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COVID-19 Dashboard

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Abstract: Applying a digital strategy is proven to be one way to reduce the infection rate of COVID-19. As a fundamental part of it, database is capable to create a data repository to predict uncertain impacts of the pandemic.

The research proposed a database design for project C-Beta that emphasized on creating an ideal system to record and monitor the daily health condition of people with COVID-19. Mainly, the research adopted Connolly and begg principles of Database Software Development Life Cycle. As a result, the database design activities produced blueprints in the forms of data dictionary, ERD, and user views.

The database design delivered in the research included with several features namely user verification, restricted research membership, and flexibility in survey creation. Based on analysis and design phase, C-Beta provides a method to collect data for COVID-19 clinical study. Researchers who utilize C-Beta is able to manage multiple surveys and extract all collected records at the same time.

Keywords: **Webpage, Data Base, Server, Data repository, Clinical study**

I. INTRODUCTION

1) The burden the COVID-19 novel coronavirus has placed on the world is enormous.
2) There's a great thirst for information and clarity.so that everyone can better understand how the outbreak impacts the world and their region.
3) We see that as a community effort. We invite the global community of engineers and data scientists to add data to this public dashboard that will cover not just the direct impact of the coronavirus on public health, but other aspect of society as well.
4) We want to help everyone better understand the impact of COVID-19 anywhere around the world.

II. PROBLEM STATEMENT

1) We are not able to see the data of covid-19 statewise. So, many people are facing problem to know the data.
2) Many people are not aware of number of cases .From graph they can see how rapidly cases are increasing.

III. OBJECTIVES

1) Creating a web interface for Users to see live covid updates of the country. To create a web interface which stores the data of the last seven days and displays it in an organized manner.
2) Displaying the state wise covid19 data with various types of graphs to visualize the data.
3) The point of the organization will be to give individuals the details identified with COVID19 and educate them with the data from the specialists and other authority assets so they can forestall themselves structure the pandemic circumstance.

IV. IMPLEMENTION

1) Our project proposes to build a dashboard which help us to check the number of covid cases in India
2) With pie chart and graph we show how many cases are increased or decreased everyday
3) Everyday covid data is updated in the website

V. METHODOLOGY

A. *Front-End And Back-End Tool Details*
1) Hyper Text Mark-up Language
2) Cascading Style Sheet
3) JavaScript

B. Back-End Tool
1) Django
2) Python
3) SQL Server

VI. SOFTWARE DESCRIPTION

A. Front End Design

1) *HTML (HyperText Mark-up Language):* HTML is a standard mark-up language for creating web pages and web applications with Cascading Style Sheet (CSS) and JavaScript, it forms a triad of corner stone technologies of the World Wide Web.

2) *CSS (Cascading Style Sheet):* CSS is a style sheet language used for describing the presentation of a document written in a mark-up language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

3) *Django:* Django is Python-based free and open-source web framework, which follows the model-template-view (MVT) architectural pattern. In Django, Python is used throughout, even for settings files and data models.

B. Screen Layout Design

1) *HTML <form> TAG:* The HTML <form> element represents a document section that contains interactive controls to submit information to a web server. It is possible to use the :valid and :invalid CSS pseudo-classes to style a <form>element. The HTTP method that the browser uses to submit the form.

2) *Post:* Corresponds to the HTTP POST method; form data are included in the body of the form and sent to the server.

3) *Get*: Corresponds to the HTTP GET method; form data is appended to the action attribute URI with a '?' as separator, and the resulting URI is sent to the server. This method is used when the form has no side-effects and contains only ASCII characters. This value can be overridden by a form method attribute on a <button> or <input> element.

4) *Action:* The URI of a program that processes the form information. This value can be overridden by a form action attribute on a <button> or <input> element.

5) *HTML <input> TAG:* The HTML <input> element is used to create interactive controls for web-based forms in order to accept data from the user. An <input> work varies considerably depending on the value of its type attribute; hence the different types are covered in their own separate reference pages. If this attribute is not specified, the default type adopted type is text.

C. Connectivity To Mysql Database

We need our MySQL server address (if the database is on the same server as the web server it will most likely be localhost or 127.0.0.1), username, password and database name. The connectivity is done using mysql-connector-python. The connection is done each time when the admin wants to retrieve anything from the database, or add something to the database. All in all, whenever the admin wants to perform an operation wherein the database is involved, the connection is required. The below code must be written inside the file Settings.py.

```
 DATABASES = {
'default': {
'ENGINE': 'django.db.backends.mysql',
'NAME': 'dbms_project',
'HOST': '127.0.0.1',
 'PORT': '3306',
'USER': 'root',
'PASSWORD': '123456789',
}
}
```

VII. MAJOR MODULES

A. Index.html

This is the main page of the project . Where a user can see the last updated data of Covid19 of India . The page has various data like total active cases, total death ,total infected and total recovered cases .

Not only the total data can be seen but also the change since 24 hrs can be seen . The data is taken from the Ministry of Health and Family welfare site . In this page you can also see the state wise covid19 update .

B.   India.html / State.html

In this page a user can see the covid update of a particular state by typing the state name in the search bar displayed in the Index.html page. After the user searches for a state which is a valid name then they will be redirected to this page in which they can see the record of past seven days with various user friendly graphs and a tabular arrangement of covid data of the state .
If the user clicks on covid India on the index page then they will be redirected to India.html page where they can see the detailed information of past seven days with graphs .

C.   Awareness.html

In this page various awareness is mentioned related to covid 19. Things to do to control the spread of the virus . How to protect yourself from the virus and all sorts of safety methods are mentioned .

VIII.   RESULTS

It will provide the details of state wise data of covid 19 and awareness among the users
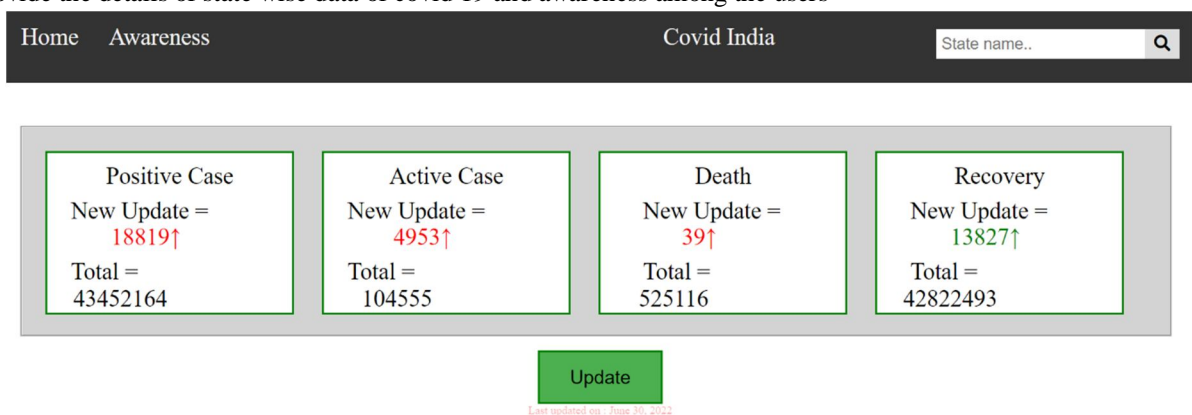
COVID-19 Statewise Status

S.No.	Name of State/UT	Infected Case		Active Cases		Cured/Discharged		Death	
		Total	Change since yesterday	Total	Change since yesterday	Total	Change since yesterday	Total	Change since yesterday
1	Andaman and Nicobar Islands	10157	8 ↑	42	4 ↑	9986	4 ↑	129	0
2	Andhra Pradesh	2321379	172 ↑	755	97 ↑	2305893	75 ↑	14731	0
3	Arunachal Pradesh	64518	0 ↑	4	2 ↓	64218	2 ↑	296	0
4	Assam	724788	73 ↑	395	33 ↑	716405	40 ↑	7988	0
5	Bihar	832581	178 ↑	934	48 ↑	819388	130 ↑	12259	0
6	Chandigarh	93785	85 ↑	568	49 ↑	92052	36 ↑	1165	0
7	Chhattisgarh	1154179	126 ↑	861	10 ↑	1139282	116 ↑	14036	0
8	Dadra and Nagar Haveli and Daman and Diu	11474	4 ↑	14	1 ↓	11456	5 ↑	4	0

No	State								
9	Delhi	1934009	1109 ↑	4325	157 ↓	1903423	1265 ↑	26261	1 ↑
10	Goa	248540	201 ↑	982	50 ↑	243720	151 ↑	3838	0
11	Gujarat	1231483	529 ↑	2914	121 ↑	1217623	408 ↑	10946	0
12	Haryana	1015501	620 ↑	2655	6 ↑	1002222	612 ↑	10624	2 ↑
13	Himachal Pradesh	286061	105 ↑	507	66 ↑	281413	39 ↑	4141	0
14	Jammu and Kashmir	455006	73 ↑	447	42 ↑	449803	31 ↑	4756	0
15	Jharkhand	435858	44 ↑	284	5 ↑	430254	39 ↑	5320	0
16	Karnataka	3968365	1945 ↑	5707	789 ↑	3922541	1154 ↑	40117	2 ↑
17	Kerala***	6634722	4459 ↑	28860	774 ↑	6535869	3668 ↑	69993	17 ↑
18	Ladakh	28411	22 ↑	78	11 ↑	28105	11 ↑	228	0
19	Lakshadweep	11408	1 ↑	3	1 ↑	11353	0 ↑	52	0
19	Lakshadweep	11408	1 ↑	3	1 ↑	11353	0 ↑	52	0
20	Madhya Pradesh	1044243	93 ↑	490	36 ↑	1033012	57 ↑	10741	0
21	Maharashtra	7972474	3957 ↑	25735	254 ↑	7798817	3696 ↑	147922	7 ↑
22	Manipur	137266	6 ↑	18	2 ↑	135128	4 ↑	2120	0
23	Meghalaya	93947	28 ↑	65	24 ↑	92288	4 ↑	1594	0
24	Mizoram	229048	39 ↑	261	30 ↑	228084	9 ↑	703	0
25	Nagaland	35507	0 ↑	2	1 ↓	34744	1 ↑	761	0
26	Odisha	1289602	161 ↑	627	106 ↑	1279849	55 ↑	9126	0
27	Puducherry	166438	80 ↑	304	57 ↑	164172	23 ↑	1962	0
28	Punjab	762755	223 ↑	1079	95 ↑	743903	125 ↑	17773	3 ↑
29	Rajasthan	1288328	140 ↑	939	35 ↑	1277825	105 ↑	9564	0
30	Sikkim	39224	6 ↑	26	3 ↑	38744	2 ↑	454	1 ↑
31	Tamil Nadu	3473116	1827 ↑	10033	1063 ↑	3425057	764 ↑	38026	0
32	Telangana	800476	485 ↑	4421	249 ↑	791944	236 ↑	4111	0
33	Tripura	100901	2 ↑	7	2 ↑	99971	0 ↑	923	0
34	Uttarakhand	438663	48 ↑	787	19 ↑	430180	29 ↑	7696	0
35	Uttar Pradesh	2090050	546 ↑	3541	93 ↓	2062971	635 ↑	23538	4 ↑
36	West Bengal	2027901	1424 ↑	5885	1126 ↑	2000798	296 ↑	21218	2 ↑

IX. CONCLUSION

The volume of data increases dramatically over time Especially data generated on global pandemic caused by covid 19.such a volume of data requiring utilizing big data analytics tools along with AI techniques to make sense of pandemic and control its spread in a timely manner .finally we highlighted and discussed a number of further research and application to assist stakeholder such as government , MoHs , hospitals,, patients and responsible authorities to make decisions and predict the future .. These challenges include healthcare data security and patient privacy issues.

X. ACKNOWLEDGEMENT

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[1] Ministry of health and family welfare
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