



University Dormitory and Housing Management System





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Introduction

- The Student Dormitory and housing Management System is a web based system that manages the process of allocating houses to university students.
- The system manages the allocation of houses to different classes of students which includes fresh, sophomore, junior and senior students.
- The system supports fresh students by providing dorms available in the university (on campus) while other classes of students are expected to live in an off campus housing after their fresh year studies.

Agenda

- The agenda of this system is to provide an automated system to allocate house for students and to simplify the process of finding a house through web based system for both the on campus and off campus housing.
- The uniqueness of the system is that the university provides a way for 2nd year and above students to look and book for an off campus house after their freshman year, by signing with residential owners that work closely with the university to help the students book house from the residential houses provided by the residence admin.

Entity Relationship Model

The Entity in the system includes :-

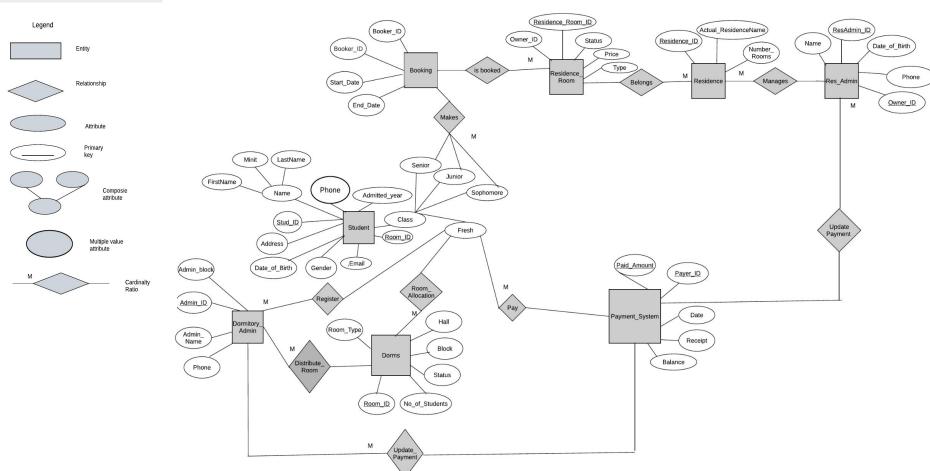
- Student (Request for a house)
- Dormitory Rooms(rooms for fresh students)
- Residential Rooms(off campus houses for 2nd year and above)
- Administrators (manage room allocation and payment)
- Payment System (manage the payment for the houses)

Entity Relationship Model

The relationship between the entities is described as follows:

- Fresh students *register* through the admin
- All students *pay* through the payment system
- Sophomore, Junior and senior students *make* booking
- Dormitory Admin *distribute rooms* for fresh students
- Fresh students gets *allocated* to a Dorm
- Residence admin *manages* the residence houses
- Residential rooms *belong to* Residence owners

ER MODEL



		Last_name		Address	Date_of_Birth		Phone	Admitted_Year		RoomID
			M	Helen Way 94536, Fremont, California	2001-12-31		510-255-9828	2020-2024	fresh	R-12
11	Maranata	Muluneh	F	Bradly street 94539 Fremont, California	1999-03-03	maranathagamil.com	510-255-9800	2021-2024	fresh	1 02/A
12	Mahmud	Mohammed	l M	Brahms Cmn 94538, Fremont, California	1999-04-03	mahmud@gmail.com	510-255-9801	2019-2021	sophomore	R-01
13	John	Carter	M	Brahms Cmn 94538, Fremont, California	2000-04-05	John@gmail.com	510-255-9802	2021-2024	fresh	04/B
14	Kris	David	F	Cadiz Court 94536 , Fremont, California	1997-06-07	Kris@gmail.com	510-255-9803	2019-2025	sophomore	R-01
15	Sammy	Madiga	F	Dalgo Road 94539, Fremont, California	2020-07-08	sammy@gmail.com	510-255-9804	2018-2022	senior	R-02
16	Christopher	Tucker	I M	Dali Street 94536, Fremont, California	1995-08-09	christopher@gmail.com	510-255-9805	2021-2023	fresh	03/A
17	Cameron	Wilson	M	Dallas Court 94536, Fremont California	1992-09-01	Kate@gmail.com	510-255-9806	2018-2022	fresh	03/A
18	Benny	Matthew	M	Dalton Cmn 94536, Fremont, California	2002-10-10	Benny@gmail.com	510-255-9807	2021-2025	Fresh	1 03/A
19	Bethel	Samuel	I F	el Torazo Cmn 94536, Fremont, California	2003-11-02	Bethel@gmail.com	510-255-9808	2021-2024	fresh	05/A
20	Tom	Hiller	l M	Elaiso Cmn 94536, Fremont, California	2001-12-05	tom@gmail.com	510-255-9809	2021-2025	Junior	R-02
21	Jim	Fredirick	l M	Elba Place 94536, Fremont, California	1991-03-13	Jim@gmail.com	510-255-9810	2021-2024	senior	R-04
22	Mlacolm	Solomon	l M	Hackamore Cmn 94539, Fremont, California	1998-10-13	malcolm@gmail.com	510-255-9811	2019-2021	senior	I R-04
23	Becky	Warren	M	Hackamore Lane 94539, Fremont, California	1997-06-05	Becky@gmail.com	510-255-9812	2019-2022	fresh	12/A
24	Sutton	Cruise	F	Hackberry Street 94539, Fremont, California	1996-07-16	sutton@gmail.com	510-255-9813	2019-2023	sophomore	I R-05
25	Gabrielle	Witson	F	Sandal Wood Court 94536, Fremont, California	1995-08-17	gabrielle@gmail.com	510-255-9814	2019-2021	Junior	R-05
26	Jennifer	Lorance	I F	Sanderling Court 94555, Fremont, California	1994-04-08	Jennifer@gmail.com	510-255-9815	2019-2022	fresh	13/B
27	Liyu	Muluneh	F	Tassel Fern Cmn 94536, Fremont, California	1999-10-19	livu@gmail.com	510-255-9816	2020-2022	fresh	13/B
28	Lily	Nathan	F	Tavis Place 94538, Fremont, California	1999-12-20	Lily@gmail.com	510-255-9817	2020-2023	senior	R-06
29	Angela	Jonah	F	Tawny Terrace 94536, Fremont, California	1999-12-21	angela@gmail.com	510-255-9818	2020-2024	Junior	R-06
30	Mark	Joseph	l M	Teakwood Drive 94536, Fremont, California	1999-03-22	mark@gmail.com	510-255-9819	2020-2025	sophomore	I R-07
31	Vicky	Todd	F	Teal Cmn 94555, Fremont, California	1999-09-26	vicky@gmail.com	510-255-9820	2019-2022	senior	R-08
32	Eric	Jakes	M	Tecado Terrace 94538, Fremont, California	1999-04-12	eric@gmail.com	510-255-9821	2020-2023	sophomore	R-08
33	Philiphis	Luca	M	Woodview Terrace 94539, Fremont, California	2001-12-25	philiphis@gmail.com	510-255-9822	2020-2024	fresh	13/A
34	Kennedy	Jacob	M	Woodward Drive 94536, Fremont, California	2002-05-26	kennedy@gmail.com	510-255-9823	2019-2022	senior	I R-08
35	Rahel	Canyon	I F	Woodward Place 94536, Fremont, California	2003-10-23	rahel@gmail.com	510-255-9824	2021-2023	Junior	I R-09
36			F	Zinfindel Street 94539, Fremont, California	2004-06-04	martha@gmail.com	510-255-9825	2019-2022	senior	R-10
37 I	Alberto	Agnues	M	Zircon Terrace 94555, Fremont, California	1997-02-17	alberto@gmail.com	510-255-9826	2017-2021	sophomore	R-10
38 I	Maria	Curry	I F	Zunic Drive 94539, Fremont, California	1999-12-30	maria@gmail.com	510-255-9827	1 2020-2023	fresh	1 15/B
40		100 mg (100 mg	F	Gatewood Street 94538, Fremont, California	2000-01-20	nick@gmail.com	510-255-9829	2020-2021	senior	R-12
41	Kim	Walker	F	Farragut Drive 94539, Fremont, California	2000-04-02	kim@gmail.com	510-255-9830	1 2019-2023	fresh	I 06/B

Room_ID	Block	Hall	Room_type	Status	Number_of_students	Price
01/A	Block A	1st floor	2 beds	vacant	2	3000
04/A	Block A	1st floor	2 beds	1 2	1 2	3000
01/B	Block B	1st floor	2 beds	vacant	1 2	3000
02/A	Block A	1st floor	4 beds	3 left	1 4	2000
02/B	Block B	1st floor	4 beds	3 left	1 4	3000
03/A	Block A	1st floor	3 beds	occupied] 3	3000
03/B	Block B	1st floor	3 beds	vacant] 3	3000
04/B	Block B	1st floor	2 beds	1 left	1 2	3000
05/A	Block A	1st floor	2 beds	1 left	1 2	3000
05/B	Block B	1st floor	2 beds	1left	1 2	3000
06/A	Block A	1st floor	4 beds	vacant	1 4	2000
06/B	Block B	1st floor	4 beds	1 left	1	2000
11/A	Block A	2nd floor	2 beds	vacant	1 2	2000
11/B	Block B	2nd floor	2 beds	vacant	2	2000
12/A	Block A	2nd floor	4 beds	3left	1 4	3000
12/B	Block B	2nd floor	4 beds	3 left	1 4	3000
13/A	Block A	2nd floor	3 beds	1 left] 3	3000
13/B	Block B	2nd floor	3 beds	2 left] 3	3000
14/A	Block A	2nd floor	2 beds	2	2	2000
14/B	Block B	2nd floor	2 beds	2	2	2000
15/A	Block A	2nd floor	2 beds	1 left	1 2	3000
15/B	Block B	2nd floor	2 beds	1 left	1 2	3000
16/A	Block A	2nd floor	4 beds	vacant	1 4	
16/B	Block B	2nd floor	4 beds	vacant	1 4	2000

```
MariaDB [19659mm] > select * from Residence;
 Residence ID | Actual Residence Name | Number Rooms
 101 | Bayareares1
 102 | J Resedential
 103 | M&Mresidential
 104
    Fremont
4 rows in set (0.000 sec)
```

```
MariaDB [19659mm] > select * from Payment System;
| Payment ID | Payer ID | Date | Balance | Paid amount | Receipt
 10111
            | 111
                       2019-04-02
                                      3000
                                                   1000 |
                                                         st101.docx
| 10112
            | 113
                  | 2020-05-21 | 3000 |
                                                  1000 | st102.docx
10113
            116
                  | 2020-08-09 | 3000
                                                   3000 | st103.docx
10114
            | 117
                  | 2021-05-07 | 3000 |
                                                   2000 | st104.docx
            | 118
                                                  2000 | st105.docx
1 10115
                  | 2018-08-10 | 3000
 10116
            1 119
                  | 0202-02-09 | 2000
                                                   1000 | st106.docx
                  | 2018-10-03 | 2000
| 10117
            | 123
                                                   2000
                                                         st107.docx
 10118
            126
                   | 2017-04-11 |
                                     3000
                                                  1500 |
                                                         st108.docx
1 10119
            1 127
                   | 2020-02-17 | 3000
                                                   3000 | st109.docx
 10120
            | 133
                   | 2021-08-13 | 2000
                                                  1500 | st110.docx
 10121
            1 138
                  | 2022-02-14 | 3000
                                                  1000 | st111.docx
 10122
            141
                     | 1995-09-15 | 2000
                                                  1500 | st112.docx
12 rows in set (0.000 sec)
```

Residence_Room_ID	Owner_ID			Number_of_People_Occupation	Price	1
R-01	101	2beds	occupied	2	3000	1
R-02	101	double bed, single bed	1 left] 3	2000	
R-03	101	single	vacant	1	1000	
R-04	101	2beds	occupied	2	3000	1
R-05	102	2beds ,double bed	2 left	4	4000	
R-06	102	2beds	occupied	2	3000	1
R-07	102	single	occupied	1	1000	
R-08	102	double bed, single bed	occupied	3	2000	
R-09	102	single	occupied	1	1000	1
R-10	103	2 beds ,double bed	2 left	4	4000	
R-11	103	2 beds	vacant	2	3000	
R-12	103	2 beds	ocuppied	2	3000	1
R-13	104	single	vacant	1	1000	
R-14	104	2 beds	vacant	2	3000	1
R-15	104	1doublebed, single bed	vacant	3	2000	1

```
MariaDB [19659mm] > select * from Booking;
 Booker Id | Booking ID | R Room ID | Start Date |
                                                      End Date
  112
              151
                           R-01
                                        2018-04-03 |
                                                      2019-04-03
  114
              152
                          R-01
                                        2018-05-01 | 2018-07-04
  115
              153
                          R-02
                                        2020-06-04 | 2021-06-04
  120
              154
                           R-02
                                        2019-07-05 |
                                                     2019-08-04
  121
              155
                           R-04
                                        2018-08-07 |
                                                     2019-09-10
  122
              156
                                        2019-09-10 | 2020-09-01
                           R-04
  124
              157
                          R-05
                                        2021-10-03 |
                                                      2022-10-03
  125
              158
                          R-05
                                        2022-11-02 | 2023-11-02
  128
              159
                                        2018-12-02 | 2019-12-03
                          R-06
  129
              160
                           R-06
                                        2019-01-14
                                                     2020-01-13
  130
              161
                           R-07
                                        2020-06-16 I
                                                     2020-09-15
  131
              162
                           R-08
                                        2019-07-15 | 2020-07-14
  132
              163
                          R-08
                                        2020-08-16 |
                                                     2021-06-16
  134
              164
                           R-08
                                        2017-09-17 | 2017-12-16
  135
              165
                          R-09
                                        2019-01-18 | 2020-01-18
  136
              166
                           R-10
                                        2017-02-18 |
                                                     2017-06-17
  137
              167
                           R-10
                                        2020-04-20 |
                                                      2020-07-21
              169
  140
                           R-12
                                        2019-03-22 |
                                                     2020-03-21
18 rows in set (0.000 sec)
```

Basic Queries

Retrieve the first name, last name, class and room ID of all fresh students

```
MariaDB [19659mm] > select Stud id, First name, Last name, Class, RoomID from Student where Class = 'fresh';
 Stud id | First name | Last name | Class | RoomID
 111
         | Maranata | Muluneh
                                | fresh | 02/A
 113
           John
                       | Carter
                                  | fresh | 04/B
 116
         | Christopher | Tucker
                                | fresh | 03/A
        | Cameron | Wilson
 117
                                | fresh | 03/A
 118
         | Benny | Matthew
                                 | Fresh | 03/A
 119
         | Bethel
                   | Samuel
                                   | fresh | 05/A
  123
         | Becky
                   Warren
                                  | fresh | 12/A
 126
         | Jennifer | Lorance
                                  | fresh | 13/B
  127
          | Liyu
                      | Muluneh
                                    fresh | 13/B
 133
         | Philiphis
                      Luca
                                   fresh | 13/A
 141
           Kim
                       | Walker
                                    fresh |
11 rows in set (0.000 sec)
```

Retrieve the students ID, first name, last name, room ID ordered in descending order.

tud_id	First_name	Last_name	RoomID			
.41	Kim	Walker	06/B			
40	Nick	Neo	R-12			
.38	Maria	Curry	15/B			
.37	Alberto	Agnues	R-10			
.36	Martha	Zack	R-10			
.35	Rahel	Canyon	R-09			
.34	Kennedy	Jacob	R-08			
.33	Philiphis	Luca	13/A			
.32	Eric	Jakes	R-08			
.31	Vicky	Todd	R-08			
.30	Mark	Joseph	R-07			
.29	Angela	Jonah	R-06			
.28	Lily	Nathan	R-06			
.27	Liyu	Muluneh	13/B			
.26	Jennifer	Lorance	13/B			
.25	Gabrielle	Witson	R-05			
.24	Sutton	Cruise	R-05			
.23	Becky	Warren	12/A			
.22	Mlacolm	Solomon	R-04			
.21	Jim	Fredirick	R-04			
.20	Tom	Hiller	R-02			
.19	Bethel	Samuel	05/A			
.18	Benny	Matthew	03/A			
.17	Cameron	Wilson	03/A			
.16	Christopher	Tucker	03/A			
.15 j	Sammy	Madiga	R-02			
.14	Kris	David	R-01			
.13 j	John	Carter	04/B			
.12 j	Mahmud	Mohammed	R-01			
.11 j		Muluneh	02/A			

Retrieve the students ID, last name and their Room ID grouped by Room ID

Stud_id	Last_name	RoomID			
141	Walker	06/B			
139	Paul	R-12			
111	Muluneh	02/A			
116	Tucker	03/A			
113	Carter	04/B			
119	Samuel	05/A			
123	Warren	12/A			
133	Luca	13/A			
126	Lorance	13/B			
138	Curry	15/B			
112	Mohammed	R-01			
115	Madiga	R-02			
121	Fredirick	R-04			
124	Cruise	R-05			
128	Nathan	R-06			
130	Joseph	R-07			
131	Todd	R-08			
L35	Canyon	R-09			
136	Zack	R-10			
L40	Neo	R-12			

Intermediate Queries

Retrieving the name of students whose birthyear is in 2001.

```
MariaDB [19659mm]> select First_name, Last_name from Student WHERE Date_of_Birth like '2001____';

+------+
| First_name | Last_name |
+-----+
| Angelo | Paul |
| Tom | Hiller |
| Philiphis | Luca |
+-----+
3 rows in set (0.000 sec)
```

Retrieve the list of all students living off campus and paying above 2000.

```
MariaDB [19659mm] > select Last name, class, RoomID from Student where exists (select Status from Residence Room where Residence Room.Re
sidence Room ID = Student.RoomID and price>=2000);
  Last name | class
                        RoomID
  Mohammed | sophomore | R-01
  David
            | sophomore | R-01
  Madiga
            | senior
                        | R-02
  Hiller
              Junior
                        | R-02
  Fredirick |
              senior
                          R-04
  Solomon
              senior
                          R-04
  Cruise
            | sophomore |
                          R-05
 Witson
            | Junior
                          R-05
  Nathan
              senior
                        I R-06
  Jonah
              Junior
                        I R-06
  Todd
             senior
                        I R-08
  Jakes
            | sophomore |
                          R-08
  Jacob
              senior
                          R-08
  Zack
              senior
                          R-10
              sophomore | R-10
  Agnues
              senior
                          R-12
  Neo
16 rows in set (0.000 sec)
```

Retrieve the Dorms information with all price options

```
MariaDB [19659mm] > select Block, Hall, Status from Dorms where Number of students = all(select Last Name from Student where Student.Ro
omID = Dorms.Room ID);
  Block
             Hall
                          Status
  Block A
           | 1st floor
                          vacant
  Block A
           | 1st floor
  Block B
            | 1st floor
                          vacant
  Block B
           | 1st floor
                        | 3 left
  Block B
           | 1st floor
                        | vacant
                        | 1left
  Block B
           | 1st floor
   Block A | 1st floor
                         | vacant
  Block B
           | 1st floor
                         | 1 left
  Block A | 2nd floor
                          vacant
              2nd floor | vacant
  Block B
             2nd floor
                           3 left
   Block B |
  Block A
             2nd floor
  Block B
             2nd floor
  Block A
           1 2nd floor
                        | 1 left
  Block A
             2nd floor
                          vacant
  Block B
             2nd floor
                          vacant
16 rows in set, 8 warnings (0.001 sec)
```

Advanced Queries

Retrieve the name of admins for dormitory and Residence

```
MariaDB [19659mm] > select distinct A.Admin_Name, R.Name from Dormitory Admin A inner join Residence_Admin R;
 Admin Name | Name
 Marcus
             | Natasha
             | Natasha
 James
 Monica
             | Natasha
 Erssella
             | Natasha
             | Luke
 Marcus
             | Luke
 James
 Monica
             | Luke
 Erssella
             | Luke
             | Monica
 Marcus
             | Monica
 James
             | Monica
 Monica
             I Monica
 Erssella
 Marcus
             | Henry
 James
             Henry
 Monica
               Henry
 Erssella
               Henry
16 rows in set (0.000 sec)
```

Retrieve the name information of Residence Rooms with their owner's name.

type	Status	Number_of_people_Occupation	Actual_Residence_Name	
2beds	occupied	1 2	Bayarearesl	
2beds	occupied	2	J Resedential	
2beds	occupied	2	M&Mresidential	
2beds	occupied	2	Fremont	
double bed, single bed	1 left	3	Bayarearesl	
double bed, single bed	1 left	3	J Resedential	
double bed, single bed	1 left	3	M&Mresidential	
double bed, single bed	1 left	3	Fremont	
single	vacant	1	Bayarearesl	
single	vacant	1	J Resedential	
single	vacant	1	M&Mresidential	
single	vacant	1	Fremont	
2beds ,double bed	2 left	4	Bayarearesl	
2beds ,double bed	2 left	1 4	J Resedential	
2beds , double bed	2 left	1	M&Mresidential	
2beds ,double bed	2 left	4	Fremont	
single	occupied	1	Bayarearesl	
single	occupied	1	J Resedential	
single	ccupied	1	M&Mresidential	
single	occupied	1	Fremont	
double bed, single bed	ccupied	3	Bayarearesl	
double bed, single bed	occupied	3	J Resedential	
double bed, single bed	occupied	3	M&Mresidential	
double bed, single bed	ccupied	3	Fremont	
2 beds ,double bed	2 left	4	Bayarearesl	
2 beds ,double bed	2 left	1 4	J Resedential	
2 beds ,double bed	2 left	1 4	M&Mresidential	
2 beds ,double bed	2 left	4	Fremont	
2 beds	vacant	2	Bayarearesl	
2 beds	vacant	2	J Resedential	
2 beds	vacant	1 2	M&Mresidential	

```
MariaDB [19659mm] > select s.First Name, s.Last Name, s.RoomID, b.Booking ID, p.Paid Amount from Student s inner join Payment System p on s.Stud id = p
n Booking b ;
                Last Name | RoomID | Booking ID | Paid Amount
  First Name
                            02/A
                                    | 151
 Maranata
                Muluneh
                                                          1000
  John
                Carter
                            04/B
                                     151
                                                          1000
                                    1 151
                                                          3000
  Christopher |
                Tucker
                           | 03/A
  Cameron
                Wilson
                           03/A
                                    151
                                                          2000
                                    | 151
  Benny
                Matthew
                            03/A
                                                          2000
  Bethel
                Samuel
                           05/A
                                    1 151
                                                          1000
                           | 12/A
                                    | 151
                                                          2000
  Becky
                Warren
  Jennifer
                Lorance
                           | 13/B
                                    | 151
                                                          1500
                           | 13/B
                                    151
 Liyu
                Muluneh
                                                          3000
 Philiphis
                           | 13/A
                                                          1500
                Luca
                                    | 151
 Maria
                          | 15/B
                                    | 151
                                                          1000
                Curry
                             06/B
                                    | 151
  Kim
                Walker
                                                          1500
                                     152
  Maranata
                Muluneh
                            02/A
                                                          1000
                                                          1000
  John
                Carter
                           04/B
                                    152
                Tucker
                                    152
  Christopher
                           03/A
                                                          3000
                                     152
  Cameron
                           03/A
                                                          2000
                Wilson
                Matthew
                           | 03/A
                                    152
                                                          2000
  Benny
  Bethel
                           | 05/A
                                     152
                                                          1000
                Samuel
  Becky
                Warren
                           | 12/A
                                    | 152
                                                          2000
  Jennifer
                           | 13/B
                                    152
                                                          1500
                Lorance
 Liyu
                Muluneh
                           | 13/B
                                    152
                                                          3000
                          | 13/A
  Philiphis
                Luca
                                    152
                                                          1500
 Maria
                Curry
                           | 15/B
                                     152
                                                          1000
                Walker
                             06/B
                                    1 152
                                                          1500
 Kim
 Maranata
                Muluneh
                            02/A
                                    153
                                                          1000
                Carter
                           | 04/B
  John
                                    153
                                                          1000
                                    1 153
                                                          3000
  Christopher |
                Tucker
                            03/A
                Wilson
                           03/A
                                    153
                                                          2000
  Cameron
  Benny
                Matthew
                            03/A
                                    153
                                                          2000
                                     153
                                                          1000
  Bethel
                Samuel
                           05/A
                           | 12/A
                                    1 153
                                                          2000
  Becky
                Warren
                           | 13/B
  Jennifer
                Lorance
                                    153
                                                          1500
                           | 13/B
                                                          3000
 Liyu
                Muluneh
                                    153
 Philiphis
                           | 13/A
                                    1 153
                                                          1500
                Luca
 Maria
                           | 15/B
                                    | 153
                                                          1000
                Curry
  Kim
                Walker
                             06/B
                                    | 153
                                                          1500
                            02/A
  Maranata
                Muluneh
                                     154
                                                          1000
```

John

Carter

04/B

154

1000

	9mm]> select 3 der by Student		st_Name, Payment_System.Paid_Amount, Payment_System.Balance from Student left join Payment_System on Payment_System.Payer_ID = Str
	Paid Amount		
Paul	NULL	NULL	
Muluneh	1000	3000	
Mohammed	NULL	NULL	
Carter	1000	3000	
David	NULL	NULL	
Madiga	NULL	NULL	
Tucker	3000	3000	
Wilson	2000	3000	
Matthew	2000	3000	
Samuel	1000	2000	
Hiller	NULL	NULL	
Fredirick	NULL	NULL	
Solomon	NULL	NULL	
Warren	2000	2000	
Cruise	NULL	NULL	
Witson	NULL	NULL	
Lorance	1500	3000	
Muluneh	3000	3000	
Nathan	NULL	NULL	
Jonah	NULL	NULL	
Joseph	NULL	NULL	
Todd	NULL	NULL	
Jakes	NULL	NULL	
Luca	1500	2000	
Jacob	NULL	NULL	
Canyon	NULL	NULL	
Zack	NULL	NULL	
Agnues	NULL	NULL	
Curry	1000	3000	
Neo	NULL	NULL	
Walker	1500	2000	
WGIACI	1500		Activate Windows

Mathematical Notation

```
Residence_Room \leftarrow \sigma (type, status, number_of_people_occupation,actual_residence_name) Result \leftarrow \Pi Residence_Room \star <>Residence
```

```
MariaDB [19659mm] > select distinct o.type, o.Status, o.Number of people Occupation, r.Actual Residence Name from Residence Room o natu
ral join Residence r;
                               | Number of people Occupation | Actual Residence Name
                      | Status
  type
                                             2 | Bayarearesl
                      | occupied |
  2beds
        | occupied |
                                                           2 | J Resedential
  2beds
          | occupied |
  2beds
                                                           2 | M&Mresidential
  2beds
        | occupied |
                                                           2 | Fremont
  double bed, single bed | 1 left
                                                           3 | Bavarearesl
  double bed, single bed | 1 left
                                                           3 | J Resedential
  double bed, single bed | 1 left
                                                           3 | M&Mresidential
  double bed, single bed | 1 left
                                                           3 | Fremont
  single
                        vacant
                                                           1 | Bavarearesl
                                                           1 | J Resedential
  single
                    vacant
                                                           1 | M&Mresidential
  single
                    | vacant
  single
                      | vacant
                                                           1 | Fremont
  2beds , double bed
                   | 2 left
                                                           4 | Bayarearesl
  2beds , double bed
                   | 2 left
                                                           4 | J Resedential
  2beds , double bed
                      | 2 left
                                                              M&Mresidential
  2beds , double bed
                       | 2 left
                                                               Fremont
                       I occupied
  single
                                                           1 | Bayarearesl
```

```
MariaDB [19659mm]> select Student.Last Name, Payment System.Paid Amount, Payment System.Balance from Student left join Payment System on Payment System.Payer ID = Student.
nt.Stud id order by Student.Stud id;
 Last Name | Paid Amount |
 Paul
                     NULL
                               NULL
                     1000
                               3000
 Muluneh
                     NULL
                               NULL
 Mohammed
 Carter
                     1000
                               3000
                     NULL
                               NULL
 David
                     NULL
                               NULL
 Madiga
 Tucker
                     3000
                               3000
 Wilson
                     2000
                               3000
 Matthew
                     2000
                               3000
                     1000
                               2000
 Samuel
 Hiller
                     NULL
                               NULL
 Fredirick
                     NULL
                               NULL
 Solomon
                     NULL
                               NULL
                     2000
                               2000
 Warren
```

Muluneh 3000 3000 Nathan NULL NULL NULL NULL Jonah Joseph NULL NULL NULL NULL Todd NULL NULL Jakes

NULL

NULL

1500

NULL

NULL

3000

Cruise

Witson

Lorance

Conclusion

• In conclusion the designed database system is a system designed to help University housing and dormitory system simple, easy, adaptable and accessible for manipulation.

