Online Merit Based Hostel Admission

Acknowledgement

- It is our great pleasure to acknowledge the contribution and assistance of a few individuals to this effort. We acknowledge here our debt to those who have contributed significantly to this project.
- We are also indebted to our faculty member and guide **Prof. Muquit Khan Pathan** for motivating us and fostering a feeling of belongingness towards our ability. Their helpful solutions and comments enriched by their experience for the betterment of the project. We sincerely acknowledge that without his support this project would not have been feasible.
- Our thank goes to all the faculty members of L. J. College of Computer Applications and special Thanks goes to **Prof. Gayatri Naiyar** & **Parth Joshi** who provided useful guidance time to time. Finally, we would like to thank everyone who directly or indirectly helped us in the project.

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PROJECT PROFILE

Department Category:	Education Department
Problem ID:	GH13
Project Guide:	**Prof. Muquit Khan Pathan**
Team ID	1191
Team Leader:	Ravi Kant Pujari
College Code:	248
College Name:	**L. J. College of Computer Applications**
Project Title:	**Online Merit Based Hostel Admission**
Project Statement:	Hostels always have limited seats for admission compared to total number of students admitted in college or university. An online transparent process can be designed which considers merit, gender, reservations and distance of home town of student from the institute. Online admission procedure can be defined based on above parameters.

Team Members

1. Ravi Kant Pujari
2. Vishal Thakkar
3. Rushnaiwala Taki
4. Madhwani Tejasvi
5. Sampat Pushti

METHODOLOGY

Method: SDLC (System Development Life Cycle).

Existing System:

Currently there is no online centralized system for hostel admission. There are some hostels which are either operated by private organizations or colleges where students have to apply for admission individually due to lack of centralized system. Some hostels have their own online system which provide admission forms (offline) but the problem is, students have to download it and get a physical copy and submit it to the respective hostel manually.

Sometimes students fill up wrong information about their academic qualifications which leads to time-consuming process for correction.

In existing system, the verification of documents provided by the student is done manually at hostel, which is a time-consuming process.

Disadvantages of Existing System:

- No online centralized system is available for hostel admission.
- Students have to download the admission form and get the hard copy and submit it to the respective hostel.
    - Sample Form 1: Form 1.pdf
    - Sample Form 2: Form 2.pdf
- There are few websites which are run by both private and government institutions, are not very user friendly.
    - Link: Digital Gujarat
- One of the major problem is the verification of documents submitted by students which increases the manual work.
- There is lack of transparency among all users. (To show the latest application status).
- With offline system, students have to wait in long queue for their turn.

Proposed System:

The proposed system is a centralized system for online merit-based hostel admission. It has transparency in entire admission process and also reduces the manual workload of verifying the documents provided by students.

When a student applies for hostel admission then his/her information is taken through web form and he/she can also upload his/her documents online.

When the student uploads his/her academic documents (marksheets) then the documents are verified by his/her college. This solves the problem of manual workload of documents verification at hostel. It also implements the transparency among college, hostel and student. Students get the status of their admission when they login to their account.

Advantages of Proposed System:

- The proposed system is a centralized system.
- It provides students a list of hostels nearby their college.
- Time-saving process because the entire system is online.
- The proposed system is very user-friendly.
- The proposed system is responsive in terms of design that user can access it in mobile, desktop, laptop or tablet.
- The proposed system is fast and reliable.
- Students don’t have to wait in long queue for admission.
- Students will get notifications regarding the merit list & their admission (via email or SMS).

Users

A typical system has users with different rights and permissions who use it for different purpose. Some users retrieve data and some back it up. **Online Merit Based Hostel Admission** System has following **users**:

Admin

Student

Hostel

College

All the users are the members of the website which are going to use this website. There will be an admin of the website who can view all the information on the website and has the authority to modify, update and delete details as required. The student, college and hostel will be the end users of the website for whom the website is being prepared.

Details of Users

1. Admin:

An admin is the user who will be responsible for maintaining the entire system. Admin maintain the system and also responsible for administrating the database. Admin is responsible to look after system usage and by whom it should be used.

2. Student:

A student is the user who can select the hostel by entering the college name in search bar. When student enters his/her college name then nearby hostel list is displayed. To apply for admission in hostel, first the student needs to register and log in to his/her account.

3. Hostel:

Hostel is the user who will register and login to its account. Each hostel can view all its information and also manage its information. Hostel will admit the students based on the given criteria.

4. College:

College is the user who will register and login to its account. College can view all its information and also manage its information and will have to verify the documents provided by the students.

Module Description

Admin

Login	:	Login to admin account.
Manage Users	:	To manage the user information.
Manage Institute	:	To manage the institute information.
Manage Hostel	:	To manage the hostel information.
Manage Student	:	To manage the student information.
Manage Forms	:	To manage different category forms.
Manage Report	:	To get the reports.

- Hostel Report
- Student Report
- College Report
- Admission Report

Student

Search	:	To search hostels nearby his/her college.
Register	:	To register as a student.
Login	:	Login to its account.
Manage Profile	:	To manage profile details like name, photo etc.
Apply for Admission	:	To apply for admission in hostel.
Check Merit	:	To check the merit list.
Check Status	:	To check the admission status.

Hostel

Register	:	To register as a hostel.
Login	:	Login to its account.
Manage Student Request	:	To accept/reject student request.
Manage Admission	:	To manage admission of students based on the criteria.
Manage Hostel	:	To manage the hostel information.
Manage Merit	:	To manage the merit list.
Manage Report	:	To get the reports.

Student reports

- Area wise
- Merit wise
- Category wise

Admission reports

- Merit wise
- Date wise
- Cancelled admission
- Rejected admission

College

Register : To register as a college.

Login : Login to its account.

Manage College Details : To manage the college details.

Manage Document Verification : To verify the documents submitted by students.

Manage Report : To get the reports.

- Area wise
- Merit wise
- Category wise

FLOW DIAGRAMS

DFD:

A **data flow diagram** (**DFD**) is a graphical representation of the "flow" of data through an information system, modelling its *process* aspects. A DFD is often used as a preliminary step to create an overview of the system without going into great detail.

A DFD shows what kind of information will be input to and output from the system, how the data will advance through the system, and where the data will be stored.

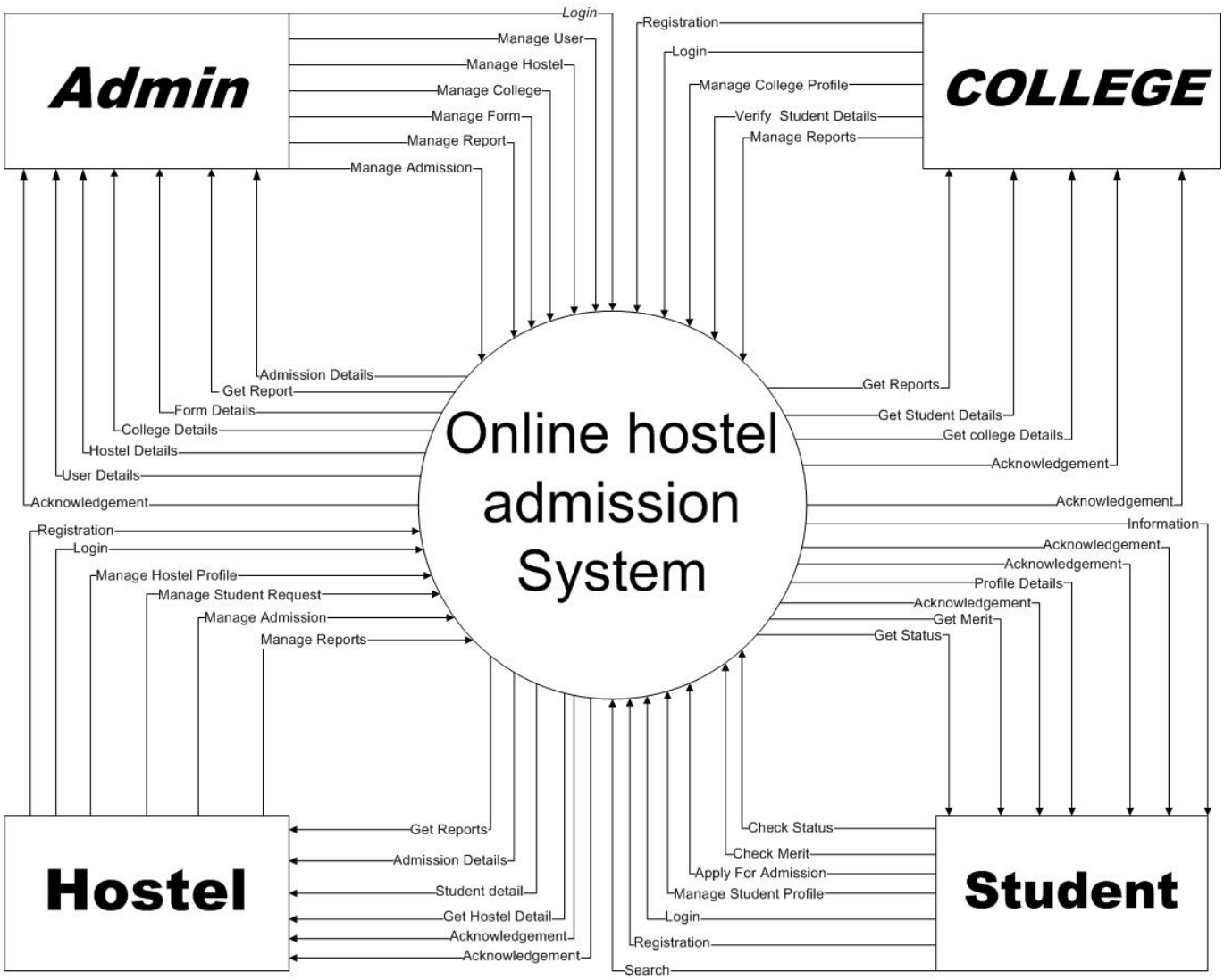
There are essentially two different types of notations for data flow diagrams (Yourdon & Coad or Gane & Sarson) defining different visual representations for processes, data stores, data flow and external entities.

Here we are using **Yourdon & Coad** notation for Data Flow Diagram (DFD).

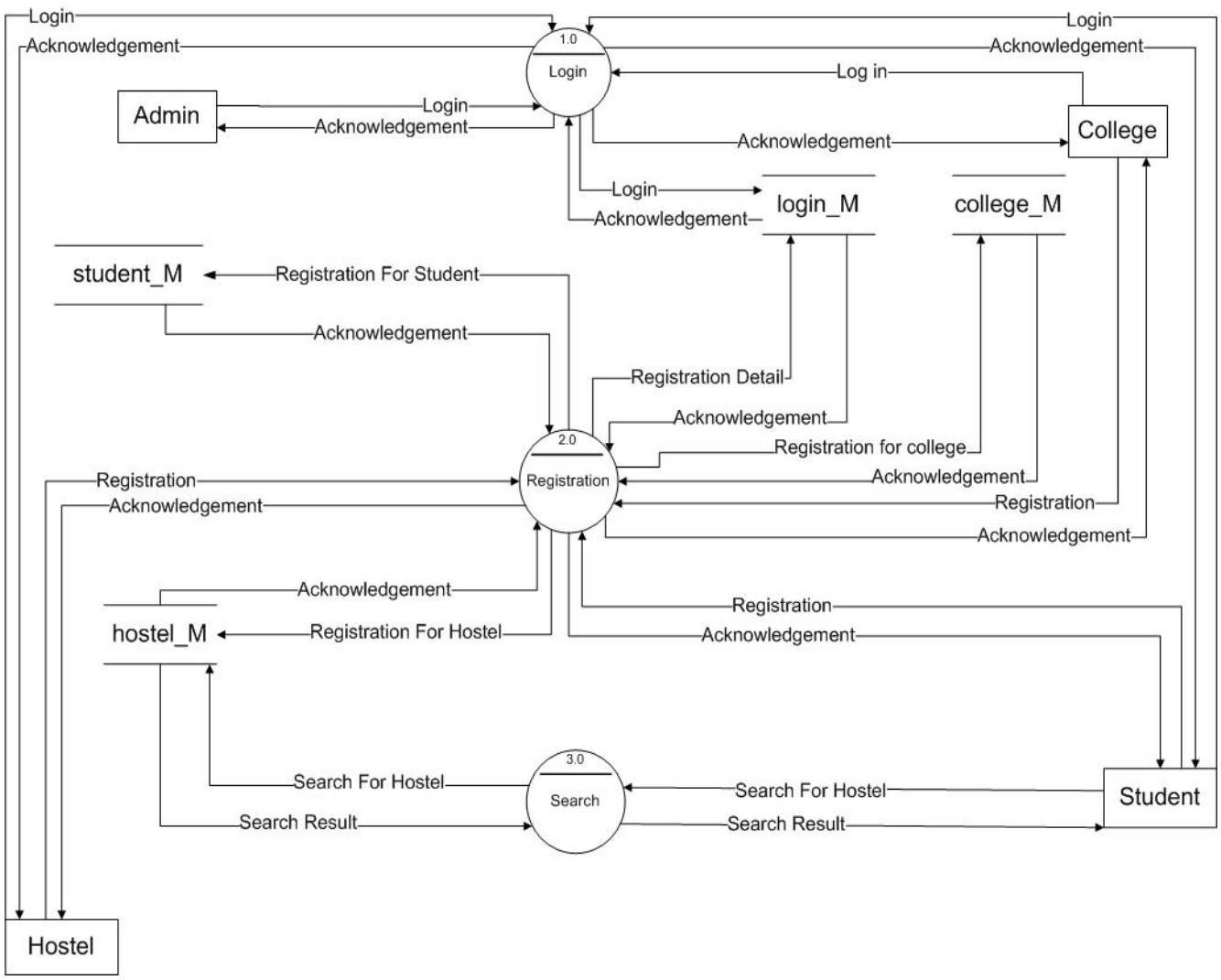
This project includes three levels of Data Flow Diagram (DFD).

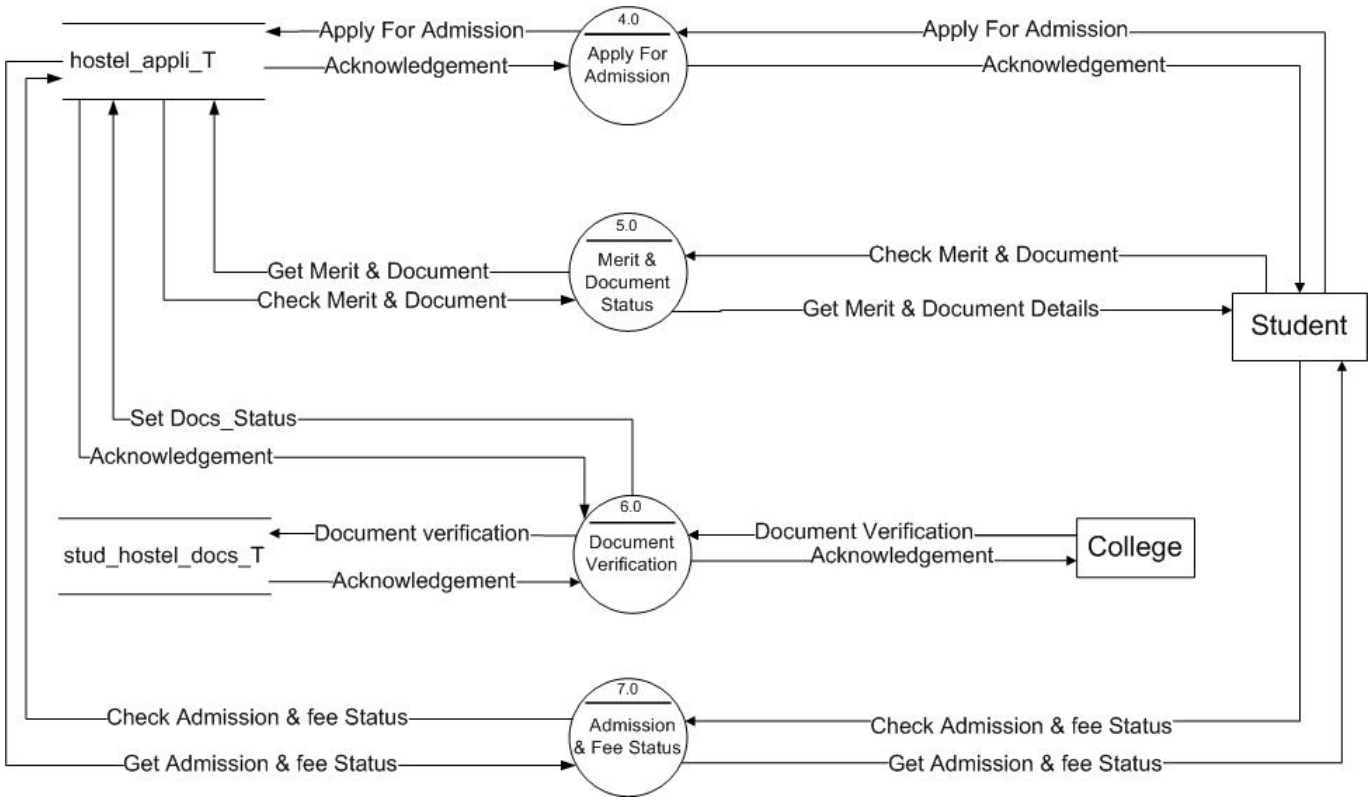
- 0^{th} Level (Context Level) DFD
- 1^{st} Level DFD
- 2^{nd} Level DFD

0th Level (or Context Level) DFD:

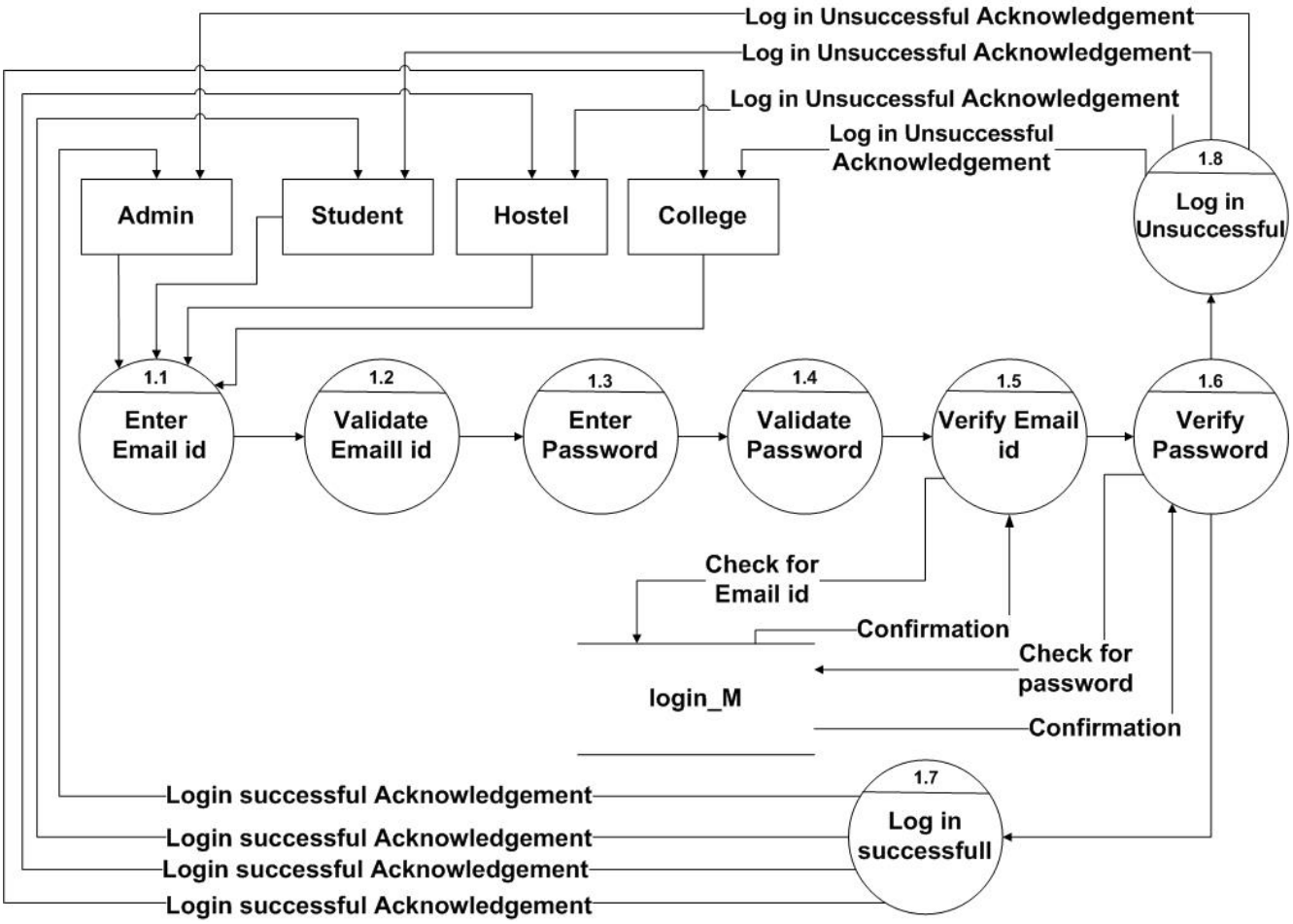


1st Level DFD:

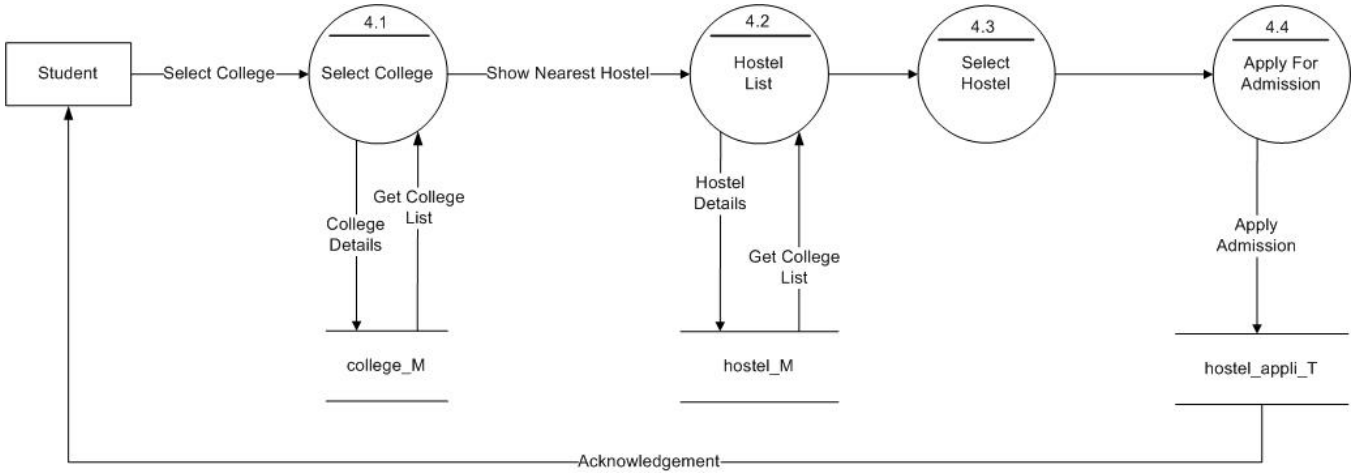



4.0
Apply For Admission
Apply For Admission
Acknowledgement
Apply For Admission
Acknowledgement
hostel_appli_T
5.0
Merit & Document Status
Check Merit & Document
Get Merit & Document
Check Merit & Document
Get Merit & Document Details
Student
Set Docs_Status
Acknowledgement
6.0
Document Verification
Document verification
Document Verification
Acknowledgement
College
stud_hostel_docs_T
Acknowledgement
7.0
Admission & Fee Status
Check Admission & fee Status
Check Admission & fee Status
Get Admission & fee Status
Get Admission & fee Status

2nd Level DFD: (Login Process)



(Apply for Admission Process):



ERD:

An **entity–relationship model** (**ER model** for short) describes interrelated things of interest in a specific domain of knowledge. A basic ER model is composed of entity types (which classify the things of interest) and specifies relationships that can exist between instances of those entity types.

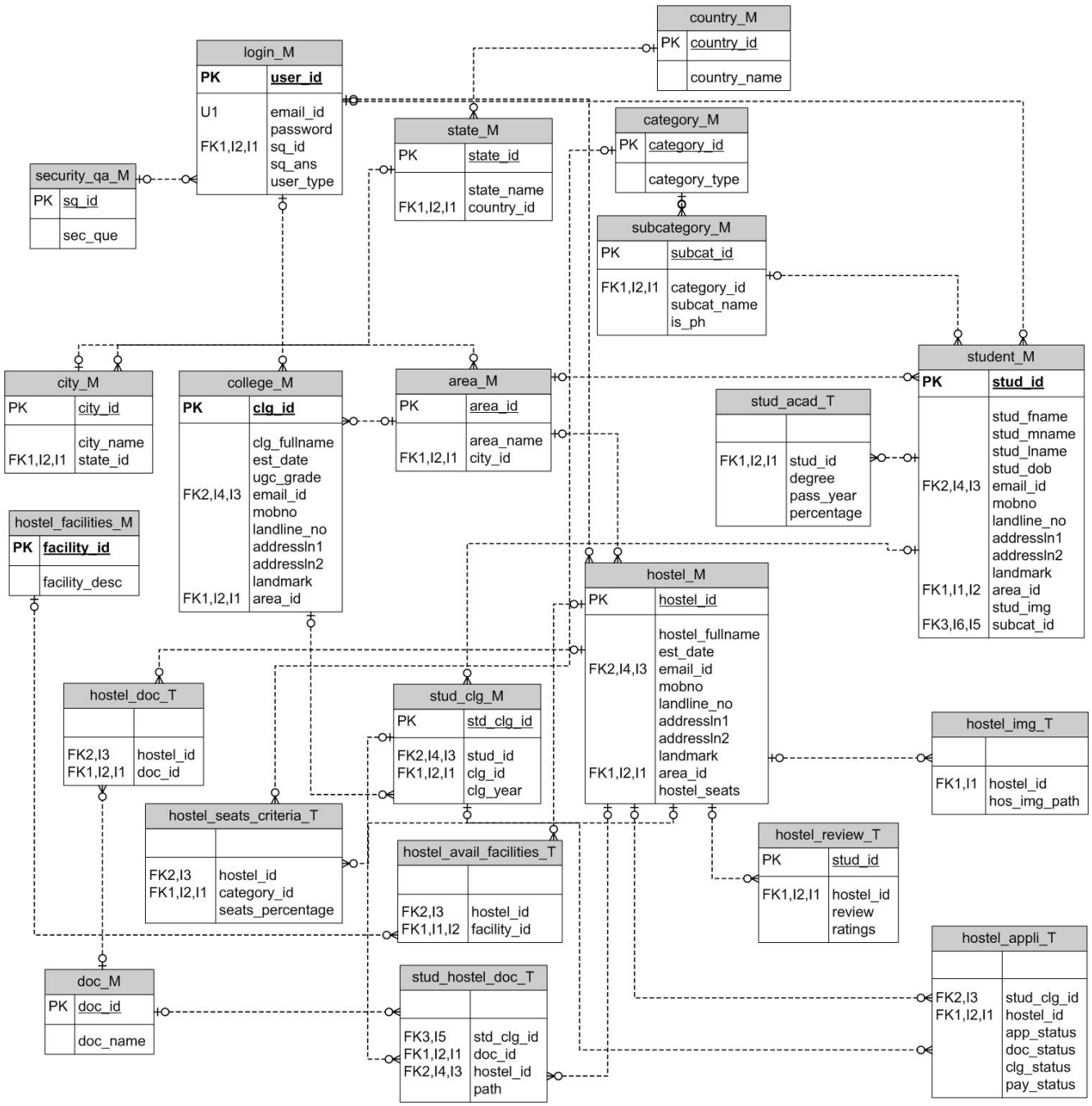
Entity:

An ERD entity is a definable thing or concept within a system, such as a person/role (e.g. Student), object (e.g. Invoice), concept (e.g. Profile) or event (e.g. Transaction) (note: In ERD, the term "entity" is often used instead of "table", but they are the same).

Relationship:

A relationship between two entities signifies that the two entities are associated with each other somehow. For example, student might enroll into a course. The entity Student is therefore related with Course, and the relationships is presented as a connector connecting between them.

ERD using Crow foot notation:



Data Dictionary:

A data dictionary is a file or a set of files that contains a database metadata. The data dictionary contains records about other objects in the database, such as data ownership, data relationships to other objects and other data.

The data dictionary is a crucial component of any relational database. Ironically, because of its importance, it is invisible to most database users. Typically, only database administrators interact with the data dictionary.

Data Dictionary Tables

Master Tables	Transaction Tables
country_M	stud_acad_T
state_M	doc_details_T
city_M	hostel_seats_criteria_T
area_M	hostel_doc_T
login_M	hostel_appli_T
hostel_M	hostel_img_T
college_M	hostel_review_T
student_M	hostel_avail_facilities_T
security_qa_M	
doc_M	
category_M	
subcategory_M	
stud_clg_M	
hostel_facilities_M	

country_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	country_id	3	int	PK	Primary Key
2.	country_name	50	varchar	Not null	Cannot be null

state_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	state_id	3	int	PK	Primary Key
2.	state_name	50	varchar	Not null	Cannot be null
3.	country_id	3	int	FK	Foreign Key

city_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	city_id	3	int	PK	Primary Key
2.	city_name	50	varchar	Not null	Cannot be null
3.	state_id	3	int	FK	Foreign Key

area_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	area_id	4	int	PK	Primary Key
2.	area_name	50	varchar	Not null	Cannot be null
3.	city_id	3	int	FK	Foreign Key

login_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	user_id	10	double	PK	Primary Key
2.	email_id	50	varchar	Not null	Cannot be null, Unique
3.	password	32	varchar	Not null	Cannot be null
4.	sq_id	2	int	FK	Foreign Key
5.	sq_ans	50	varchar	Not null	Cannot be null
6.	user_type	1	char	Not null	Cannot be null

college_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	clg_id	5	int	PK	Primary Key
2.	clg_fullname	50	varchar	Not null	Cannot be null
3.	est_date	-	Date	-	-
4.	ugc_grade	2	varchar	-	-
5.	email_id	50	varchar	FK	Foreign Key
6.	mobno	10	double	Not null	Cannot be null
7.	landline_no	15	double	-	-
8.	addressln1	100	varchar	Not null	Cannot be null
9.	addressln2	100	varchar	-	-
10.	landmark	50	varchar	-	-
11.	area_id	4	Int	FK	Foreign Key

hostel_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	hostel_id	5	int	PK	Primary Key
2.	hostel_fullname	50	varchar	Not null	Cannot be null
3.	est_date	-	date	-	-
4.	email_id	50	varchar	FK	Foreign Key
5.	mobno	10	double	Not null	Cannot be null
6.	landline_no	15	double	-	-
7.	addressln1	100	varchar	Not null	Cannot be null
8.	addressln2	100	varchar	-	-
9.	landmark	50	varchar	-	-
10.	area_id	4	int	FK	Foreign Key
11.	hostel_seats	4	int	-	-

student_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	stud_id	10	double	PK	Primary Key
2.	stud_fname	20	varchar	Not null	Cannot be null
3.	stud_mname	20	varchar	-	-
4.	stud_lname	20	varchar	Not null	Cannot be null
5.	stud_dob	-	date	Not null	Cannot be null
6.	email_id	50	varchar	FK	Foreign Key
7.	mobno	10	double	Not null	Cannot be null
8.	landline_no	15	double	-	-
9.	addressln1	100	varchar	Not null	Cannot be null
10.	addressln2	100	varchar	-	-
11.	landmark	50	varchar	-	-
12.	area_id	4	int	FK	Foreign Key
13.	stud_img	200	varchar	-	-
14.	subcat_id	5	int	FK	Foreign Key

security_qa_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	sq_id	2	int	PK	Primary Key
2.	sec_que	100	varchar	Not null	Cannot be null

doc_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	doc_id	2	int	PK	Primary Key
2.	doc_name	30	varchar	Not null	Cannot be null

category_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	category_id	5	int	PK	Primary Key
2.	category_type	100	varchar	Not null	Cannot be null

subcategory_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	subcat_id	5	int	PK	Primary Key
2.	category_id	5	int	FK	Foreign Key
3.	subcat_name	20	varchar	Not null	Cannot be null
4.	is_ph	1	char	Not null	Cannot be null

stud_clg_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	std_clg_id	10	double	PK	Primary Key
2.	stud_id	10	double	FK	Foreign Key
3.	clg_id	5	int	FK	Foreign Key
4.	clg_year	-	date	Not null	

hostel_facilities_M

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	facility_id	2	int	PK	Primary Key
2.	facility_desc	50	varchar	Not null	Cannot be null

stud_acad_T

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	stud_id	10	double	FK	FK
2.	degree	20	varchar	-	-
3.	pass_year	4	varchar	-	-
4.	percentage	5,2	decimal	-	-

stud_hostel_doc_T

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	std_clg_id	10	double	FK	Foreign Key
2.	doc_id	2	int	FK	Foreign Key
3.	hostel_id	3	int	FK	Foreign Key
4.	path	200	varchar	-	-

hostel_seats_criteria_T

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	hostel_id	5	int	FK	Foreign Key
2.	category_id	5	int	FK	Foreign Key
3.	seats_percentage	5,2	decimal	-	-

hostel_doc_T

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	hostel_id	5	int	FK	Foreign Key
2.	doc_id	2	int	FK	Foreign Key

hostel_appli_T

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	stud_clg_id	10	double	FK	Foreign Key
2.	hostel_id	5	int	FK	Foreign Key
3.	app_status	1	char	Not null	Applied/Merit/Confirm (A/M/C)
4.	doc_status	5	char	Not null	Empty/ok1/ok2/ok
5.	clg_status	5	char	Not null	Empty/sent/A/R/C
6.	pay_status	1	char	Not null	P/U/H

hostel_img_T

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	hostel_id	5	int	FK	Foreign Key
2.	hos_img_path	200	varchar	-	-

hostel_review_T

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	stud_id	10	double	FK	Primary Key
2.	hostel_id	5	int	FK	Foreign Key
3.	review	200	varchar	-	-
4.	ratings	2,1	decimal	-	-

hostel_avail_facilities_T

Serial no.	Column Name	Size	Data Type	Constraints	Description
1.	hostel_id	5	int	FK	Foreign Key
2.	facility_id	2	int	FK	Foreign Key

Development Tools & Technologies

Sublime 3


V7
php


MySQL™


Office

Possible Outcomes

This problem can have these possible outcomes:

1. Web Application
2. Android Application
3. iOS application

Challenges & Risks in Final Prototype

- In this project, one of the most challenging task is, timely verification of the documents submitted by students from their respective colleges.
- Another challenge is to make sure the documents uploaded by students must be readable and clear.

Work done till date

Till date we have completed the logical design of this project i.e. documentation. Now we have started working on the physical design and coding.