

NAME : HASSAN SAAD.

ID : 14286

SEMESTER: 5th

DEPARTMENT: SOFTWARE ENGINEERING

SUBJECT : OBJECT ORIENTED SOFTWARE ENG

INSTRUCTOR : MAM SANA JEEHAN.

DATE : 20 April 2020.

Ans:-

Introduction:-

Capturing the attendance in the workplace, bosses need to be able to know whether the staff have reported to work while in academia such as school and universities, the attendance of students are also needed to be taken to track their status. Therefore, it is important that the method for attendance capturing is accurate, convenient and fast so that it does not consume too much time. Traditionally, universities have often used the conventional method of calling names and signing of attendance sheet to record the attendance of the student.

Abstract-

The increasing number of students in colleges or universities is becoming a challenge for the lectures especially when taking their attendance. Besides that, some students might just come to get their attendance marked and then leave the class. As existing systems do not track the students before marking their attendance, students are able to leave the class once their attendances are taken, resulting in the attendance taken by the system to be not accurate. Hence in this paper a tracking algorithm which will ensure that the students were actually present for certain duration of time before having their attendance taken by the system is proposed, resulting in

Biometric Authentication :-

is the process which utilize Unique human traits in order to accurately identify a Person. Examples include Scanning of ~~Anguar~~ fingerprints, retina Scan of the eye, Voice recognition and Face recognition. Biometric authentication is deemed very efficient and accurate in identifying individuals. This is because no two People have the same retina to perform the retina Scan or have identical fingerprints. However each biometric authentication method will have suitability of these methods in an attendance capturing System.

in a more accurate attendance capturing system. This system employs the Viola-Jones method for the face detection algorithm and Eigenface method for the face recognition algorithm. The tracking was done by allocating points to students who were successfully recognized and then dividing the total point for each student with the system's counter that represents the total time of lecture.

The proposed system was able to achieve a 78% attendance marking accuracy. From the result obtained, it is found that the system is able to verify that the students are present for a set duration of time before marking their attendance which improves the accuracy of the attendance capture system.

Attendance Marking:-

once the video has ended, the store data is analysed by the system. The total Percentage of which the student was present for the lecture is computed by dividing the points received by that student over the system's counter.

After computing the Percentage, the result obtained is compared with a set threshold.

For example, if it is desired that the students be present for 80% of the total lecture time, the ~~the~~ threshold is set to 80. if the Percentage is above or equal to the threshold, the student is marked as present.

=>>

After that, the system checks if it has finished computing the attendance for all the students. if it has not, the system repeat the process, starting by computing the percentage for the next student. once all the attendance of the student's have been computed the attendances are recorded and saved into an excel spreadsheet.

Functional requirements of Student attendance management.

The Functional requirement of this is that it does what is mean for. A Functional requirement describes what a Software System, should do, while non-Functional requirements place constraints on how the system will do so.

Functional requirements specify a function that a system component must be able to perform. it can be documented in various ways. The most common ones are written descriptions in documented and use cases. Few of it's Functional requirements are as given below
User data should be fed into the system. This system is doing that properly in user entity.

Non-Functional requirements
of Student attendance
management System.

Non-Functional necessities measure
the other demand than
Practical necessities. This Squade
measure the necessities that
Specify criteria. which will
be want to Choose the
operation of a system- instead
of Specific behaviours.

Non-Functional of Student attendance
management System necessities
Place restrictions on the
merchandise being developed,
the event method and Specify
external constraints that the
merchandise should meet. our
Project qualifies all the criteria
of Functional and non Functional
accordingly and the System is
Up to mark Performance wise.
Here we need to take care
of few more things before heading
towards the system.

⇒ The most important Feature of Application world is that application's ease of usage. Application will easy to use if made while keeping in mind that user need to think twice about searching any Feature.

Everything should be made distinctive by using the color combination such that everything needed most frequently highlighted. with focus colors.

We can use simple layouts like the card and grid layout etc.

- Simple and harmonic way making UI is very intuitive and needs to followed.

• The typography is taken care very strictly as the need of the system.

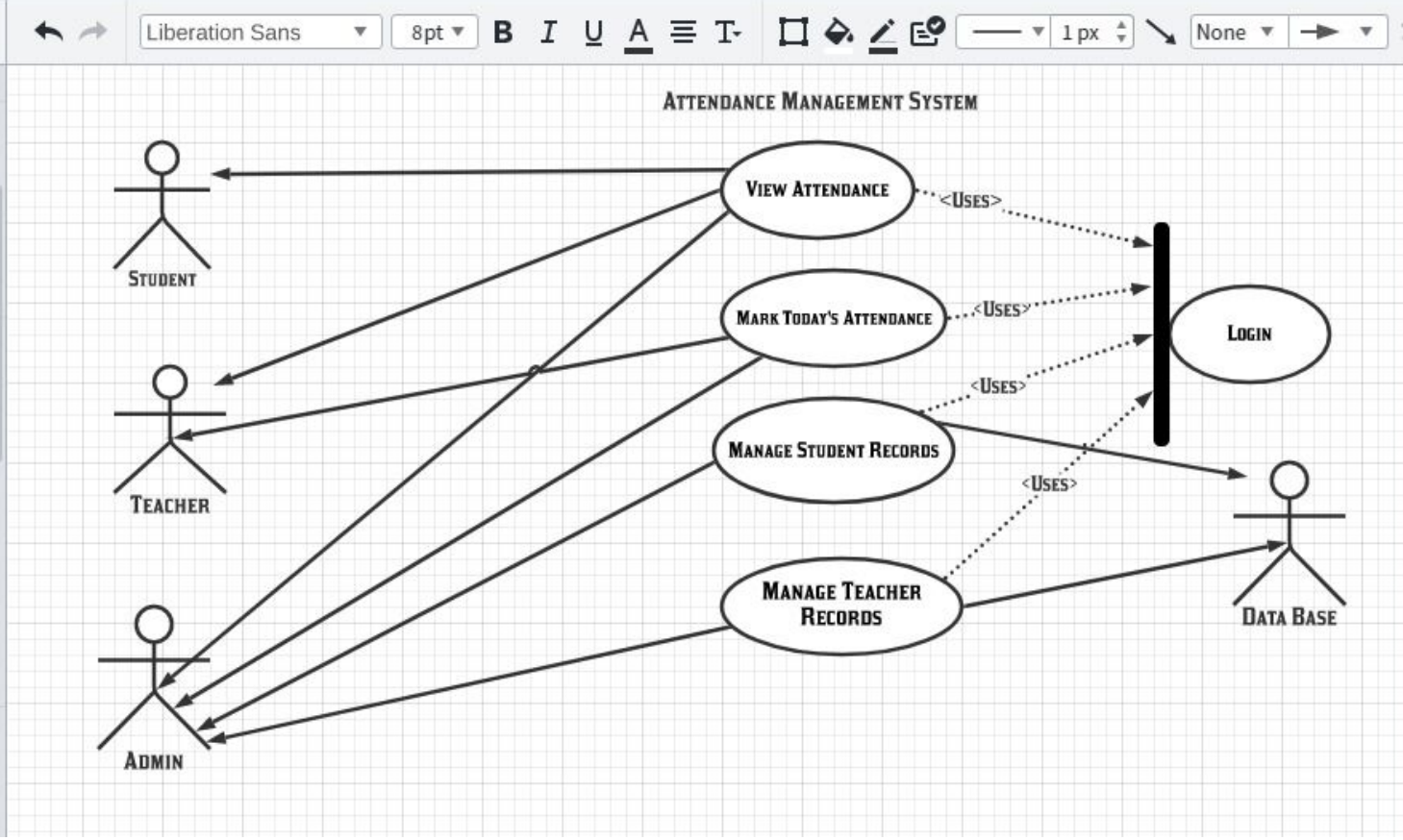
• The feedback form is a very good way taking feed back of forms and improving the system.

Shapes

UML Use Case

UML State/Activity

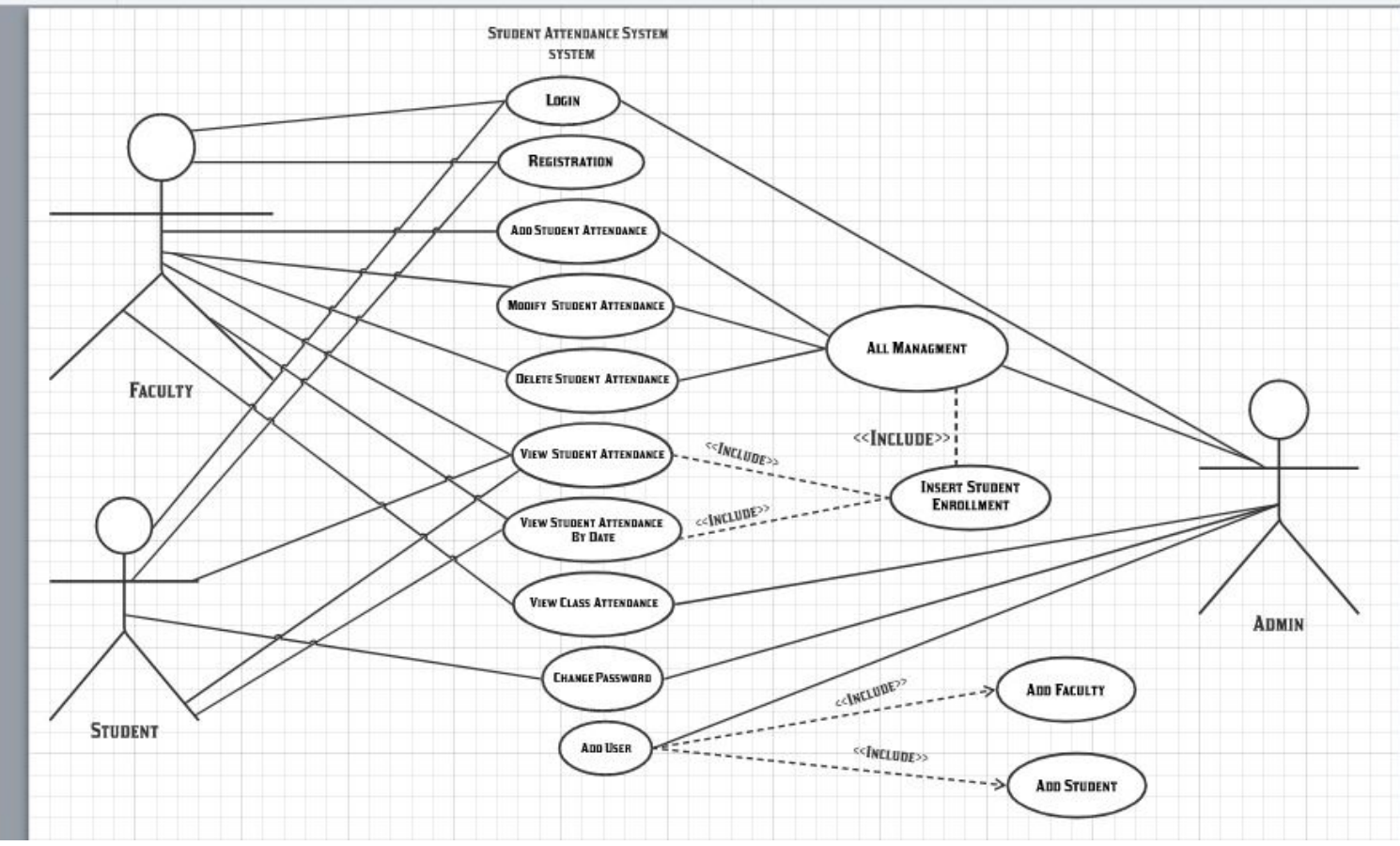
UML Sequence



Navigation icons: back, forward, search, zoom, etc.

Shapes Liberation Sans 8pt B I U A T 1 px None None MORE

Standard UML Class Dgm UML Use Case UML State/Activity

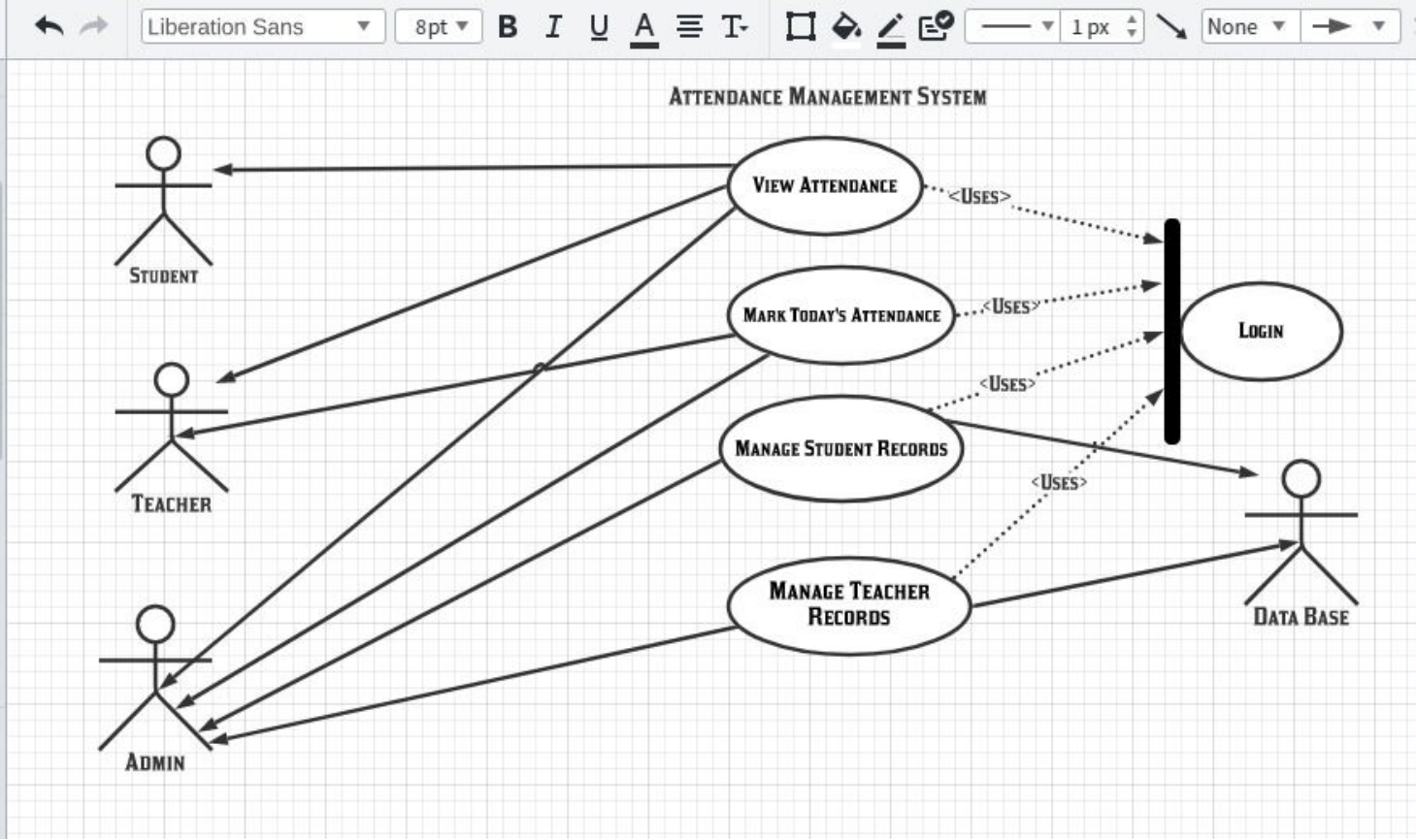


Shapes

UML Use Case

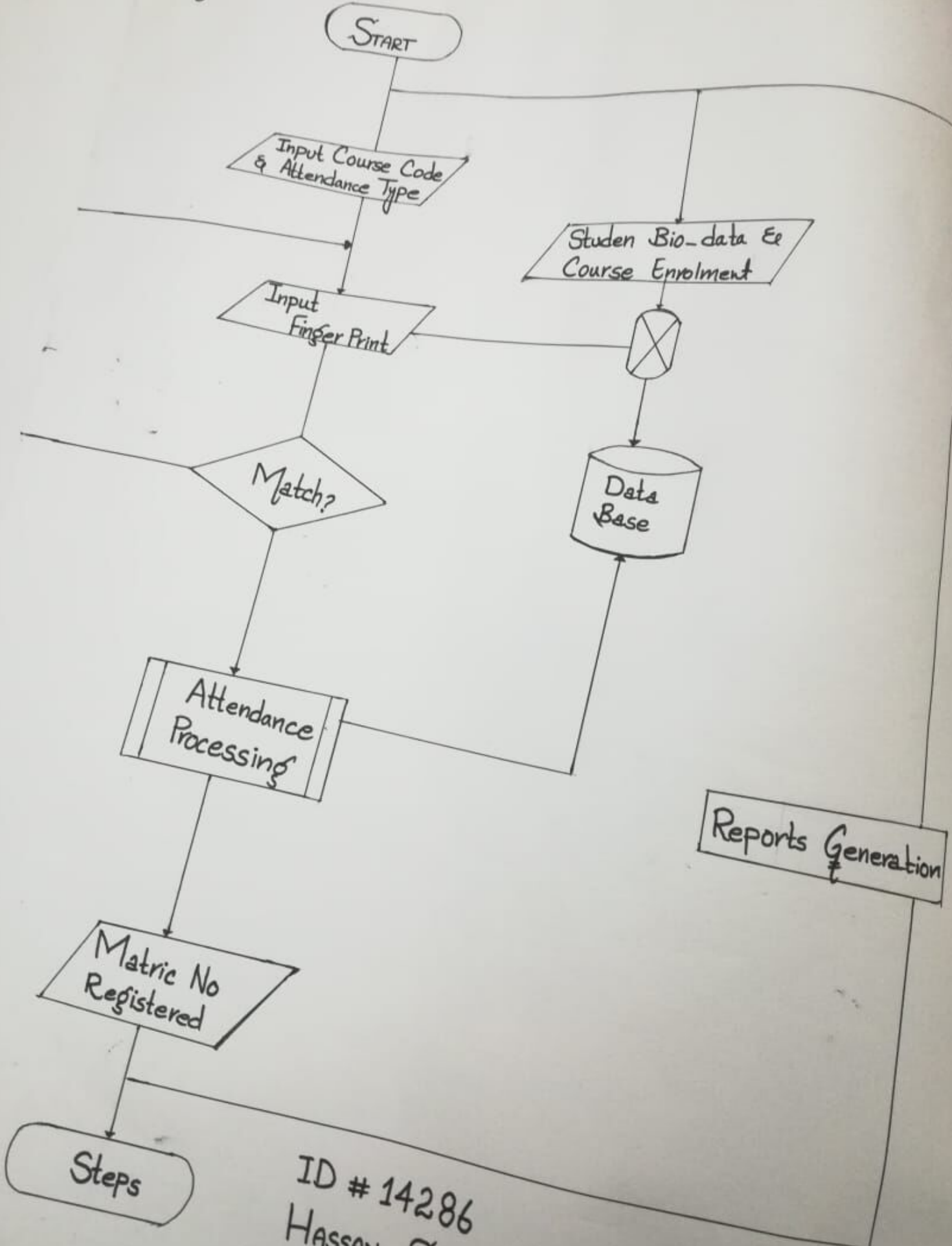
UML State/Activity

UML Sequence



Navigation icons: back, forward, search, zoom, etc.

QUESTION No # 2



ID # 14286
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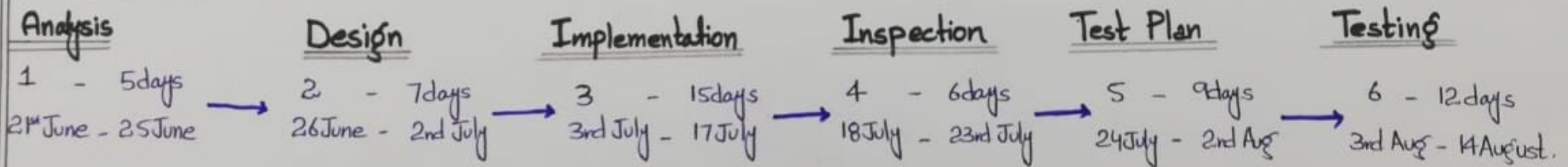
QUESTION No 2:-

GANTT CHART:-

BIOMETRIC ATTANDANCE SYSTEM.

Task Name	Duration	June	July	August.
Requirmment Eliciation	5 days	21 st June - 25 June		
Design	7 days		26 th June - 3 rd July	
Implementation	15 days		3 rd July - 17 July	
Inspection	6 days			18 July - 23 rd July
Test Plan	9 days			24 July - 2 nd August
Testing	12 days			3 rd Aug - 14 August

PERT CHART:



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