*head

*prev   data   *next

| 500 NULL | | | 500 NULL | 50 | 500 NULL |

500

| 500 | *New_node |

if(head == NULL)
{ head = newnode;
  newnode → next = head;
  newnode → prev = newnode;
}

---

*head

*prev   data   *next   *prev   data   *next   *prev   data   *next

| 100 | | 500 300 | 10 | 200 | 100 | 20 | 300 | 200 | 30 | 500 100 |

100   200   300

*prev   data   *next

| 300 NULL | 50 | 100 NULL |

500
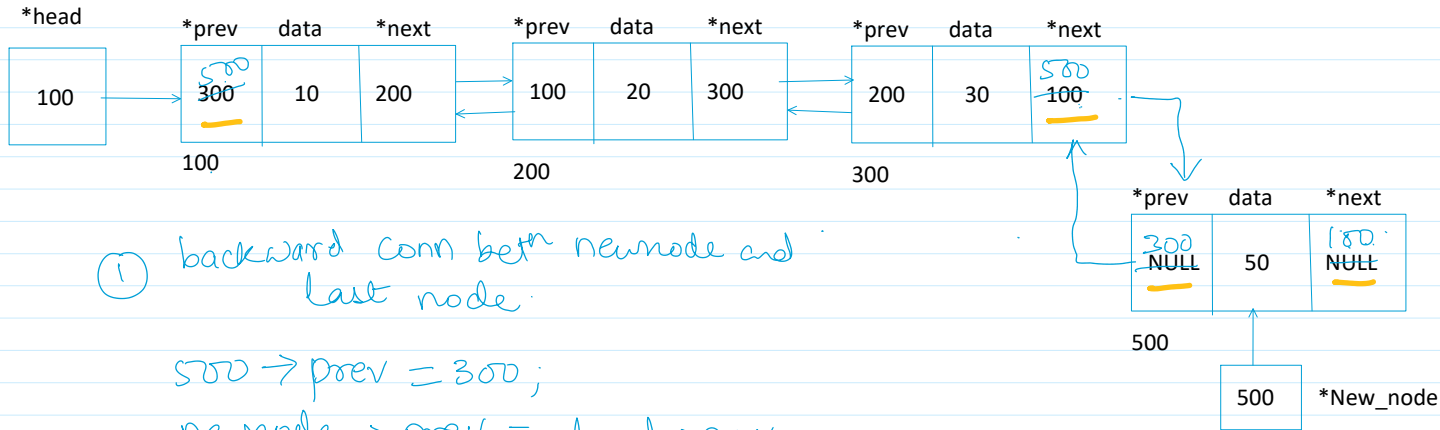
| 500 | *New_node |

① backward conn betⁿ newnode and
   last node.

   500 → prev = 300;
   newnode → prev = head → prev;

② forward conn betⁿ newnode
   and 1ˢᵗ node.

   500 → next = 100;
   newnode → next = head;

③ forward conn betⁿ last node
   and newnode.
   300 → next = 500;
   head → prev → next = newnode;

④ backward conn betⁿ 1ˢᵗ node
   and newnode.
   head → prev = newnode.