Criteria B-Solution Overview

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Gantt Chart

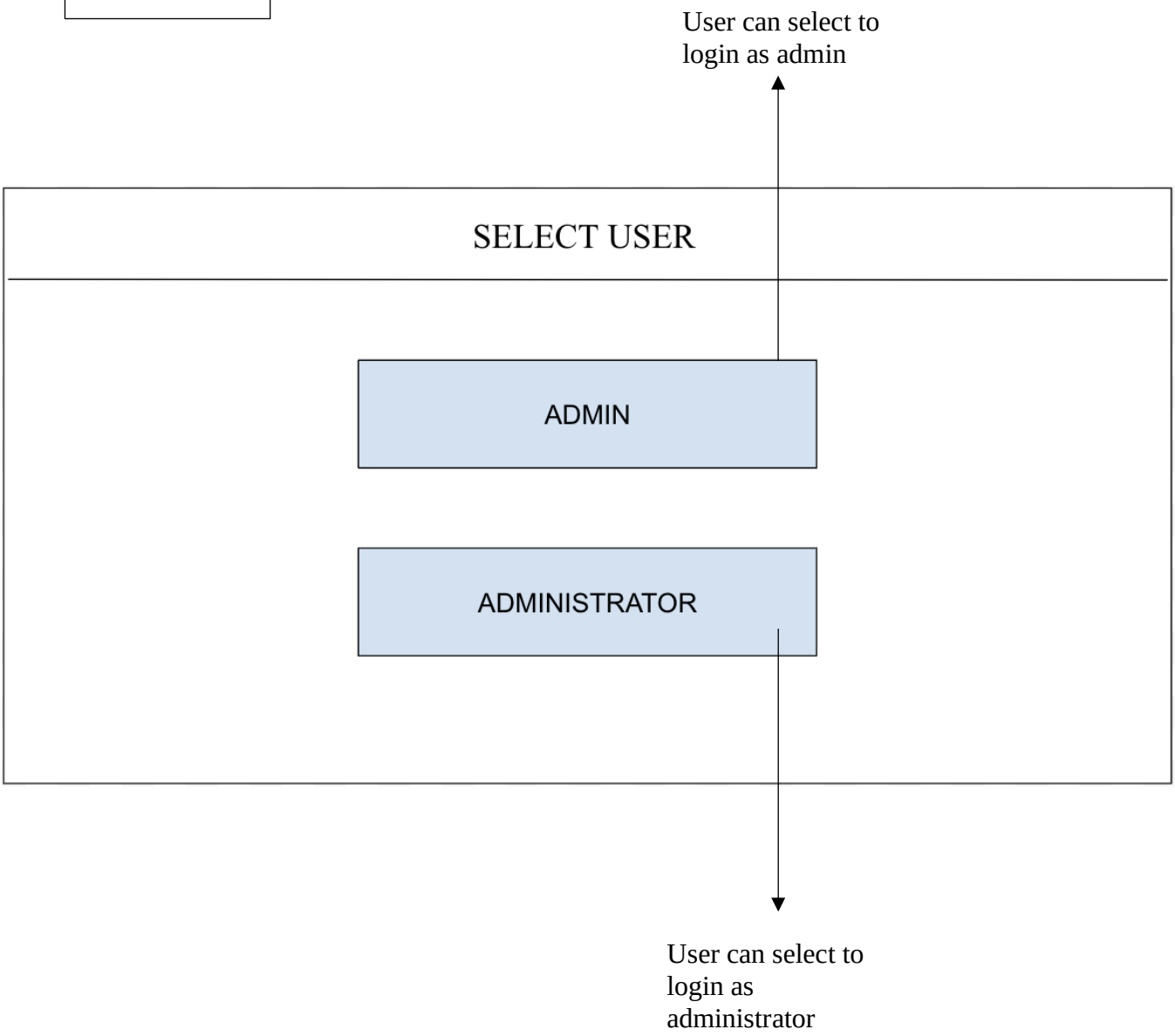
Timeline	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Planning											
Design											
Development											
Functionality											
Evaluation											
Testing											

Form Design Layout

The below layouts have been discussed with the client and the feedback is attached in appendix-4.

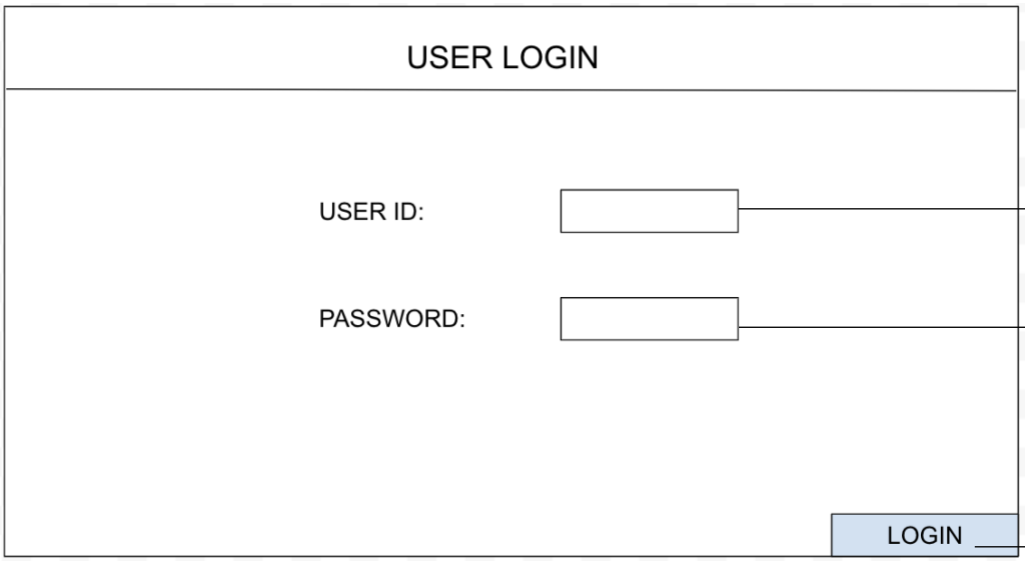
Selecting user

This form satisfies success criteria 1, for the user login



USER LOGIN

This form satisfies success criteria 1, for the user login



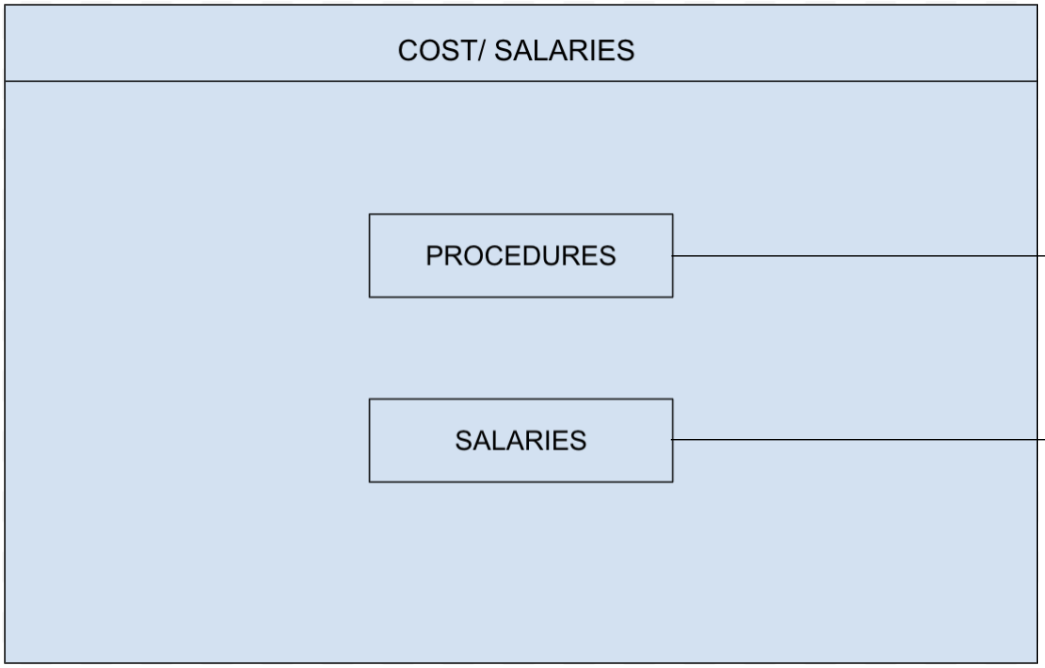
The user will be provided with a unique id to login

The user will set a password which will help them

After login details are filled, by clicking this button the user will login.

Editing procedures and salaries (only available for admin)

This form satisfies success criteria 11, for the admin to edit staff salaries and procedure costs.

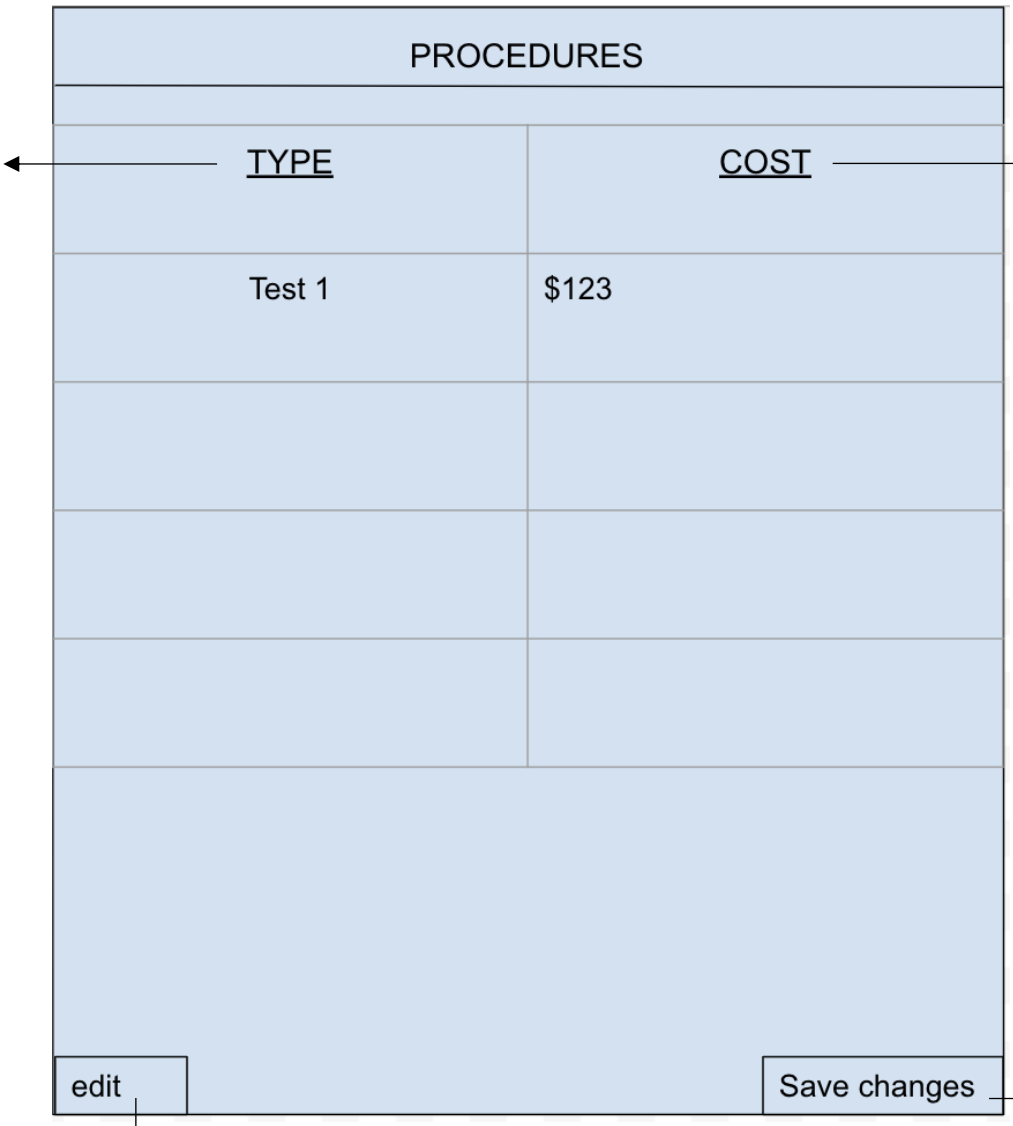


The admin can select to edit procedure costs

The admin can select to edit salaries of employees or add bonuses, etc.

Editing procedures

This form satisfies success criteria 11, for the admin to edit staff salaries and procedure costs.



The name of the procedure related to dentistry

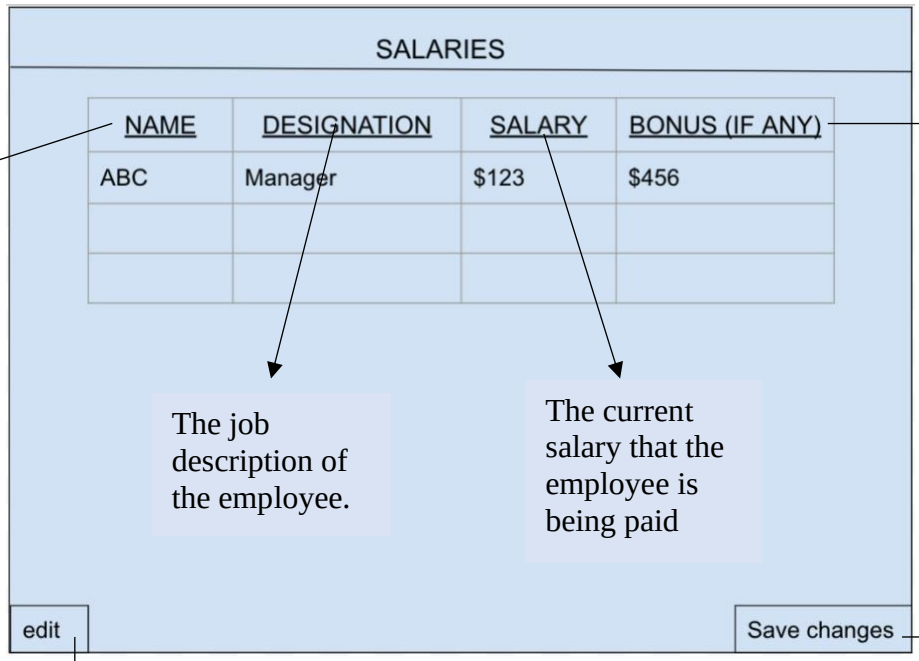
These are the costs input into the system.

After the admin makes the edits, by clicking this button the changes made will be saved in the database

If the admin wishes to edit the costs, all the fields will become editable with this button.

EDITING SALARIES

This form satisfies success criteria 11, for the admin to edit staff salaries and procedure costs.



The names of the employees

The additional money(bonus) that the employee receives for whatever reasons

The job description of the employee.

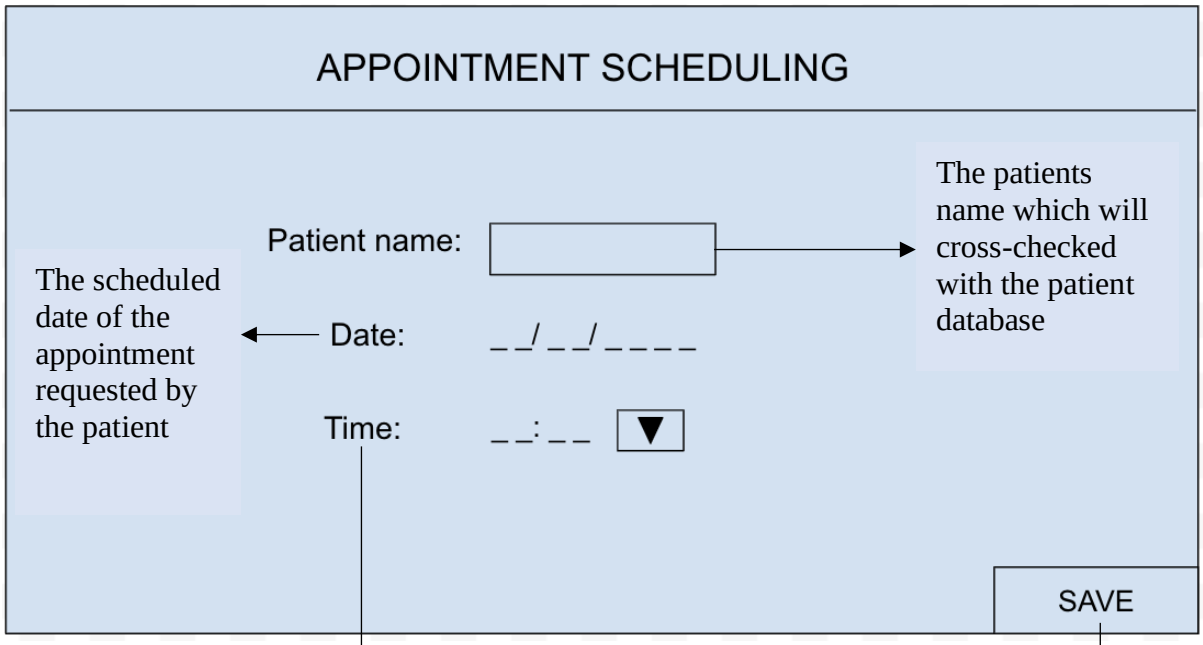
The current salary that the employee is being paid

After the admin makes the edits, by clicking this button the changes made will be saved in the database

If the admin wishes to edit the salaries or names, all the fields will become editable with this

APPOINTMENT SCHEDULING

This form satisfies success criteria 4, for the admin and the employees to automatically schedule appointments by just entering patient's name



The patients name which will cross-checked with the patient database

The scheduled date of the appointment requested by the patient

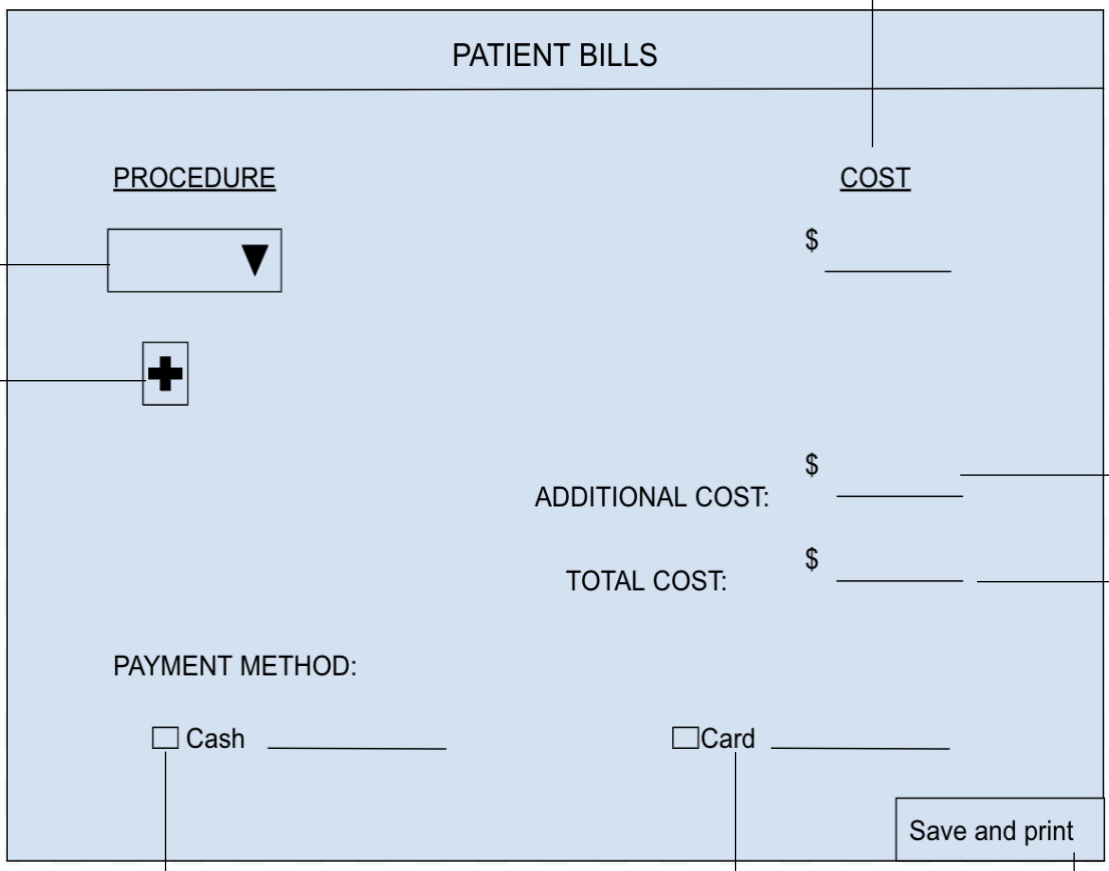
The scheduled time of the appointment at a particular date

Once the details are filled in, this button will block this slot for that patient and save it in the database and calendar

Patient bills

This form satisfies success criteria 7, for the staff to generate patient bills after the appointment with a detailed summary of all the costs

The cost of that procedure will automatically be filled here from the database



The dental procedures that the doctor will carry out

If multiple procedures are executed this is an 'add' button to add more procedures

Any additional costs the doctor has to add due to whatever reasons

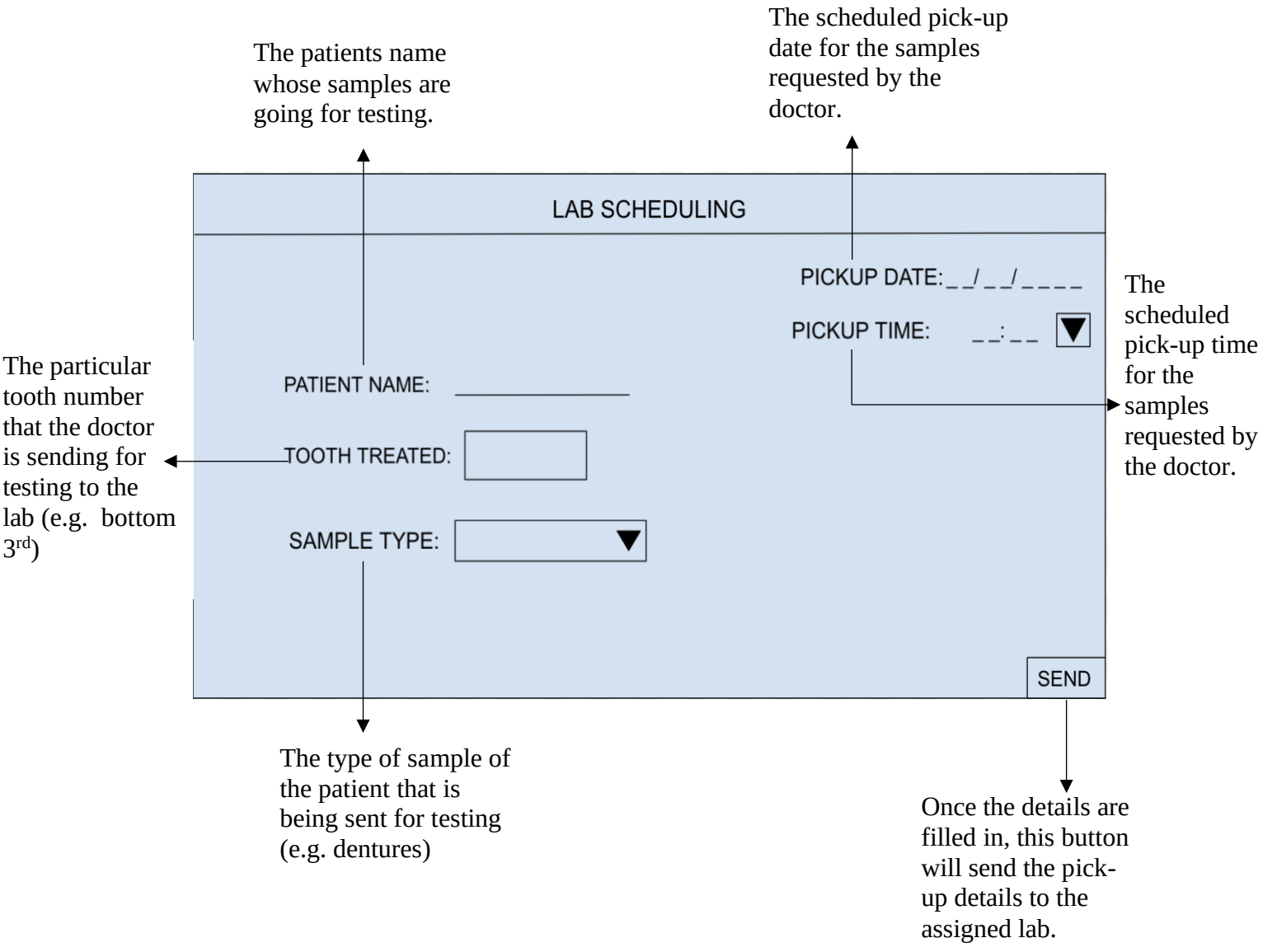
The final cost after adding the procedure costs and additional costs

Both payment methods have check boxes. One can be selected for the whole amount. If a patient wishes to pay some amount in cash and some amount by card, both the check boxes must be ticked, and the amount paid by each method must be filled in the blank space.

Once the bill is filled completely, this option will save it in the database and will also give a print option if the patient wishes for a hard copy.

Lab scheduling

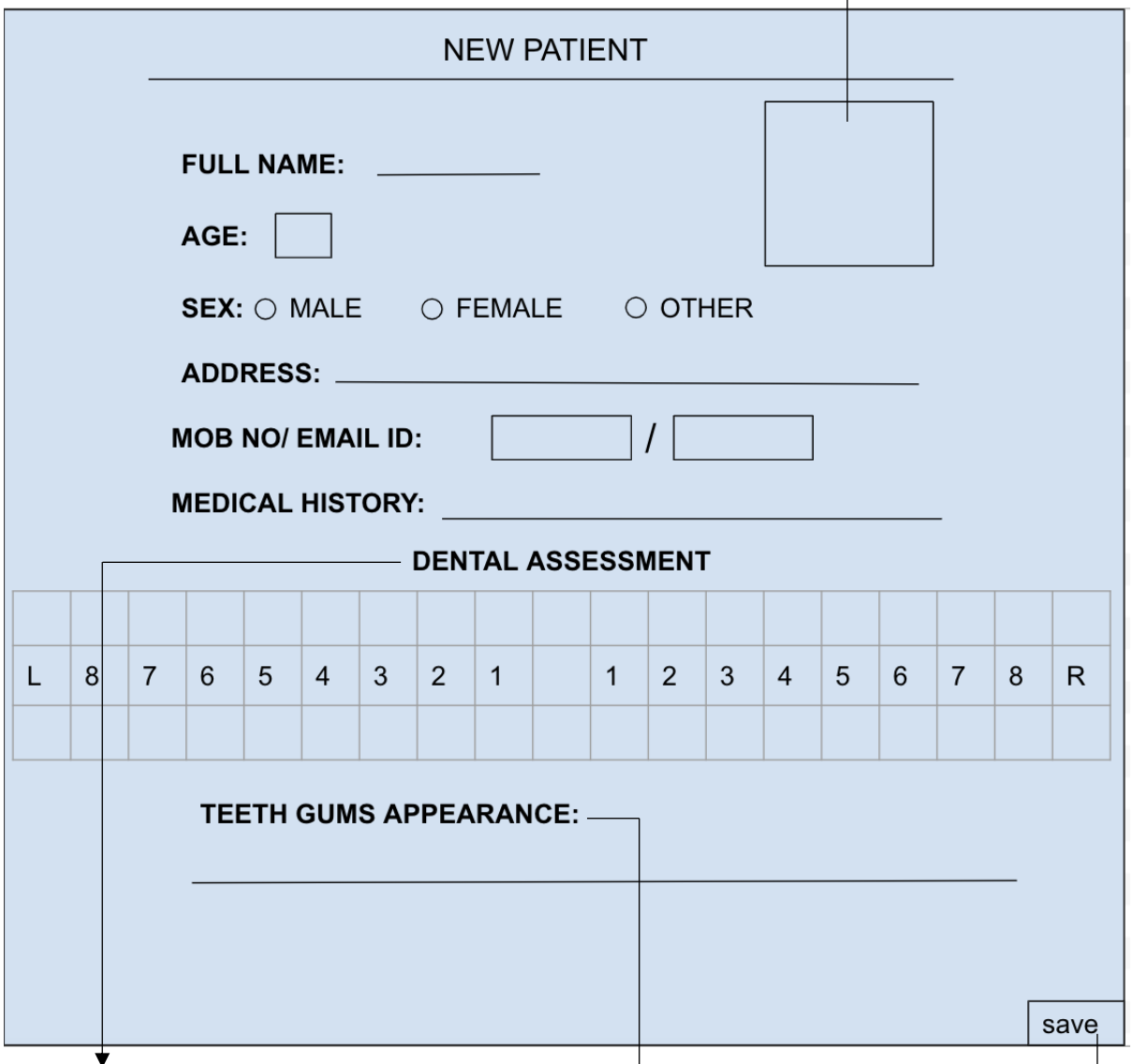
This form satisfies success criteria 5, for the staff to inform labs for sample pick up and drops



New patient

This form satisfies the success criteria 2 for scheduling appointments. The form will take in details for a new patient coming to the doctor and store their personal details in the "patients" database.

Photo id of the patient



The doctor will conduct a physical examination after which she will write a one-word report for a tooth if required. (e.g. crown, bridge, missing, etc.)
The top row is for the teeth above and the bottom row is for the teeth below. Each tooth is numbered 1-8 from left to right so they can be easily identified. This table was specifically designed asper the client's requirement.

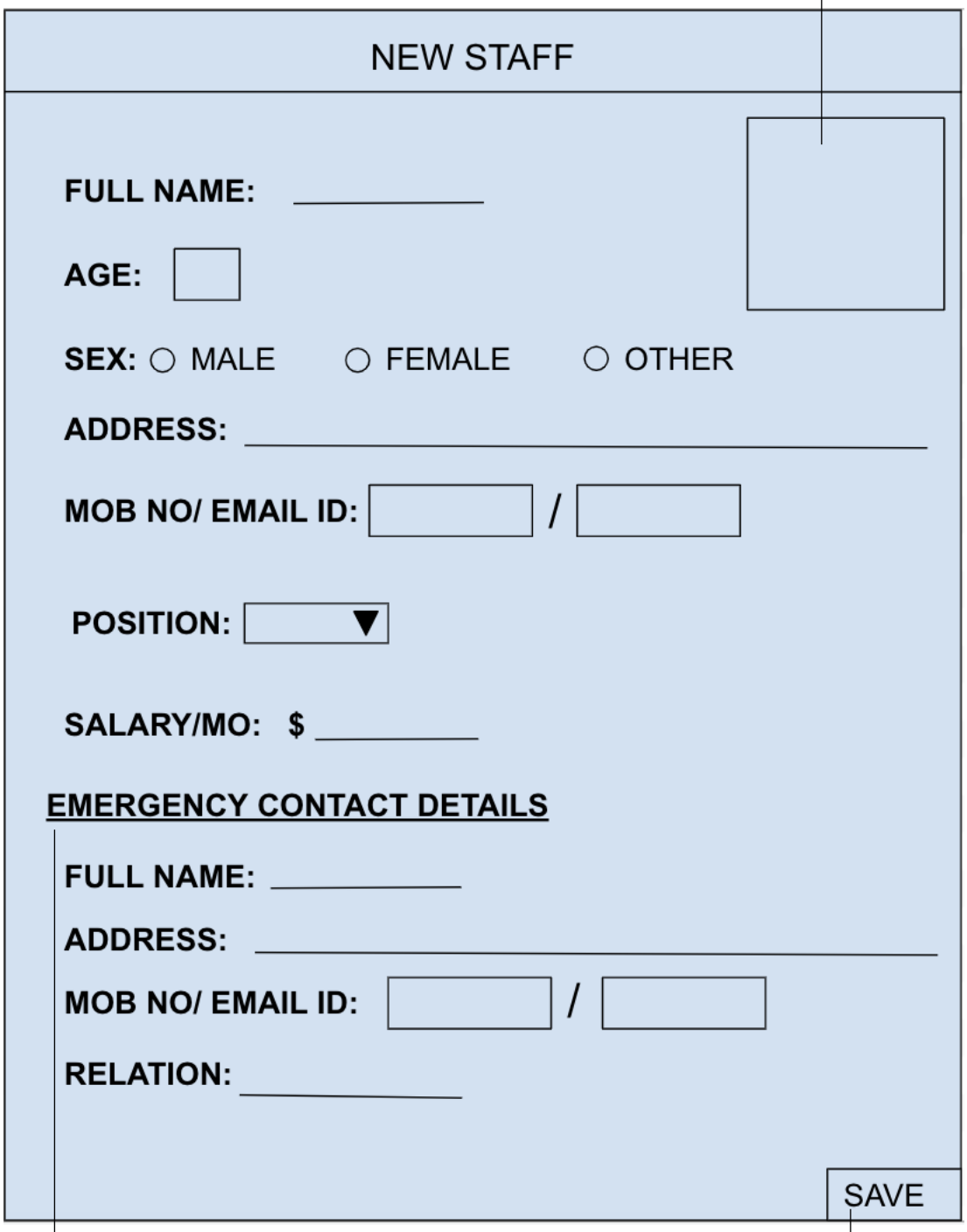
After the physical examination the doctor will write a one-line description on the current condition of the teeth and gums.

Saving the details to the database.

New staff

This form satisfies success criteria 3 to fill in the details when a new staff member is employed so their records get stored in the database.

Photograph of the staff member



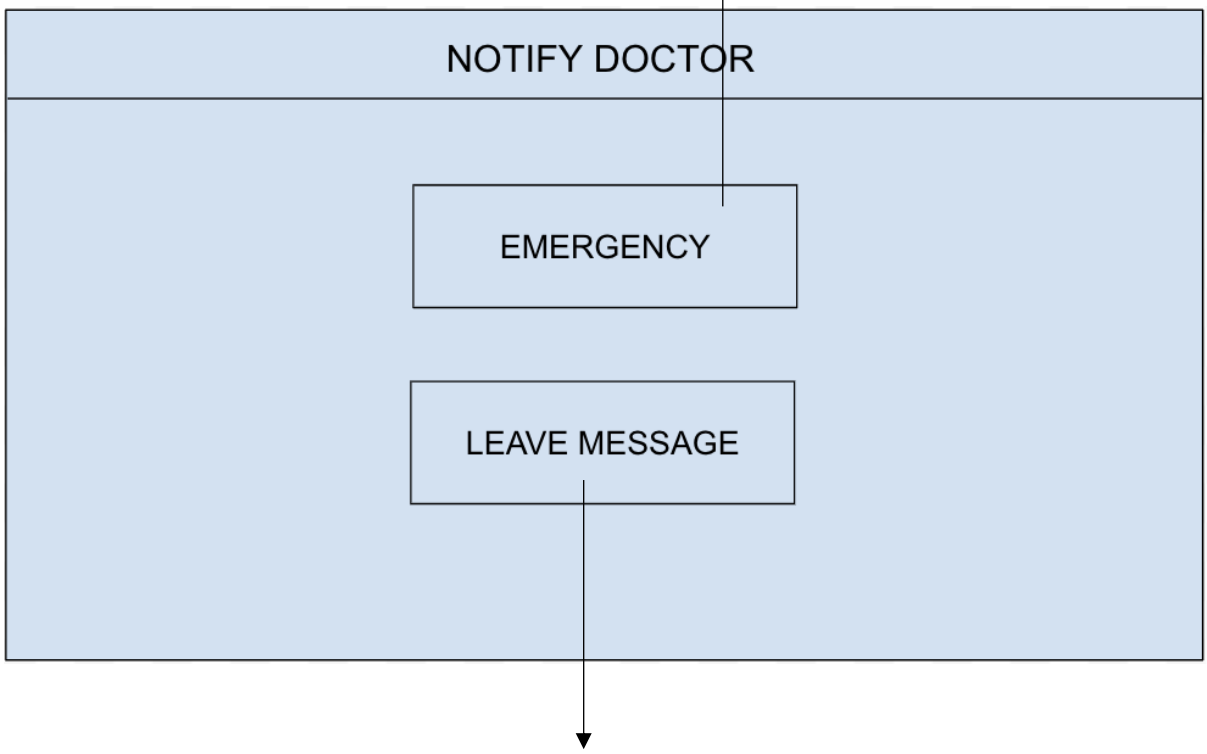
The first person to contact due to an emergency because of whatsoever reasons.

Saving the details to the database.

Notify doctor

This form satisfies success criteria 13 to notify the doctor in an emergency or if a message has to be delivered, instead of calling the doctor via phone.

The doctor will get a SOS call from the clinic is this button is pressed.



If the staff want to leave the doctor a message, after pressing this button a pop up will appear in which they can type in the message and it will be sent to the doctor.

Datatype Tables

Logging in as an admin or administrator

Field name	Data type	Description	
Username	Text	Name that the user uses to login	
Password	Text/Numeric	Security key set to login	

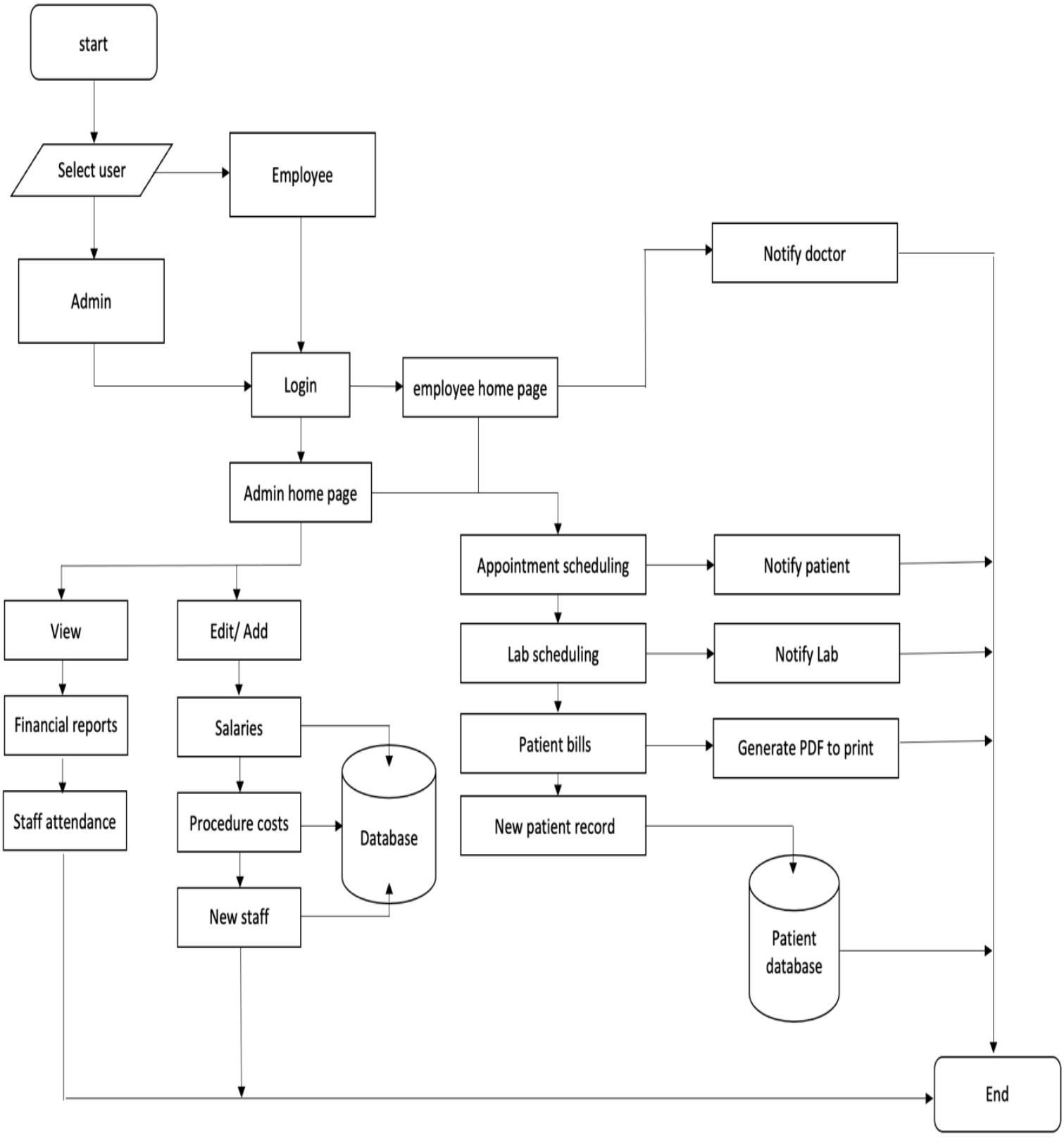
New staff

Field name	Data type	Description	Additional information
Full name	text	Name of the new employee	
Age	Numeric	Current age of employee	
Sex	Text		Option button
Address	Text	Employees residence location	
Mob No	Numeric	Contact number	
Email ID	Text		
Position	Text	Job description of the employee	Drop down menu
Salary	Numeric	Amount of monthly pay received by the employee	
Emergency contact details			
Full name	Text		
Address	Text		
Mob No.	Numeric		
Email ID	Text		
Relation	Text	How the employee is related to this contact.	

New patient

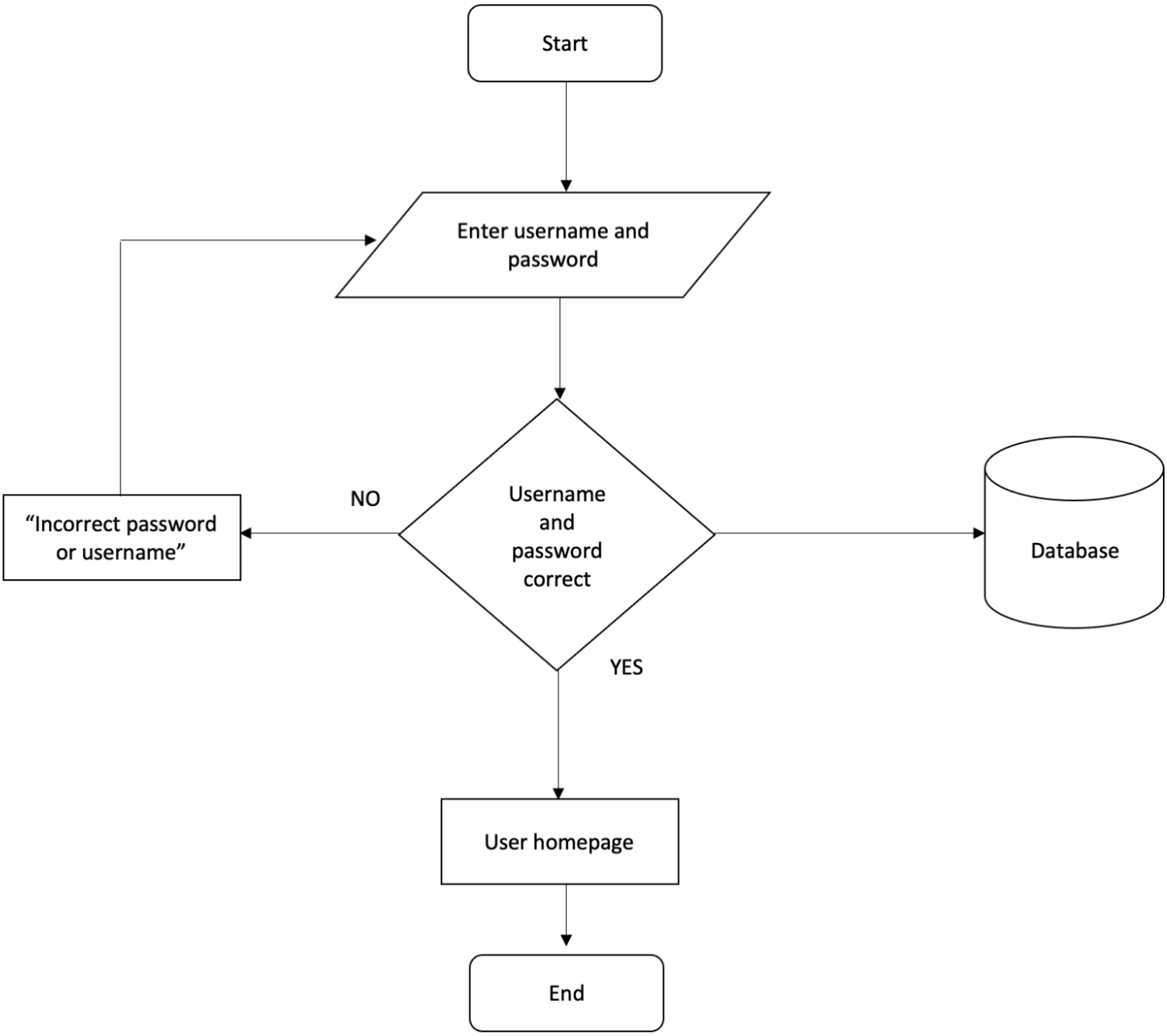
Field name	Data type	Description	Additional information
Full name	text	Name of the new patient	
Age	Numeric	Current age of patient	
Sex	Text		Option button
Address	Text	Patients residence location	
Mob No	Numeric	Contact number	
Email ID	Text		
Medical history	Text	Patients past ailments regarding dentistry or any that might relate to dentistry	
Teeth and gums appearance	Text	The physical appearance of the patient that the doctor will note down after a visual examination	
Dental assessment	Text	Condition of tooth/teeth after visual examination	Table

Structure diagram

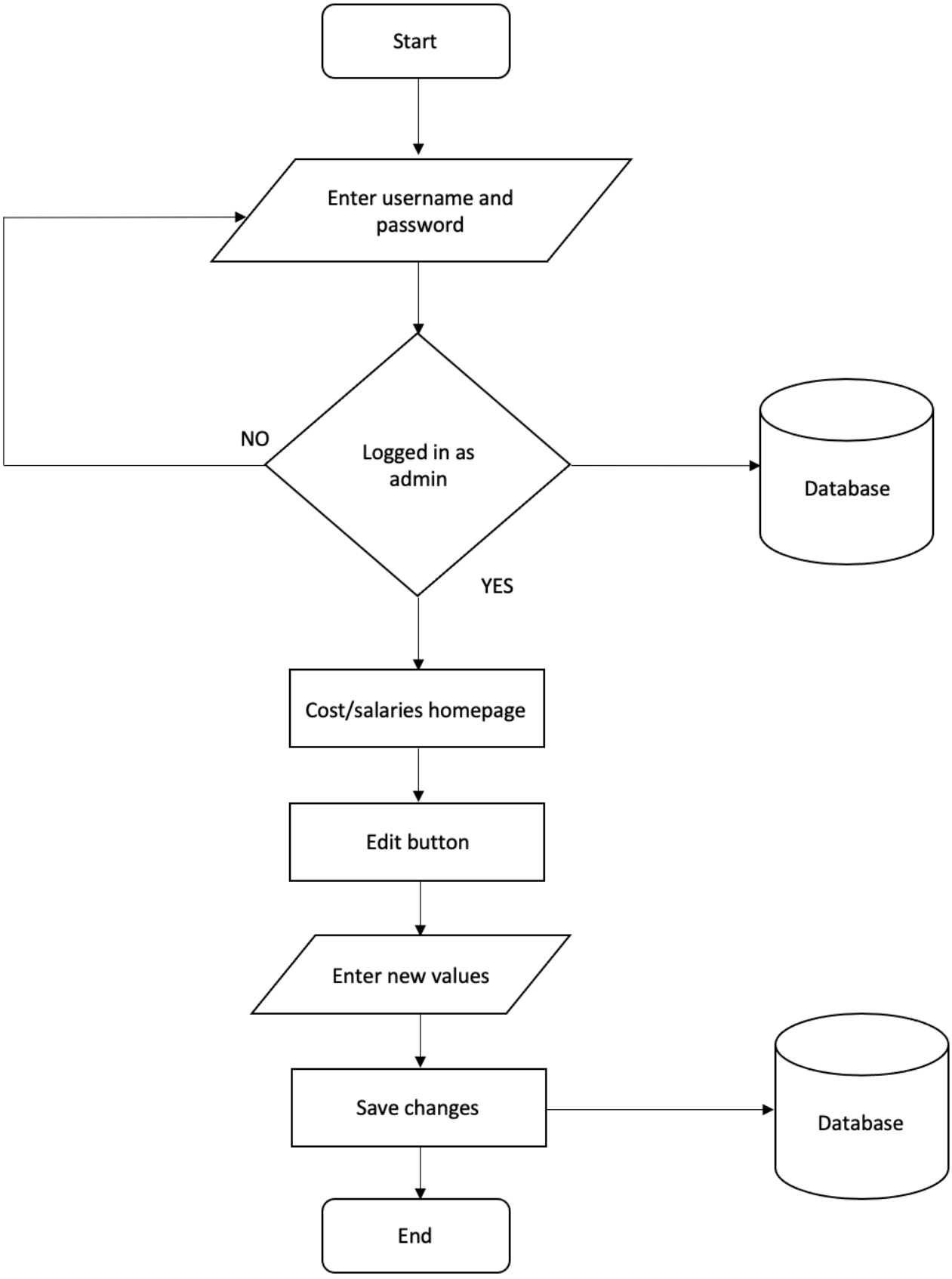


Flowcharts

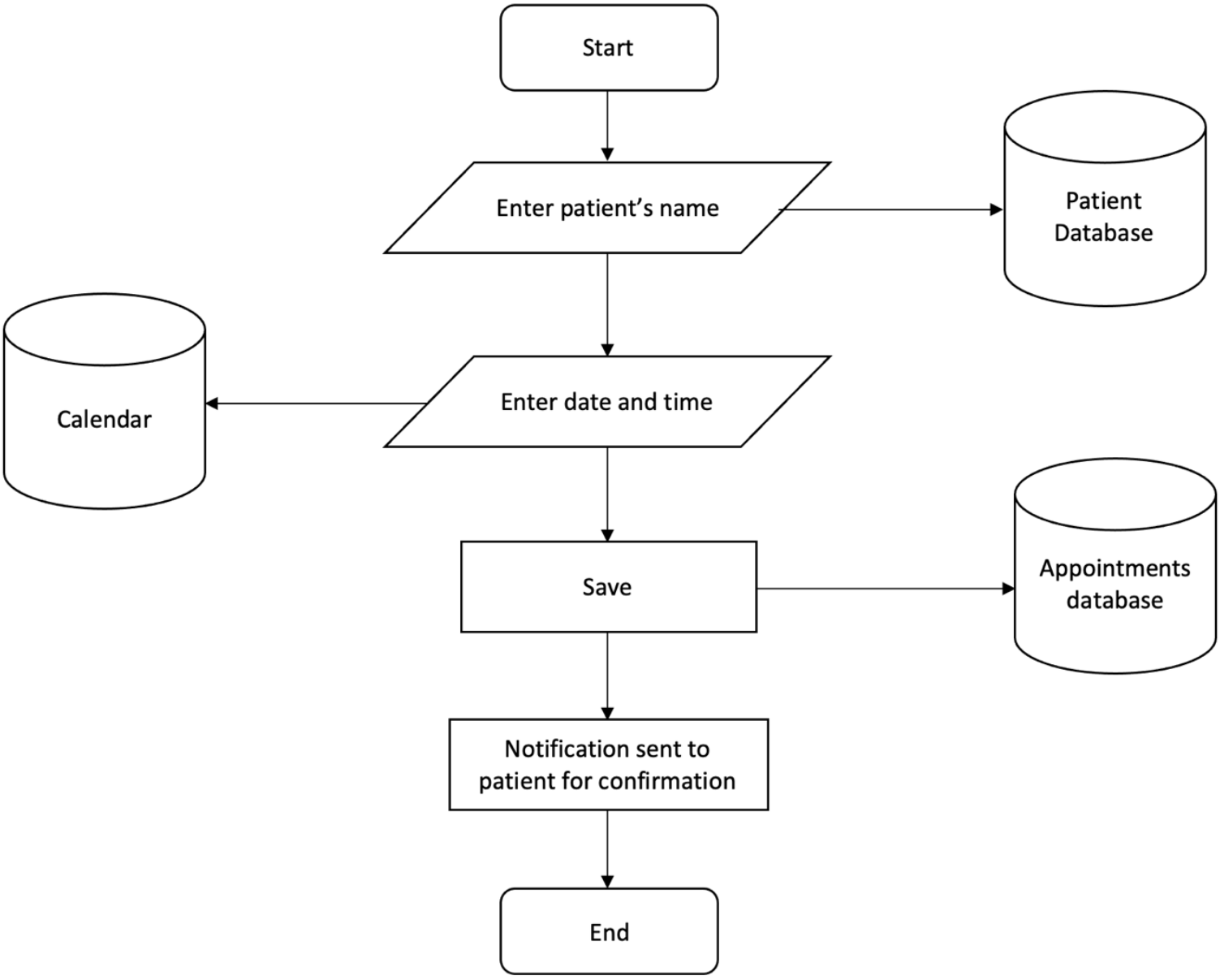
Login



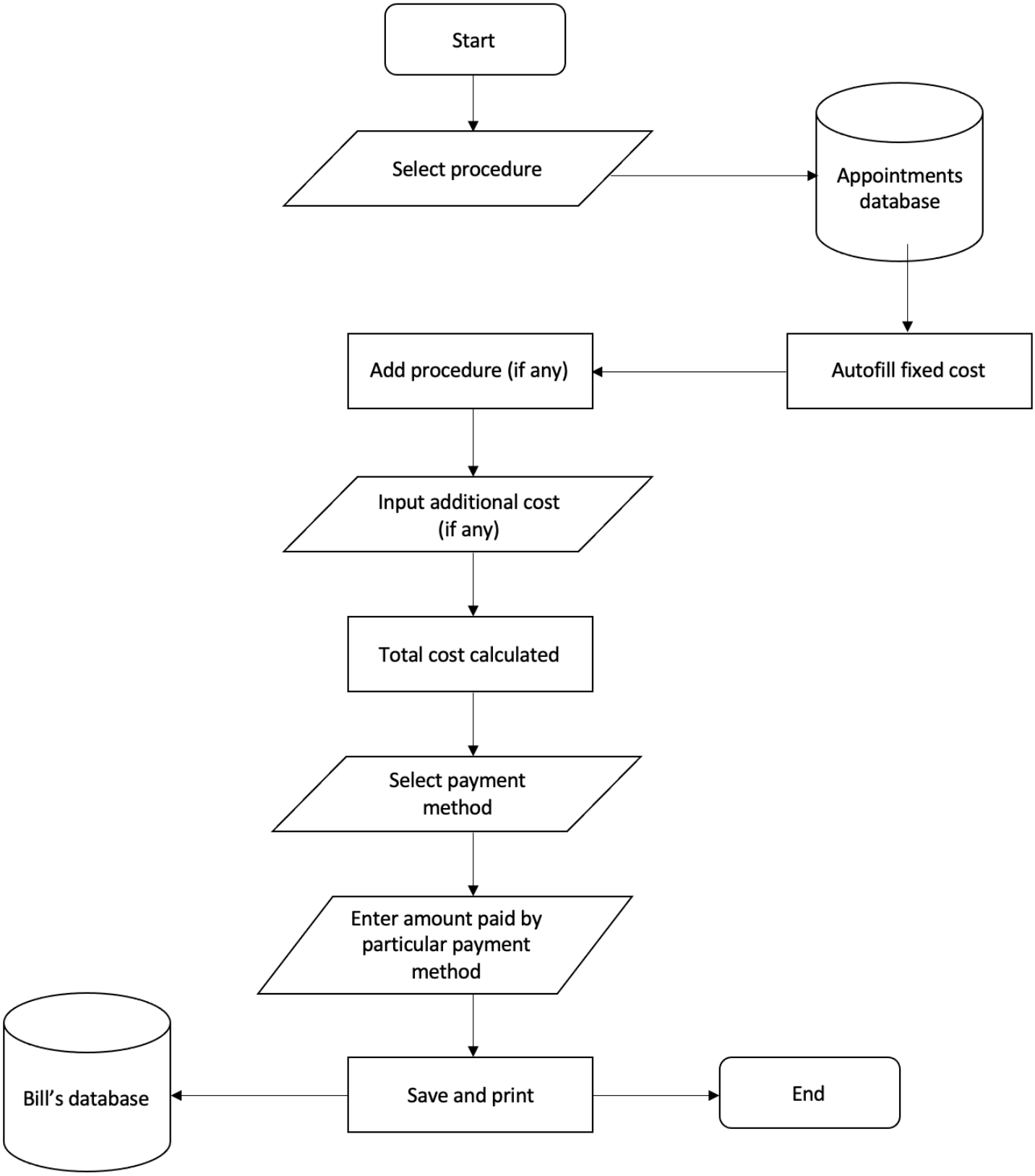
Editing procedures/salaries



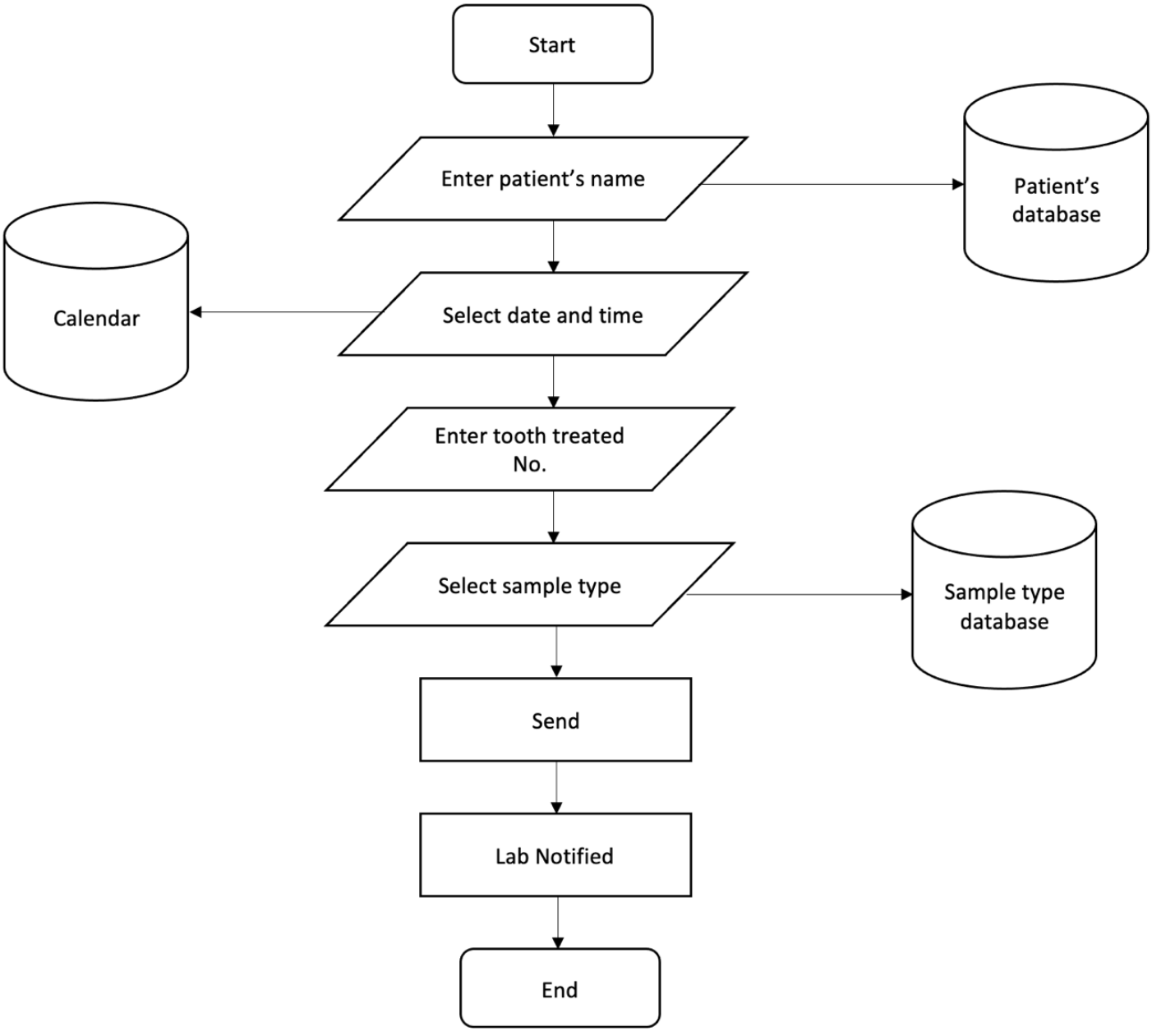
Appointment scheduling



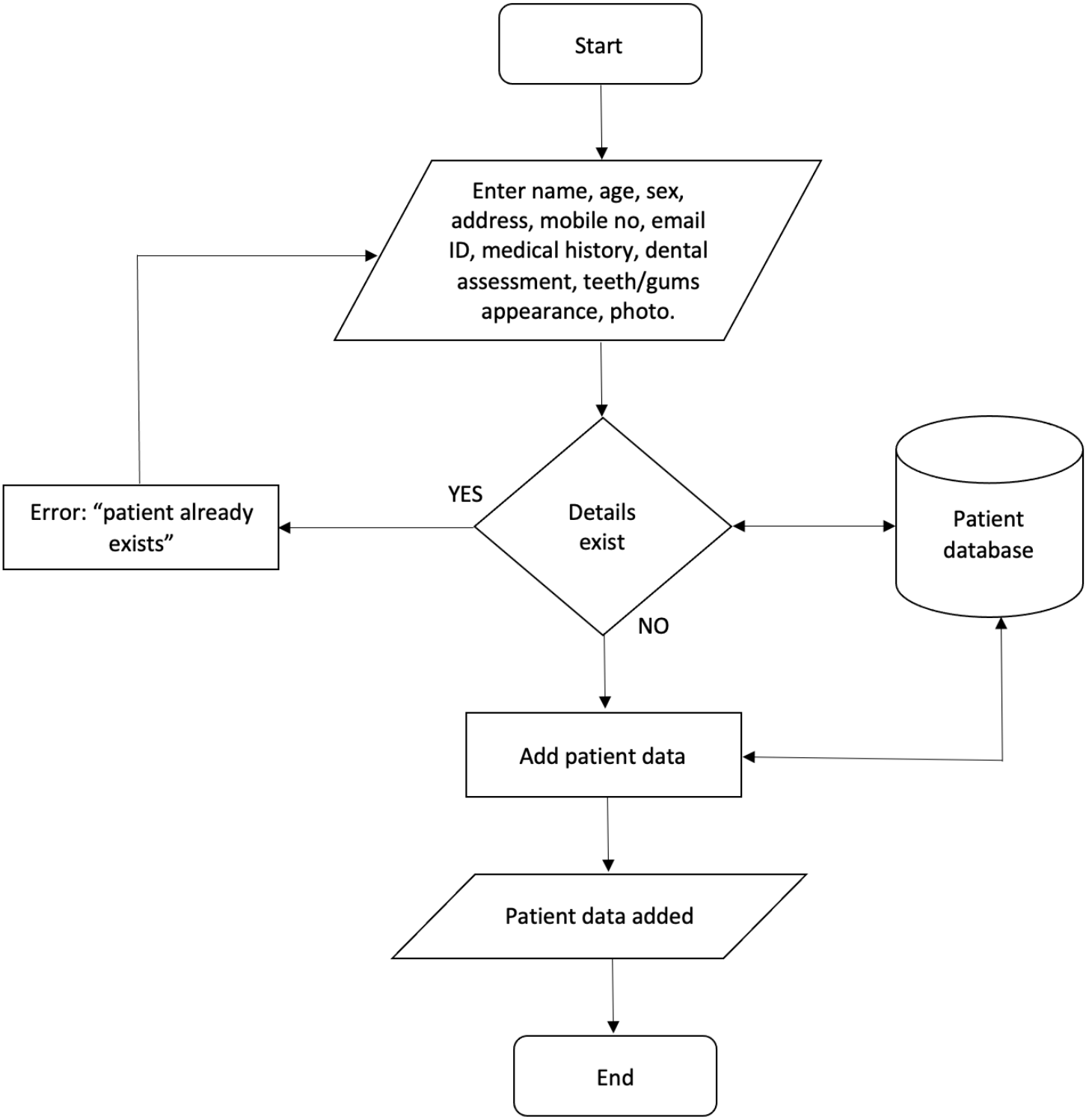
Patient bills



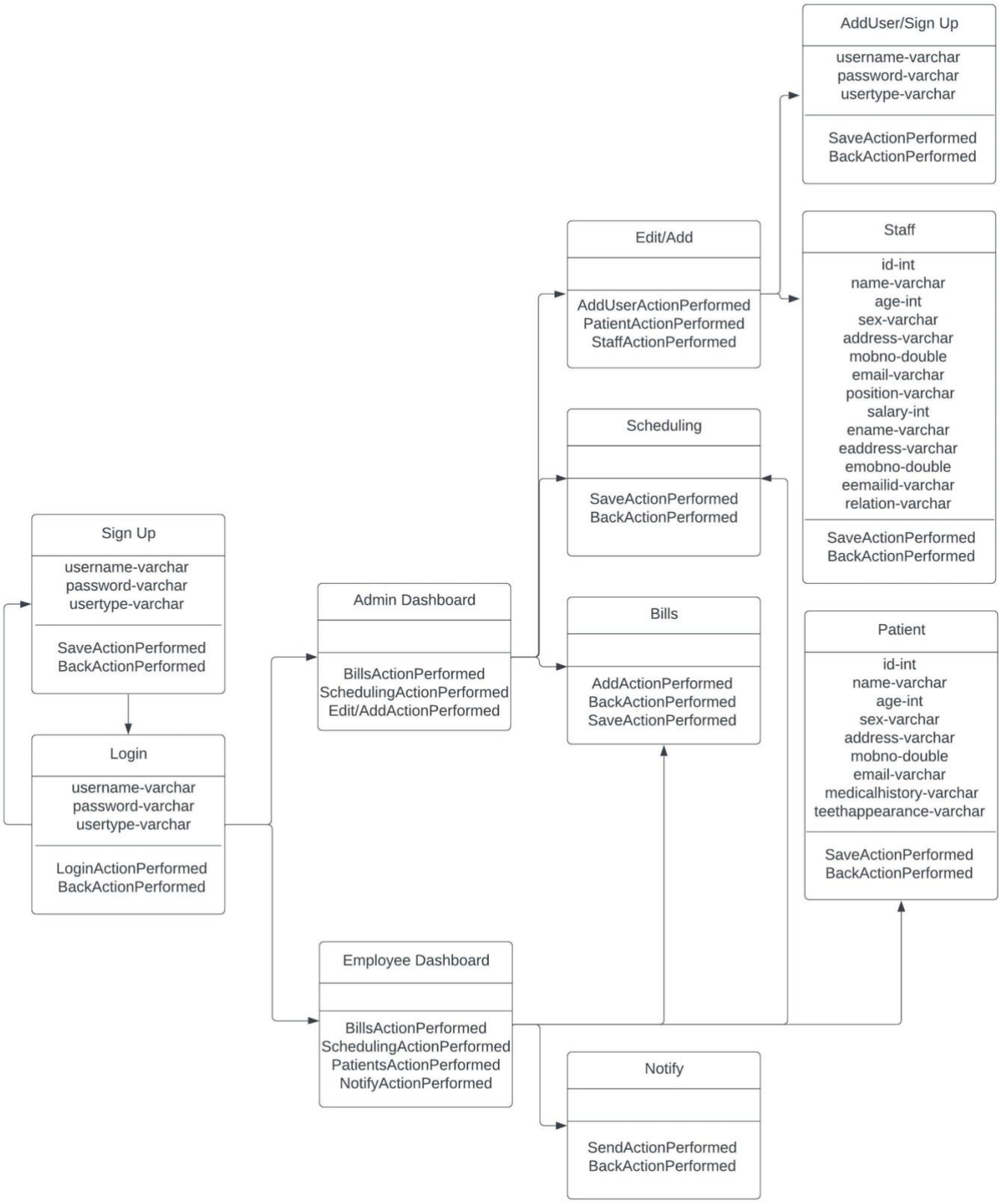
Lab scheduling



New patient


Start
Enter name, age, sex, address, mobile no, email ID, medical history, dental assessment, teeth/gums appearance, photo.
Details exist
YES
Error: “patient already exists”
NO
Patient database
Add patient data
Patient data added
End

UML Diagram


AddUser/Sign Up
username-varchar
password-varchar
usertype-varchar
SaveActionPerformed
BackActionPerformed
Edit/Add
AddUserActionPerformed
PatientActionPerformed
StaffActionPerformed
Staff
id-int
name-varchar
age-int
sex-varchar
address-varchar
mobno-double
email-varchar
position-varchar
salary-int
ename-varchar
eaddress-varchar
emobno-double
eemailid-varchar
relation-varchar
SaveActionPerformed
BackActionPerformed
Scheduling
SaveActionPerformed
BackActionPerformed
Sign Up
username-varchar
password-varchar
usertype-varchar
SaveActionPerformed
BackActionPerformed
Admin Dashboard
BillsActionPerformed
SchedulingActionPerformed
Edit/AddActionPerformed
Bills
AddActionPerformed
BackActionPerformed
SaveActionPerformed
Patient
id-int
name-varchar
age-int
sex-varchar
address-varchar
mobno-double
email-varchar
medicalhistory-varchar
teethappearance-varchar
SaveActionPerformed
BackActionPerformed
Login
username-varchar
password-varchar
usertype-varchar
LoginActionPerformed
BackActionPerformed
Employee Dashboard
BillsActionPerformed
SchedulingActionPerformed
PatientsActionPerformed
NotifyActionPerformed
Notify
SendActionPerformed
BackActionPerformed

Pseudocodes

Login

```
if glv=1 then
        open Admin Dashboard

 else
        open Employee Dashboard
end if
```

Sign up

```
Userid=input("enter userid")
Password=input("enter password)
Re-password=input("re-enter password")
Usertype=input("select user type")
    If password=re-password then
        Output("user added")
    Else
        Output("error")
    End if
```

Notifying clients about changes

```
If(databaseRecords)= changes made then
    Output (notify client)
Else
    Output(no change in schedule)
End if
```

Editing records

```
Insert values into table
Textfields=input("enter changes")
If fields>0 then
        Output("successfully updated")
Else
        Output("data save error")
End if
```

Searching data

```
Search=input searching value
Flag=false
Loop x from 0 to length-1
        If (database)[x]= search then
                output(record found)
                flag=true
        end if
end loop
if flag=false then
        output(record not found)
```

scheduling appointments

```
PATIENT=input("enter patient name")

Patient details(database)=PATIENT
        Autofill fields
                Output(save to database)
                Output(notify patient for confirmation)
```

Test plan

Test	Method	Example
Login test (success criteria 1)	Checks if the entered login details by the user match with the data in the database and the direct the user to the correct dashboard.	UserID: admin Password:12345 User type: admin Allow user to view admin dashboard. UserID: employee Password:12345 User type: admin Error message, “incorrect userID or password”
New records (success criteria 2 and 3)	Checks if the patient/staff details are getting stored in the correct location and the correct format in the database after the form is filled.	records< database Checks if all the fields are filled in the correct column without any errors showing up
Scheduling (success criteria 4, 5, 6)	Makes sure that after the data of the patient/lab is entered in the database, the details should get filled automatically. The fields should be filled in the correct text boxes and then check the database if the appointment has been scheduled.	Patient/lab name: test1 *check if all other fields auto-fill* Date: 2nd march Time: 9:00am Save record to appointments database. *check if record saved correctly* *check if notification has been sent to the patient/lab as well as the doctor. *
Bills and financial reports (success criteria 7,8)	Check if the correct months financial report is being generated. The procedure bills should have the correct cost and the total cost being displayed should be correct.	Procedure: test1 *auto-fills correct cost from database* Additional cost: 1234 *total cost shown must be added correctly* Financial report month: march

		check if it generates the report for march itself and not any other month
Changes in scheduling (success criteria 10)	There should be changes made to the scheduling that has already been saved and stored in the database. Then check if the changes have made saved correctly to the database and they should replace the old data. After that a notification should be sent to the clients with modified changes.	Patient/lab name: test1 Date: 2nd march Time: 9:00am *change details* Patient/lab name: test1 Date: 3rd march Time: 10:00am *check if changes are saved and overwrite old data* *check if notification sent to clients about changes*
Edit costs (success criteria 11)	Changing procedure costs and salaries. Check if the changes made have been saved to the database and when a new bill is being generated the new costs input in the database are changing and the staff are being allotted the correct salary.	Change costs in database Procedure: test1 *auto-fill **new** cost entered in database* Staff salary calculated at the end of the month should be new salary inputted.
Notifying doctor (success criteria 13)	Check if the doctor gets the message that the staff are trying to deliver to her.	Select leave message Message: test 1 *check if doctor gets a notification with the message “test 1”* Select emergency *check if doctor gets an ‘SOS’ notification.