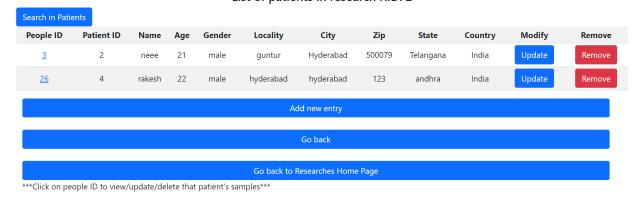# Assignment 8 Query Optimization

1) Implemented a search functionality for name (entire name) and locality columns in patients page.

By clicking on "search in patients" button the webapp takes to a new page to enter values.

List of patients in research RID: 2

Search in Patients										
People ID	**Patient ID**	**Name**	**Age**	**Gender**	**Locality**	**City**	**Zip**	**State**	**Country**	**Modify**	**Remove**
3	2	neee	21	male	guntur	Hyderabad	500079	Telangana	India	Update	Remove
26	4	rakesh	22	male	hyderabad	hyderabad	123	andhra	India	Update	Remove

Add new entry
Go back
Go back to Researches Home Page

Click on people ID to view/update/delete that patient's samples

By entering the name and locality we can look for records with those same names or same localities as the values entered.

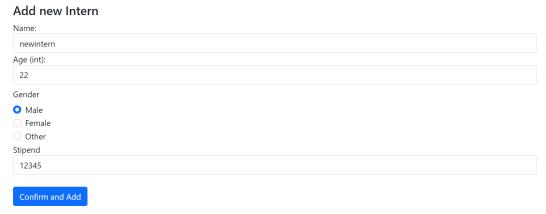### List of patients in research RID: 2

name

guntur

search										
People ID	**Patient ID**	**Name**	**Age**	**Gender**	**Locality**	**City**	**Zip**	**State**	**Country**	**Modify**	**Remove**

Add new entry
Go back
Go back to Researches Home Page

Click on people ID to view/update/delete that patient's samples

By entering locality as guntur and then clicking on search.

List of patients in research RID: 2

name

locality

search										
People ID	**Patient ID**	**Name**	**Age**	**Gender**	**Locality**	**City**	**Zip**	**State**	**Country**	**Modify**	**Remove**
3	2	neee	21	male	guntur	Hyderabad	500079	Telangana	India	Update	Remove

Add new entry
Go back
Go back to Researches Home Page

Click on people ID to view/update/delete that patient's samples

2) BY adding explain and analyse to the query the results of number of scans and loops are generated.

3) Changed the datatype from int to tinyint for columns id and stipend in the intern table. Here is a snapshot of the intern table with a record containing stipend, ids lower than 127

List of interns in research RID: 1

People ID	Intern ID	Name	Age	Gender	Stipend	Modify	Remove
29	1	ironman7017	22	male	123	Update	Remove
32	3	neeraj	22	male	64	Update	Remove
Add new entry							
Go back							
Go back to Researches Home Page							

Now if addition of a new record with value greater than 127 for stipend is attempted the webapp throws a data error stating out of range value for column stipend.
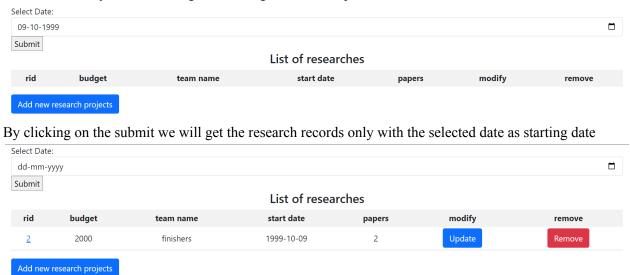
Add new Intern

Name:

newintern

Age (int):

22

Gender

⦿ Male
◯ Female
◯ Other

Stipend

12345

Confirm and Add

DataError

MySQLdb._exceptions.DataError: (1264, "Out of range value for column 'stipend' at row 1")

4) Added a column start date in the list of researches page with datatype date. By clicking on search by date and selecting the required date we get the records only with that selected date as the starting date.

List of researches

rid	budget	team name	start date	papers	modify	remove
1	353	uhuju	2012-10-02	4	Update	Remove
2	2000	finishers	1999-10-09	2	Update	Remove

Add new research projects   Search by date

Select the date by either entering or selecting from the drop down

Select Date:

| 09-10-1999 | 📅 |

Submit

List of researches

rid	budget	team name	start date	papers	modify	remove

Add new research projects

By clicking on the submit we will get the research records only with the selected date as starting date

Select Date:

| dd-mm-yyyy | 📅 |

Submit

List of researches

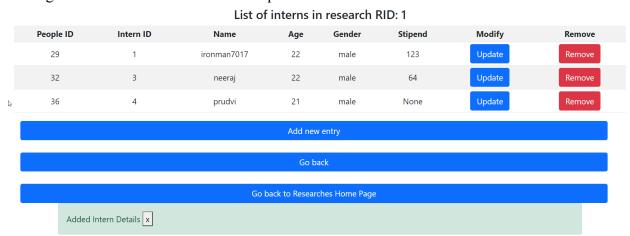| rid	budget	team name	start date	papers	modify	remove
2	2000	finishers	1999-10-09	2	Update	Remove

Add new research projects

Date format in sql : YYYY-MM-DD

5) Changed the functionality of intern page, stipend column to not required. i.e. null values are supported.

List of interns in research RID: 1

People ID	Intern ID	Name	Age	Gender	Stipend	Modify	Remove
29	1	ironman7017	22	male	123	Update	Remove
32	3	neeraj	22	male	64	Update	Remove

Add new entry

Go back

Go back to Researches Home Page

Adding new intern with null value for stipend.

List of interns in research RID: 1

People ID	Intern ID	Name	Age	Gender	Stipend	Modify	Remove
29	1	ironman7017	22	male	123	Update	Remove
32	3	neeraj	22	male	64	Update	Remove
36	4	prudvi	21	male	None	Update	Remove

Add new entry

Go back

Go back to Researches Home Page

Added Intern Details x

Added a functionality to count stipend from intern table.

By clicking on count stipend button (shown below)

List of interns in research RID: 1

People ID	Intern ID	Name	Age	Gender	Stipend	Modify	Remove
29	1	ironman7017	22	male	123	Update	Remove
32	3	neeraj	22	male	64	Update	Remove
36	4	prudvi	21	male	None	Update	Remove

Add new entry

Go back

Count stipend

Go back to Researches Home Page

The webapp takes to a new page where the count is displayed ignoring the records which have stipend values as null

Count
{'count(intern.stipend)': 2}

Go back!