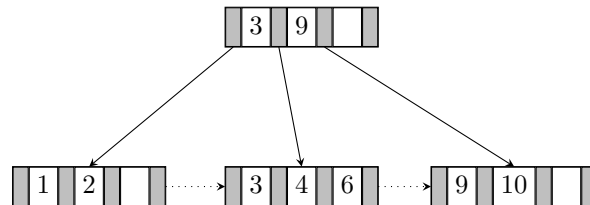# 2 Extending the B$^+$ tree

2.1 Insert 3 and 9
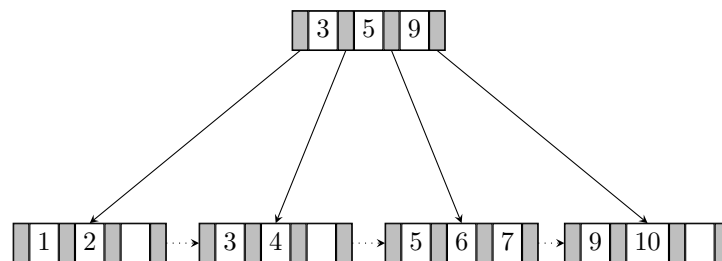

2.2 Insert 10
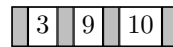
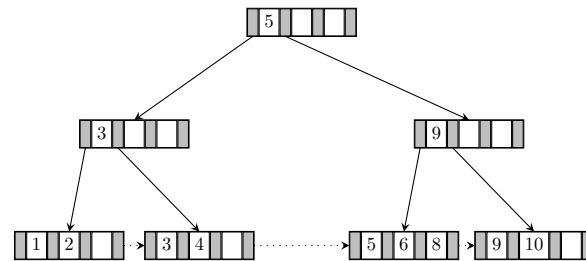## 2.3 Insert 1 and 2

2.4 Insert 6 and 4
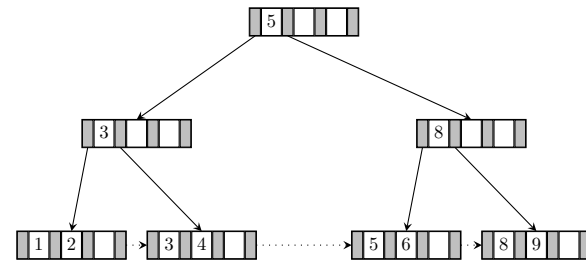

2.5 Insert 5 and 7

2.6 Insert 8

```
                    | 5 |   |   |
                  /              \
         | 3 |   |   |        | 7 | 9 |   |
        /        \          /    |     \
  |1|2| | | → |3|4| | | ⋯→ |5|6| | | → |7|8| | | → |9|10| | |
```
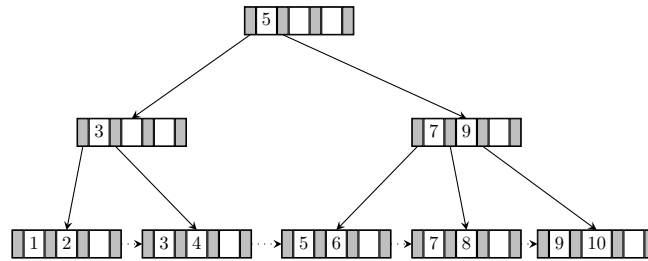
3 Shrinking the B⁺ tree

3.1 Delete 7

```
                    | 5 |   |   |
                  /              \
         | 3 |   |   |        | 9 |   |   |
        /        \          /        \
  |1|2| | | → |3|4| | | ⋯⋯→ |5|6|8| → |9|10| | |
```

3.2 Delete 10

```
                    | 5 |   |   |
                  /              \
         | 3 |   |   |        | 8 |   |   |
        /        \          /        \
  |1|2| | | → |3|4| | | ⋯⋯→ |5|6| | | → |8|9| | |
```

3.3 Delete 6

```
                 | 3 | 5 |   |   |
               /      |        \
  |1|2| | | ⋯⋯→ |3|4| | | ⋯⋯→ |5|8|9|
```