Parking\_Slot (**p\_id**, *block\_id*, available, handicapped)

Block (**b\_id**, is\_block\_full, type, slot\_cost\_hourly, num\_spots)

Customer (**c\_id,** cnic [u], f\_name, l\_name, contact, email, dr\_lisence [u], reg\_date, is\_regular, bank\_account)

Regular\_Customer (***rc\_id***, start\_date, end\_date)

Reservation (**r\_id**, *slot\_id*, *c\_id*, veh\_num, start\_time, duration [check], date)

Slip (**s\_id**, *c\_id*, *r\_id*, slot\_num, entry\_time, exit\_time, veh\_num, basic\_cost, penalty, total\_cost)

Functional Dependencies:

Parking \_Slot:

1. p\_id 🡪 block\_id
2. p\_id 🡪 handicapped

Block:

1. b\_id 🡪 type
2. type 🡪 slot\_cost\_hourly
3. b\_id 🡪 num\_spots

Customer:

1. c\_id 🡪 cnic
2. c\_id 🡪 dr\_license
3. c\_id 🡪 is\_regular

Regular\_Customer:

1. rc\_id 🡪 start\_date, end\_date

Reservation:

1. r\_id 🡪 c\_id, veh\_num

Slip:

1. s\_id 🡪 c\_id, r\_id, veh\_num
2. s\_id 🡪 entry\_time
3. s\_id 🡪 exit\_time
4. slot\_num 🡪 basic\_cost
5. basic\_cost 🡪 total\_cost
6. entry\_time, exit\_time 🡪 penalty
7. entry\_time, exit\_time 🡪 total\_cost

After Normalization to BCNF:

Parking\_Slot1 (p\_id, block\_id, handicapped)

p\_id 🡪 block\_id, handicapped

Parking\_Slot2 (p\_id, available)

p\_id 🡪 available

Block1 (b\_id, type, num\_spots)

b\_id 🡪 type, num\_spots

Block2 (type, slot\_cost\_hourly)

type 🡪 slot\_cost\_hourly

Block3 (b\_id, is\_block\_full)

b\_id 🡪 is\_block\_full

Customer (c\_id, cnic [u], f\_name, l\_name, contact, email, dr\_lisence [u], reg\_date, is\_regular, bank\_account)

c\_id 🡪 cnic, f\_name, l\_name, contact, email, dr\_lisence, reg\_date, is\_regular, bank\_account

Regular\_Customer (rc\_id, start\_date, end\_date)

Reservation1 (r\_id, c\_id, veh\_num)

r\_id 🡪 c\_id, veh\_num

Reservation2 (r\_id, slot\_id, start\_time, duration, date)

Slip1 (s\_id, c\_id, r\_id, veh\_num, slot\_num, entry\_time, exit\_time)

s\_id 🡪 c\_id, r\_id, veh\_num, slot\_num, entry\_time, exit\_time)

Slip2 (entry\_time, exit\_time, penalty)

entry\_time, exit\_time 🡪 penalty

Slip3 (slot\_num, basic\_cost, total\_cost)

slot\_num 🡪 basic\_cost