Midst - An Android College Portal

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22 May 2020

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Part I
Project overview

1 Introduction

Admissions into educational institutions are one of the biggest challenges faced by students and parents, this process is associated with tons of queries forcing them to query through number of websites, make visits to the institutions.
We as a group have made an earnest effort at developing 'Midst' an android application for Dera Bassi campus aimed at minimizing pre and post admission hassles.

2 Features

1. A navigation drawer listing the users - parents, faculty, students, miscellaneous users
2. Every user fragment features buttons to navigate through queries
3. Strong user verification - every user logging in gets verified. For unauthorised access application stops
4. The miscellaneous fragment includes a video about the campus prepared by authorities at the campus

3 Options available with users

3.1 Parents

1. Pay wards fee

3.2 Students

1. Curriculum details
2. Faculty details
3. Book availability status in library

3.3 Faculty

1. Retrieve details of particular student

3.4 Miscellaneous

1. Go through admission procedure
2. Accommodation related queries
3. Placement record

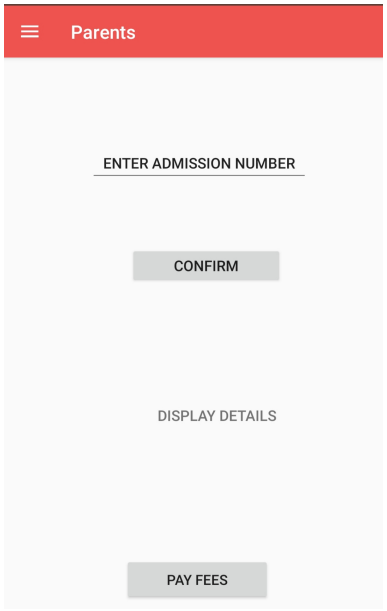


Figure 1: Parents window

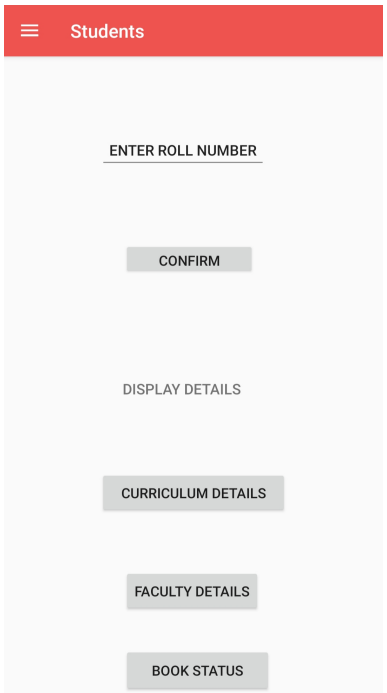


Figure 2: Students window

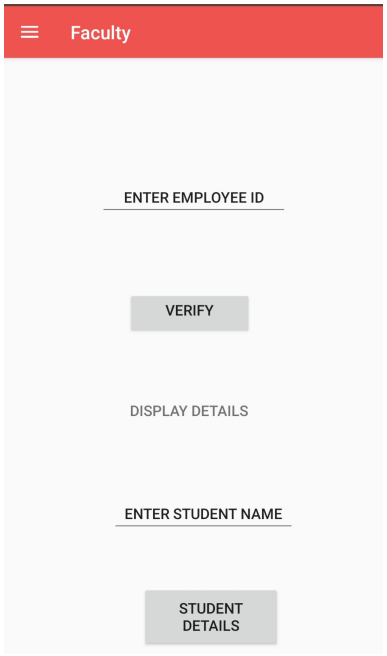


Figure 3: Faculty window

Figure 4: Miscellaneous window

Part II
Project Requirements

4 Functional

1. Automatically validate user by evaluating login requirements
2. Navigation window should be right aligned with respect to UI

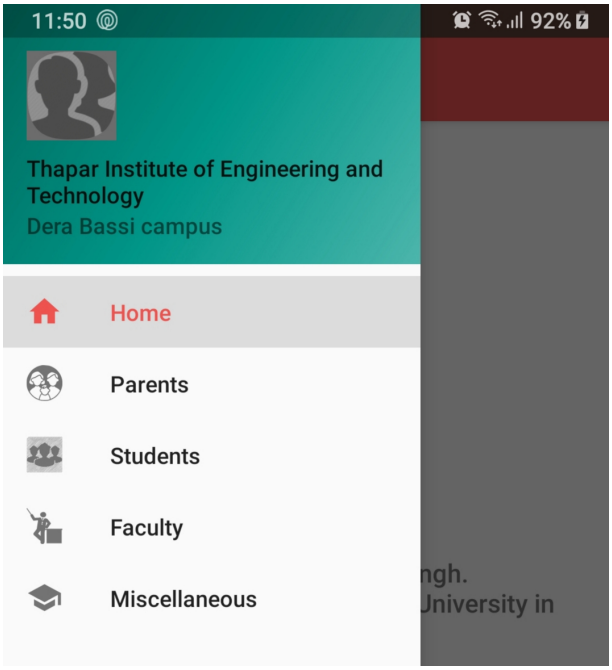


Figure 5: Navigation window

3. Background colour of all windows in the application should be #ffffff, navigation drawer header must be #03DAC5 colored, app bar color should be #EF5350
4. Only the specified user has the authority to access its own fragment
5. Buttons redirect the user to valid webpages

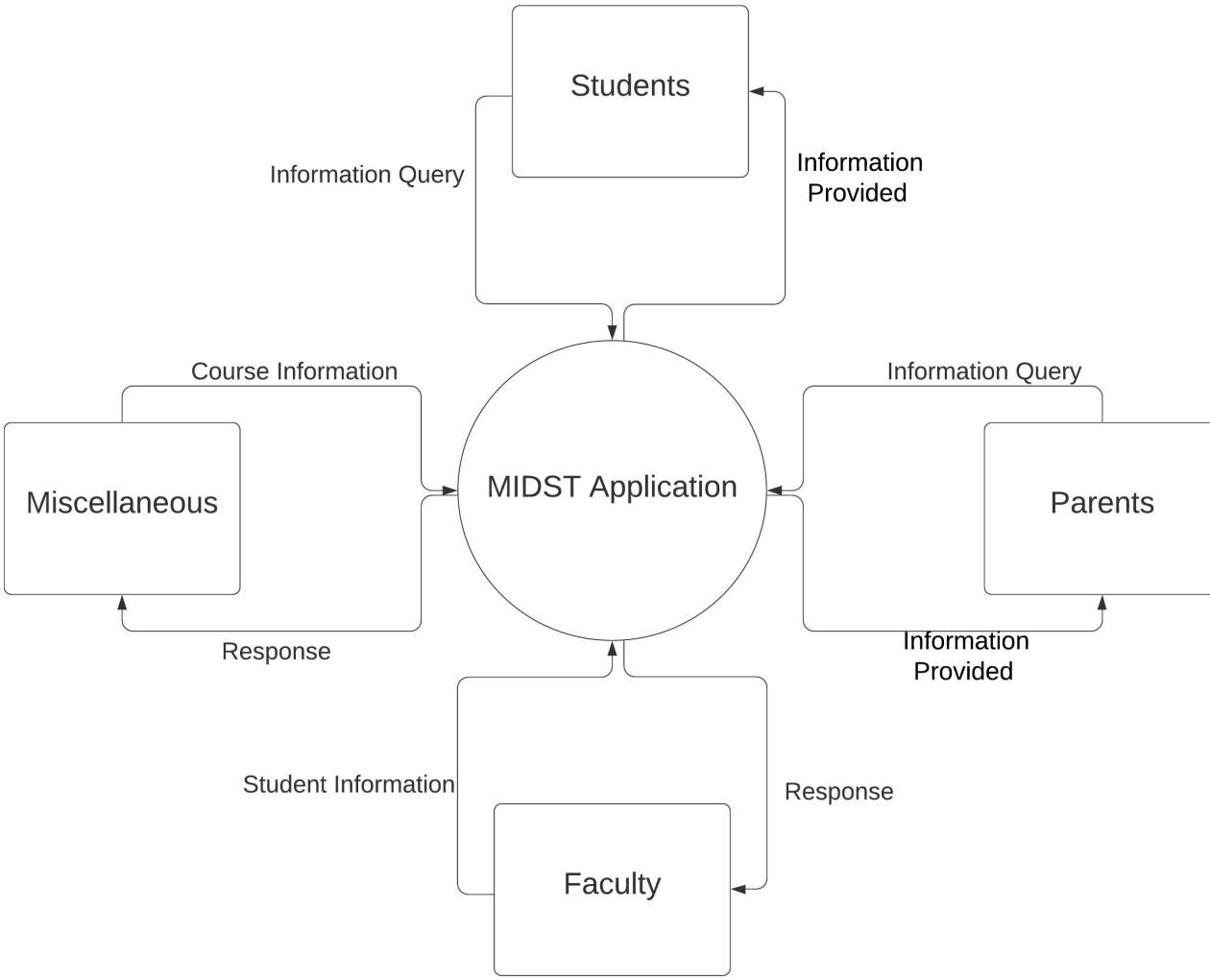
5 Non functional

1. Mobile application should be portable
2. The database and website(s) should be capable of handling atleast 150 users

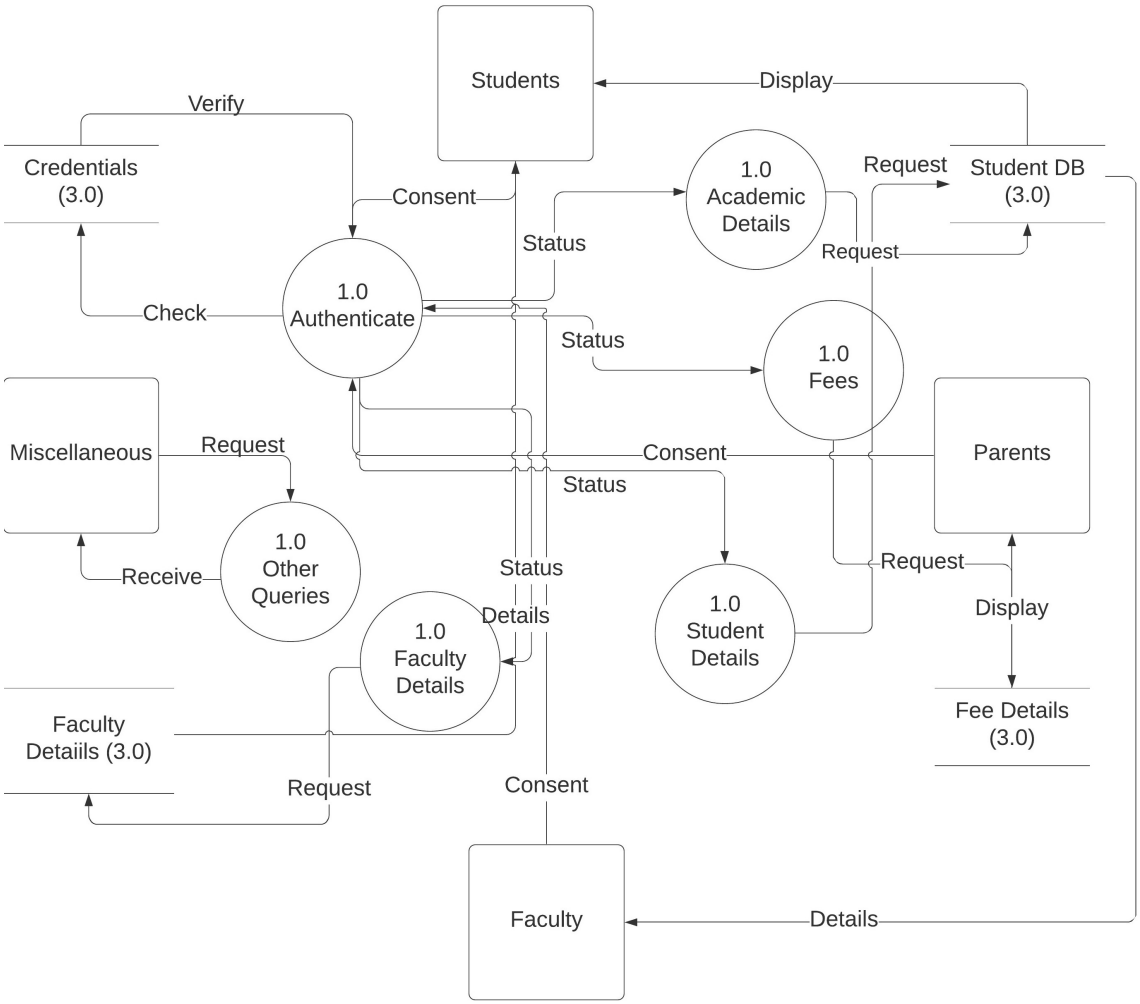
Part III
Structured Analysis

6 Data Flow Diagram

6.1 Level 0



6.2 Level 1

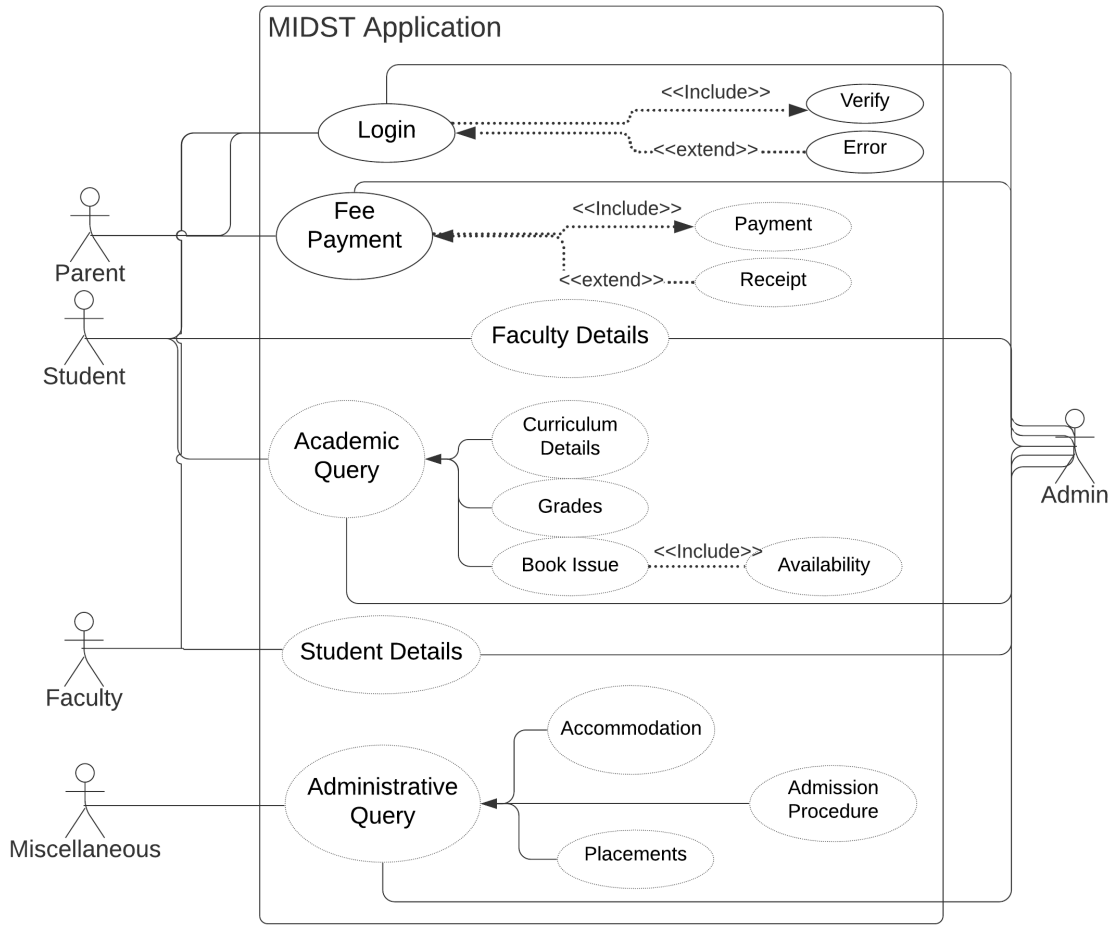

Students
Display
Verify
Credentials
(3.0)
Consent
1.0
Academic
Details
Request
Student DB
(3.0)
Status
Request
1.0
Authenticate
Check
Status
1.0
Fees
Miscellaneous
Request
Consent
Parents
Status
1.0
Other
Queries
Receive
Status
Request
Details
1.0
Faculty
Details
1.0
Student
Details
Display
Faculty
Detaiils (3.0)
Fee Details
(3.0)
Request
Consent
Faculty
Details

6.3 Data Dictionary

Display = User + Query
Numbers : Valid numbers = Admission Number + Employee ID + Roll number
admission number : integer *Parent's input*
employee id : integer *Faculty's input*
roll number : integer *Student's input*
consent : boolean
receive : boolean
request : boolean
verify : boolean
status : boolean
error : string *Error message*

Part IV
Object Oriented Analysis

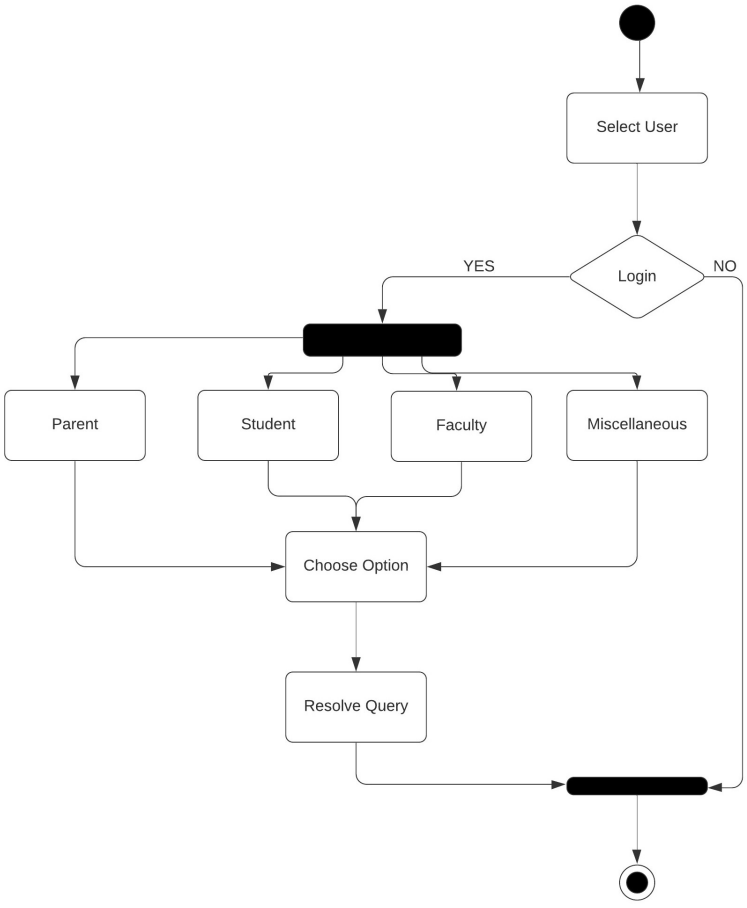
7 Use Case Diagram



8 Use Case Template for Students

Title	Student's queries
Description	Student access the system for academic details, faculty details and library book status
Primary Actor	Student
Preconditions	Student is logged into system
Postconditions	Student is registered for course
Main Success Scenario	1. Students logins in by roll number 2. Chooses particular option
Extensions	1a. Student is unregistered -1a1. System stops and user logins in again

9 Activity Diagram



10 Sequence Diagram

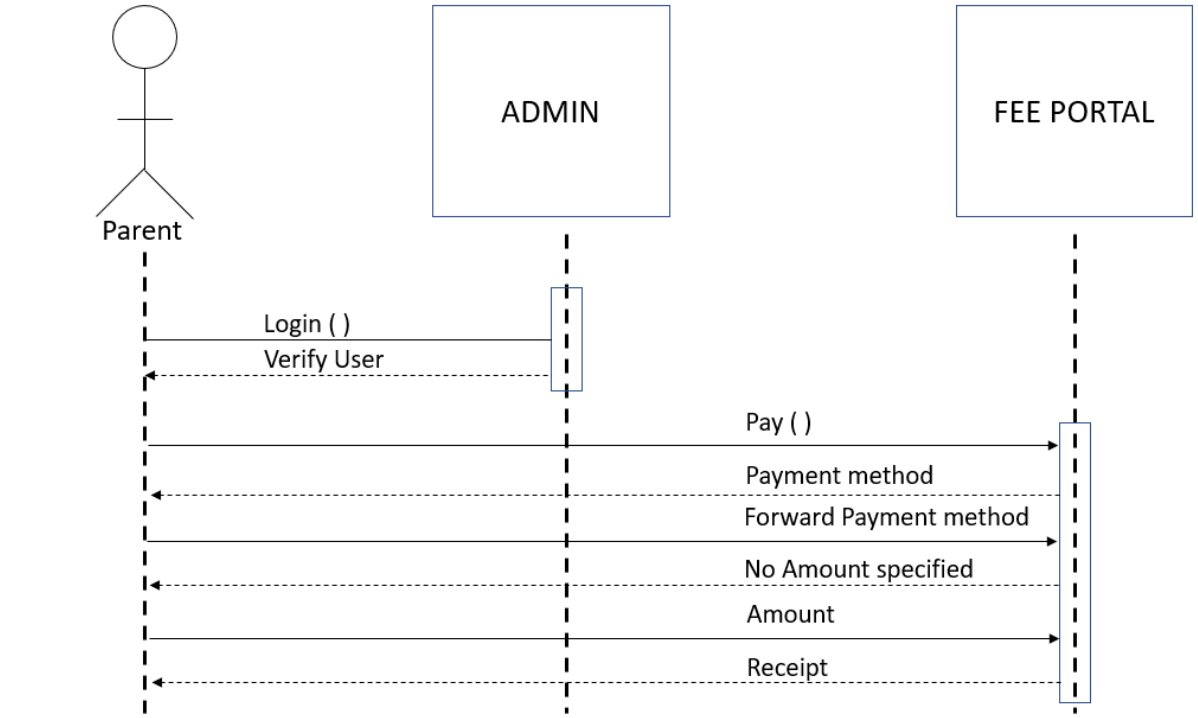


Figure 6: Parent

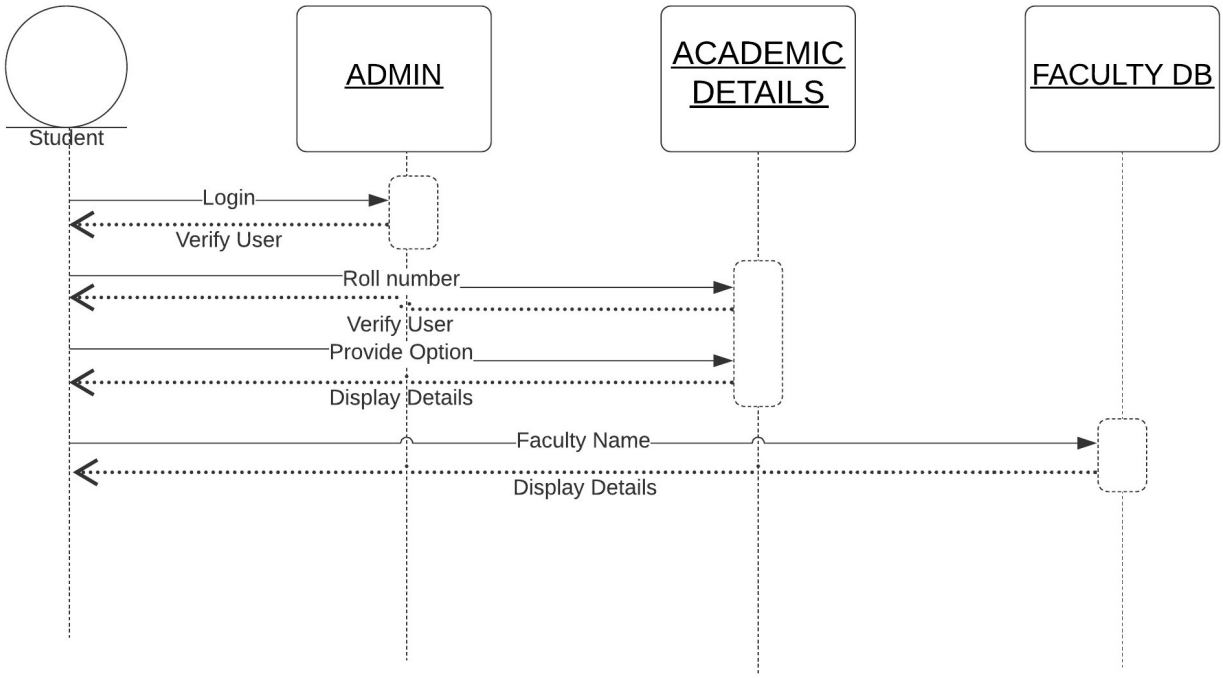


Figure 7: Student

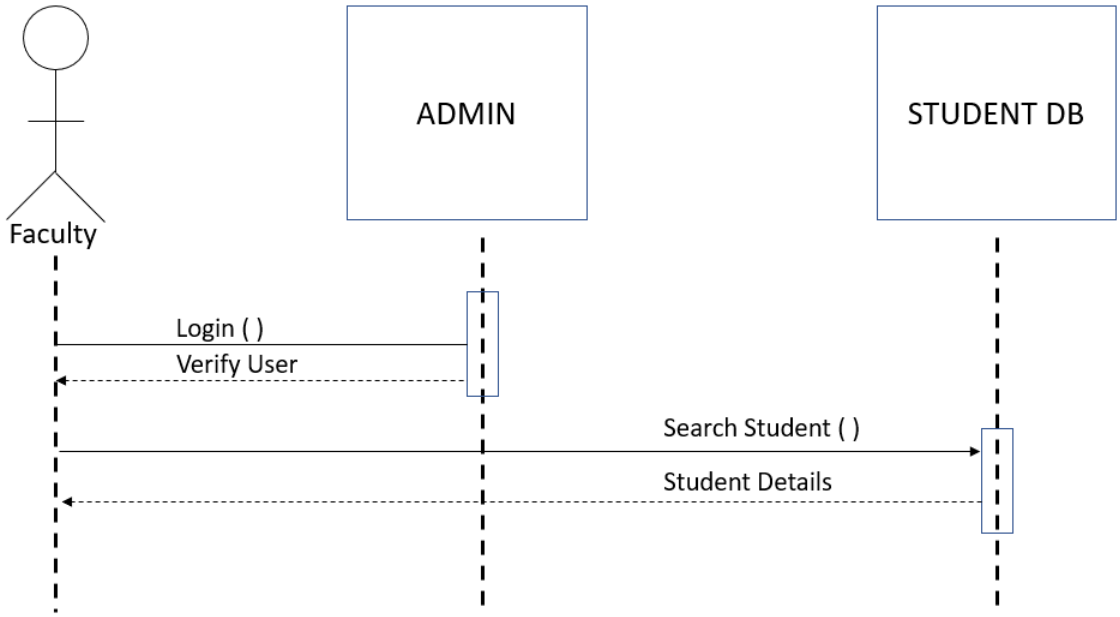


Figure 8: Faculty

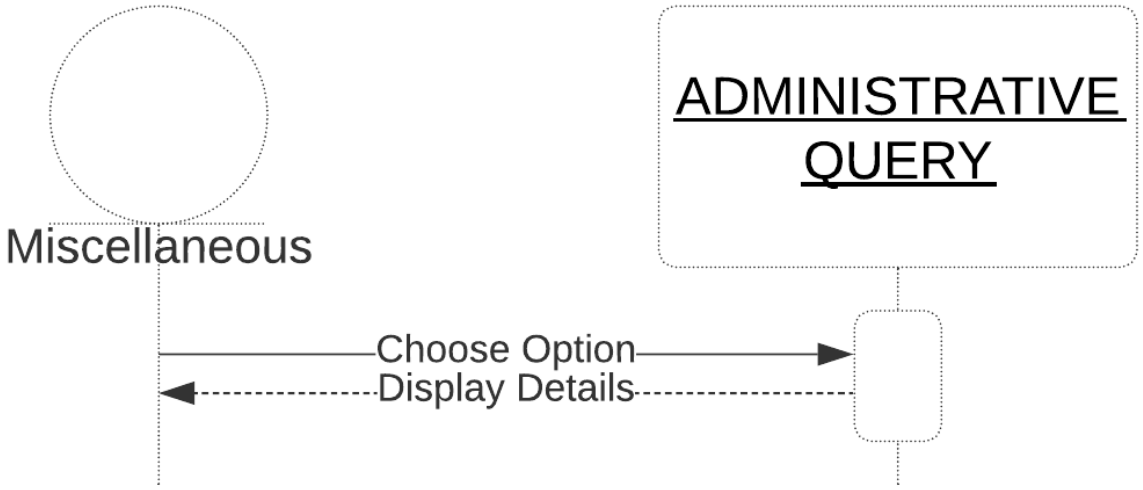
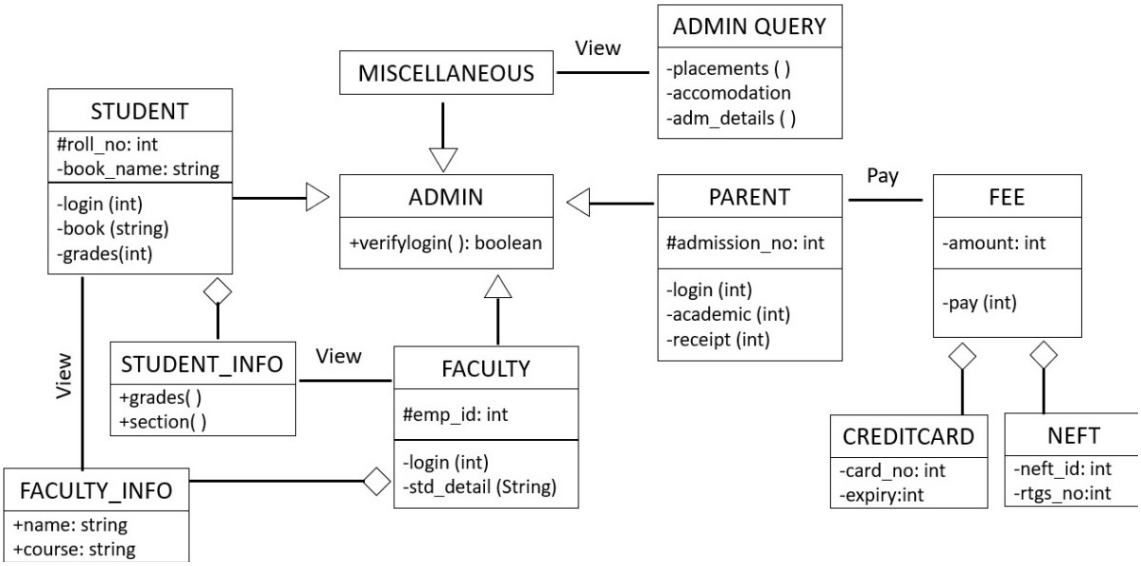


Figure 9: Miscellaneous

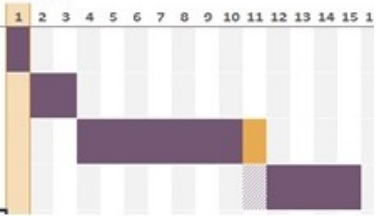
11 Class Diagram



Part V
Activity Planning

12 Gantt Chart

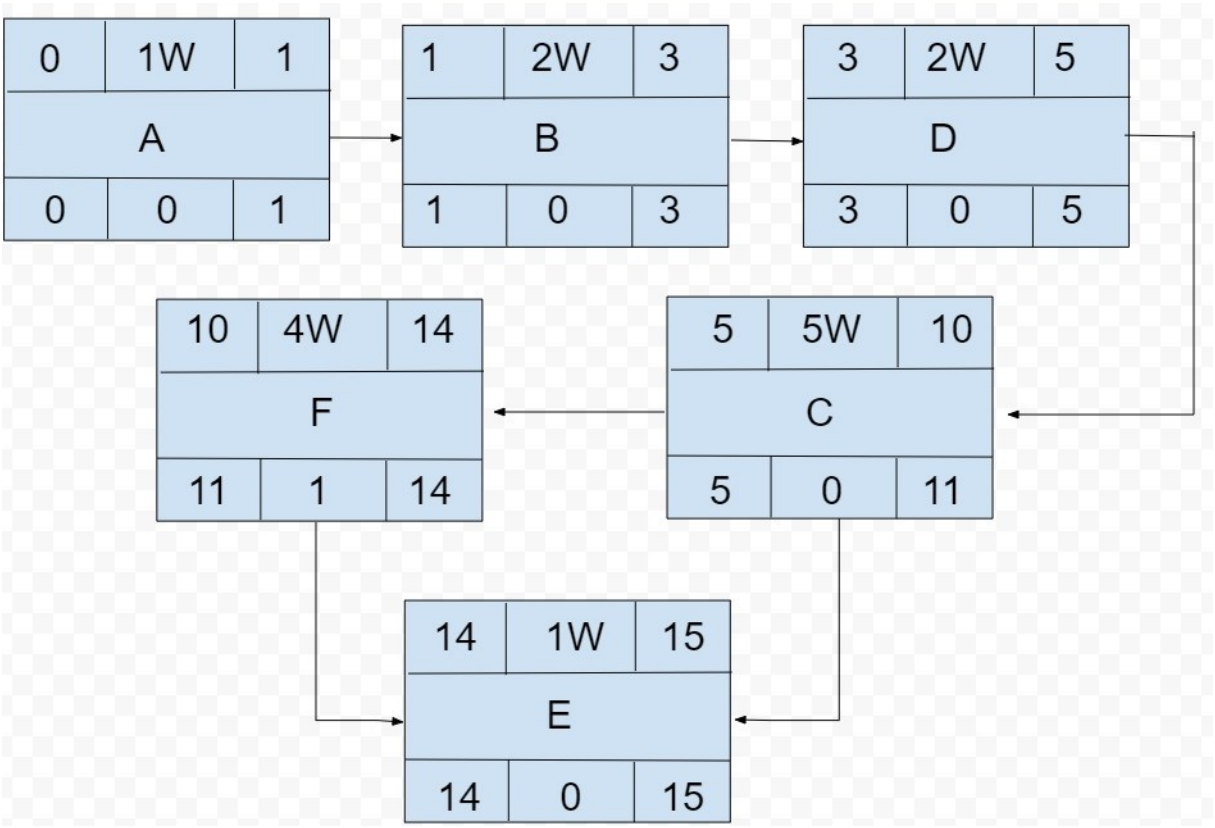
ACTIVITY	PLAN START	PLAN DURATION	ACTUAL START	ACTUAL DURATION	PERCENT COMPLETE
Planning	1	1	1	1	100%
Designing	2	2	2	2	100%
Implementation	4	7	4	8	100%
Testing	11	5	12	4	100%



13 CPM Table

ID	Activity Name	Duration	Precedents
A	Hardware Selection	1	
B	Software Designing	2	A
C	Coding	5	D
D	Data Presentation	2	B
F	Testing	4	C
E	Installation	1	C, F

14 Activity on Node representation



15 Critical Path

No delay in project deadline, calculate total float

1. Path A - B - D - C - F - E : Float = 1
2. Critical Path A - B - D - C - E : Float = 0

Part VI
Testing

16 Unit testing

S No.	Screen	Test Case	Expected Result	Result
1	Hamburger Icon	Check navigation window	All users get displayed in order along with their icons	Pass
2	Parents	Check orientation of all features	All appear in order	Pass
3	Parents	Enter admission number	Entered successfully	Pass
3	Parents	Click confirm button	Displays student name in textView	Pass
4	Parents	Click pay fees button	Redirects to payment portal	Pass
5	Students	Check orientation of all feature	All appear in order	Pass
6	Students	Enter roll number	Entered successfully	Pass
7	Students	Click confirm button	Student's name displayed in display details box	Pass
8	Students	Click curriculum details	Display a pdf file	Pass
9	Students	Click faculty details	Redirects to faculty webpage	Pass
10	Students	Click book status button	Redirects to Nava Nalanda library website	Pass
11	Faculty	Check orientation of all features	All appear in order	Pass
12	Faculty	Enter employee id	Entered successfully	Pass
13	Faculty	Click confirm button	Faculty name displayed in display details box	Pass
14	Faculty	Enter student name	Entered succesfully	Pass
15	Faculty	Click student details button	Redirected to portal	Pass
16	Miscellaneous	Video playing automatically	Video gets played by default	Pass
17	Miscellaneous	Check orientation of features	All are properly oriented	Pass
18	Miscellaneous	Click placement button	Redirected to CLIP website	Pass
19	Miscellaneous	Click accommodation button	Redirected to LMTSM hostel web page	Pass
20	Miscellaneous	Click placement button	Redirected to admissions web page	Pass

17 Compatibility Testing

1. This application has been tested for various screen sizes
2. Tested for orientation changes - portrait and landscape