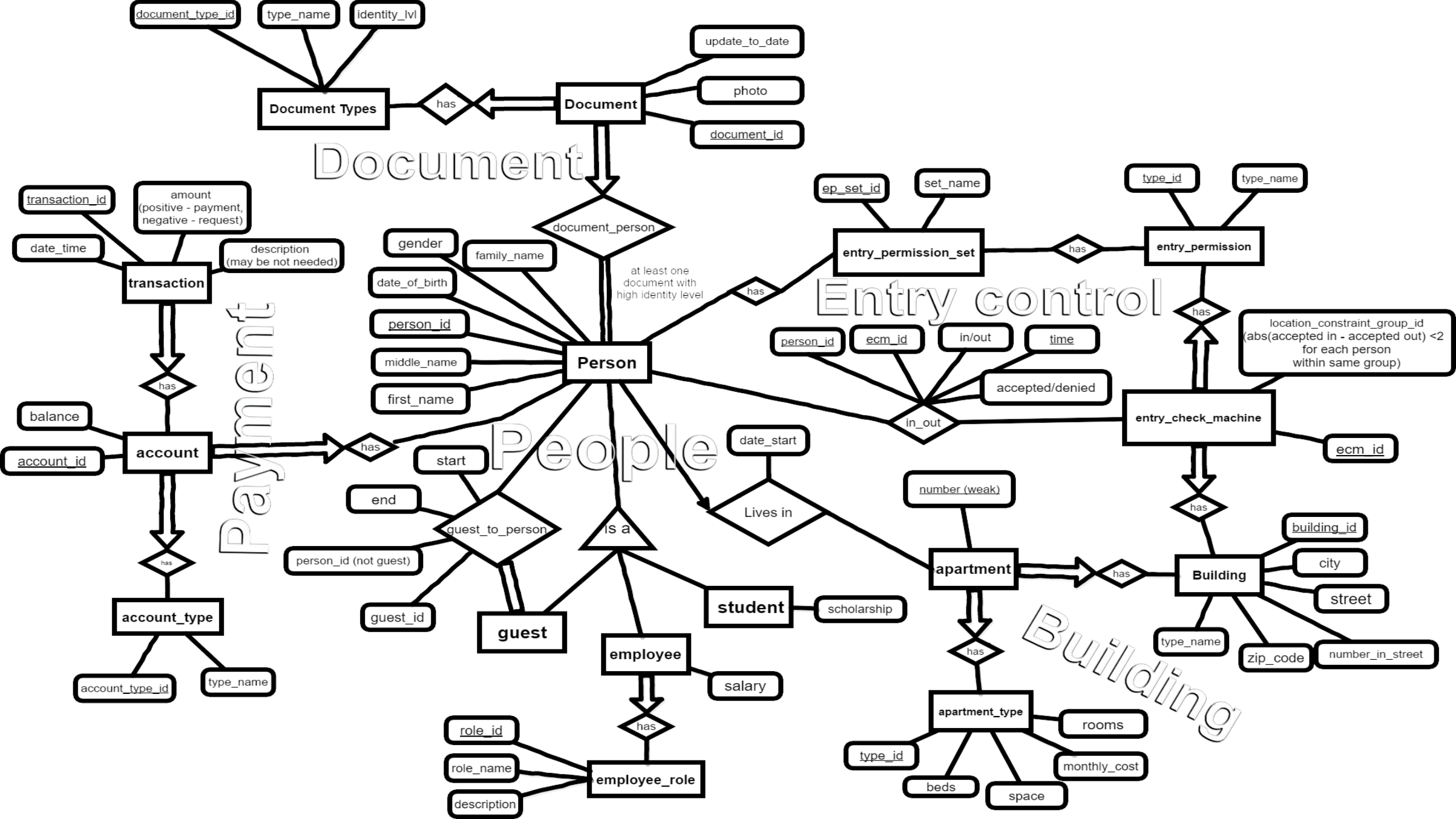# Campus administration

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Idea of the Project

▶ Developing an application for managing all tasks related with the allocation and monitoring of the students' housing facilities.

▶ It will make the dormitory administrator work easier, more efficient, and make fewer mistakes

Main features

- Apartments' occupation control
- Guest control
- Students and personnel documents maintenance
- Payment control
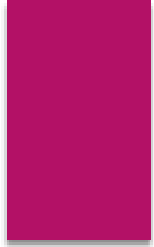- Personnel attendance control
- Access control

Technologies

Students	Employees	List of tenants	Apartments occupation	Guests	Docs	Account balances	Attendance

Occupied beds	Appartment...	Building	Beds	Free Beds
5	100	1	5	0
2	101	1	2	0
2	101	2	2	0
2	100	2	2	0
1	100	4	1	0
1	102	1	5	4
1	102	4	5	4
1	101	4	5	4
1	100	3	1	0
1	101	3	2	1
1	102	3	5	4
1	102	2	5	4
0	119	2	1	1
0	404	4	5	5
0	421	4	1	1
0	107	2	5	5

Apartments occupation

Apartments for female students | Apartments for female employees

Apartments for male students | Apartments for male employees

SELECT * FROM apartment_occupation ORDER BY beds_occupied DESC

```sql
1   SELECT
2      COUNT (li.person_id) AS beds_occupied,
3      A .apartment_number,
4      A .building_id,
5      AT .beds,
6      (
7         AT .beds - COUNT (li.person_id)
8      ) AS free_beds
9   FROM
10     (
11        (
12           apartment A
13           LEFT JOIN lives_in li ON (
14              (
15                 (
16                    li.building_id = A .building_id
17                 )
18                 AND (
19                    li.apartment_number = A .apartment_number
20                 )
21              )
22           )
23        )
24        JOIN apartment_type AT ON (
25           (
26              A .apartment_type_id = AT .apartment_type_id
27           )
28        )
29     )
30  GROUP BY
31     A .apartment_number,
32     A .building_id,
33     AT .beds;
```

First name	Last name	Building	Time
Silas	Randolph	1	2016-11-16 00:00:00.0
Willard	Carmichael	1	2016-11-12 08:17:56.0
Claude	Madrigal	4	2016-09-04 05:34:10.0
Luciano	Madrid	1	2016-11-19 01:00:51.649...
Joey	Valdez	2	2016-11-16 23:01:59.0
Lucius	Carnahan	4	2016-11-15 22:27:45.0
Joesph	Shea	3	2016-11-06 03:32:34.0
Lucio	Barton	2	2016-10-17 21:48:22.0
John	Sheehan	3	2016-11-15 14:42:12.0
Noel	Dowdy	1	2016-09-19 22:33:31.0
Harris	Carman	2	2016-10-20 20:32:24.0
Eldon	Mosier	3	2016-11-13 00:41:37.0

People inside now

SELECT first_name, family_name, building_id, date_time FROM persons_inside_campus_now

```sql
1   SELECT
2     in_out.person_id,
3     in_out.ecm_id,
4     in_out.direction,
5     in_out.date_time,
6     in_out.accepted,
7     entry_check_machine.building_id,
8     entry_check_machine.entry_permission_id,
9     entry_check_machine.constraint_group_id,
10    person.first_name,
11    person.middle_name,
12    person.family_name,
13    person.date_of_birth,
14    person.gender,
15    person.main_document_id
```

```sql
16   FROM
17     (
18       (
19         in_out
20         JOIN entry_check_machine USING (ecm_id)
21       )
22       JOIN person USING (person_id)
23     )
24   WHERE
25     (
26       (
27         in_out.person_id IN (
28           SELECT
29             last_time_person_accepted_in_out.person_id
30           FROM
31             last_time_person_accepted_in_out
32         )
33       )
34       AND (
35         in_out.date_time = (
36           SELECT
37             last_time_person_accepted_in_out.last_accepted_entry
38           FROM
39             last_time_person_accepted_in_out
40           WHERE
41             (
42               last_time_person_accepted_in_out.person_id = in_out.person_id
43             )
44         )
45       )
46       AND (
47         (
48           entry_check_machine.constraint_group_id <> 1
49         )
50         OR (
51           in_out.direction <> 'o' :: bpchar
52         )
53       )
54     );
```
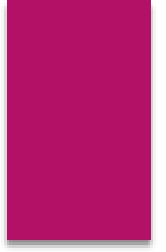
```sql
1   SELECT
2     in_out.person_id,
3     MAX (in_out.date_time) AS last_accepted_entry
4   FROM
5     in_out
6   WHERE
7     (in_out.accepted = TRUE)
8   GROUP BY
9     in_out.person_id;
```

Id	First name	Last name	Balance	
7	Claud	Bartlett	−54.0	
5	Harris	Carman	243.0	
8	Willard	Carmichael	−203.0	
26	Lucius	Carnahan	−239.0	
3	Elden	Janes	−33.0	
22	William	Jansen	199.0	
1	Luciano	Madrid	−137.0	
23	Harvey	Madsen	−427.0	
24	Eldon	Mosier	63.0	
9	Harrison	Randall	59.0	
25	Silas	Randolph	318.0	
2	Aurelio	Shay	160.0	
6	Joesph	Shea	−283.0	
21	John	Sheehan	181.0	
4	Shon	Valdes	13.0	
10	Joey	Valdez	−176.0	

Rental fee | Rental fee negative

Tuition fee | Tuition fee negative

SELECT * FROM rental_fee_balance ORDER BY family_name

Demonstration of the application