**COVID 19 ANALYSIS**

**L43-L44 Math Lab**

**Project Report**

**Submitted by**

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**Covid 19 Analysis**

This document illustrates the Report of my Covid 19 Analysis Application. The report encapsulates the essence of the processes and activities that are described and performed in our project. The Covid-19 Analysis project gives you the summary about various variations of Covid-19 with respect to the time. The data displayed/used out in the application has been analyzed and seen-through properly. It provides facilities relating to the variation of Time VS Deaths graph, Time VS Tests graph, Time VS Confirmed graph, Time VS Recover graph.

Beyond the existing expectations of a covid analysis system, the project also aims to include the Blog tab where the user gets to read the latest news and important articles about the Covid-19.The project has an open mind to updates, therefore the data of the graphs is fetched from various websites online which helps in attaining accurate figures. The application of the project was executed using RStudio. The model created has been tested of all its features.

The project is also designed to be human-computer interactive, therefore being easy to access, simple and useful. The results therefore, are intended to enhance the data in statistical format of various variations.

|  |
| --- |
| *“A technology focusing on the interaction between user interface and the computer portal should be simple, accessible and useful.”* |

ACKNOWLEDGEMENT

*We would like to express my special thanks of gratitude to our teacher, sir Jaganathan B, who gave the golden opportunity to do this wonderful project on the topic “Covid-19 Analysis Application”, which also helped me in doing a lot of Research and I came to know about so many new things I am really thankful to them.*  
*Secondly, we would also like to thank other people who were directly or indirectly related to the project and who helped us a lot in finalizing this project within the limited time frame.*

INTRODUCTION

The World Health Organisation (WHO) has declared the coronavirus disease 2019 (COVID-19) a pandemic. A global coordinated effort is needed to stop the further spread of the virus. On 31 December 2019, a cluster of cases of pneumonia of unknown cause, in the city of Wuhan, Hubei province in China, was reported to the World Health Organisation. In January 2020, a previously unknown new virus was identified, subsequently named the 2019 novel coronavirus, and samples obtained from cases and analysis of the virus’ genetics indicated that this was the cause of the outbreak. This novel coronavirus was named Coronavirus Disease 2019 (COVID-19) by WHO in February 2020.The virus is referred to as SARS-CoV-2 and the associated disease is COVID-19.

The Application Covid-19 Analysis helps the user to detect a particular pattern in increase or decrease of the variations of covid-19 under various factors such as number of deaths, recovered cases, test carried out and confirmed cases with the help of representing the information in statistical format i.e., inform of graphs of all the countries around the globe.

It also helps the user to read the important and the latest news articles related to the Covid-19 using the Blog tab.

OBJECTIVES

To summarize, the goals and objectives that we’ve studied about the Covid-19 Analysis Application, are-

 Represent the data in a graph form

 Reduce time consumption

 Statistical representation of data

 All system managements are automated

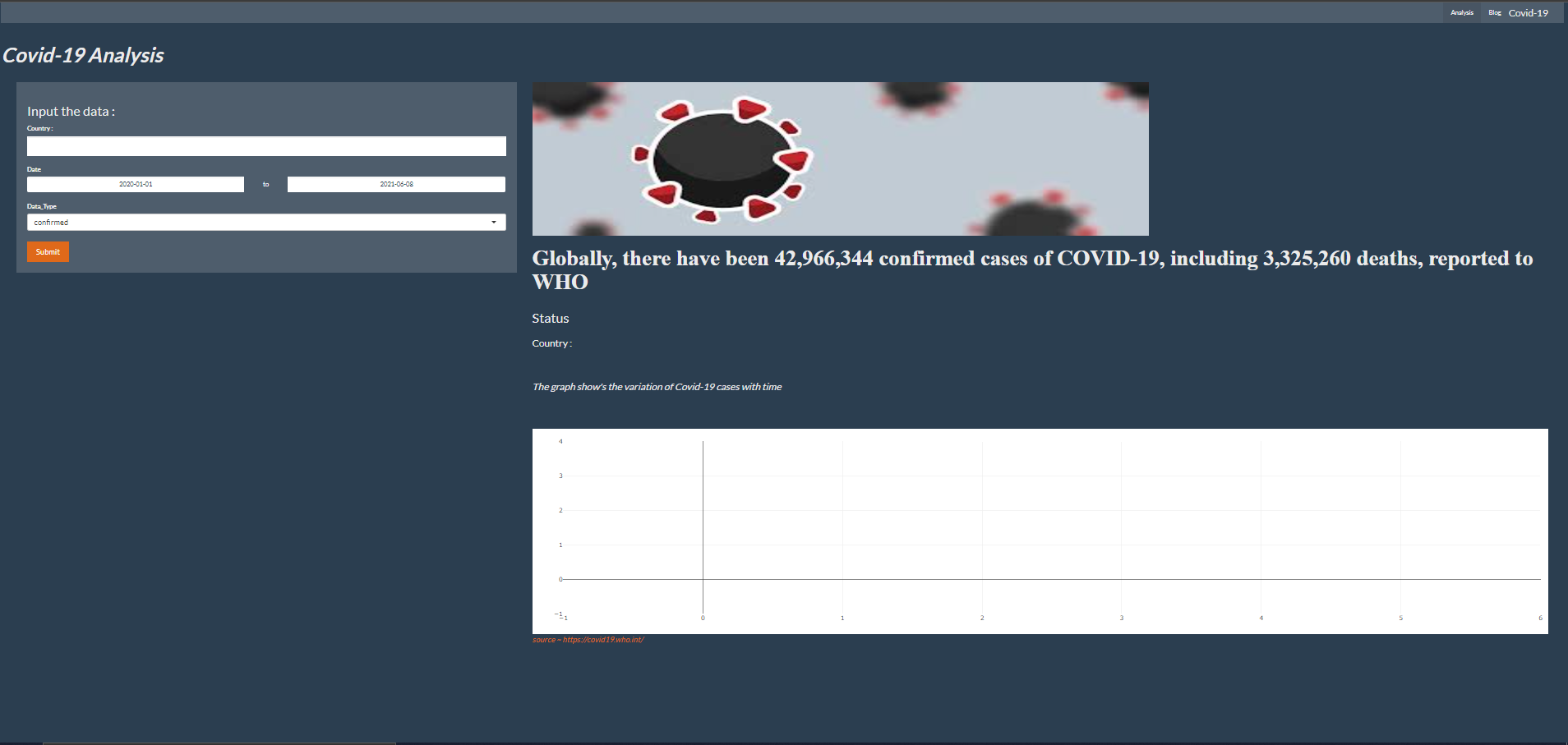
 Access of the information around the globe

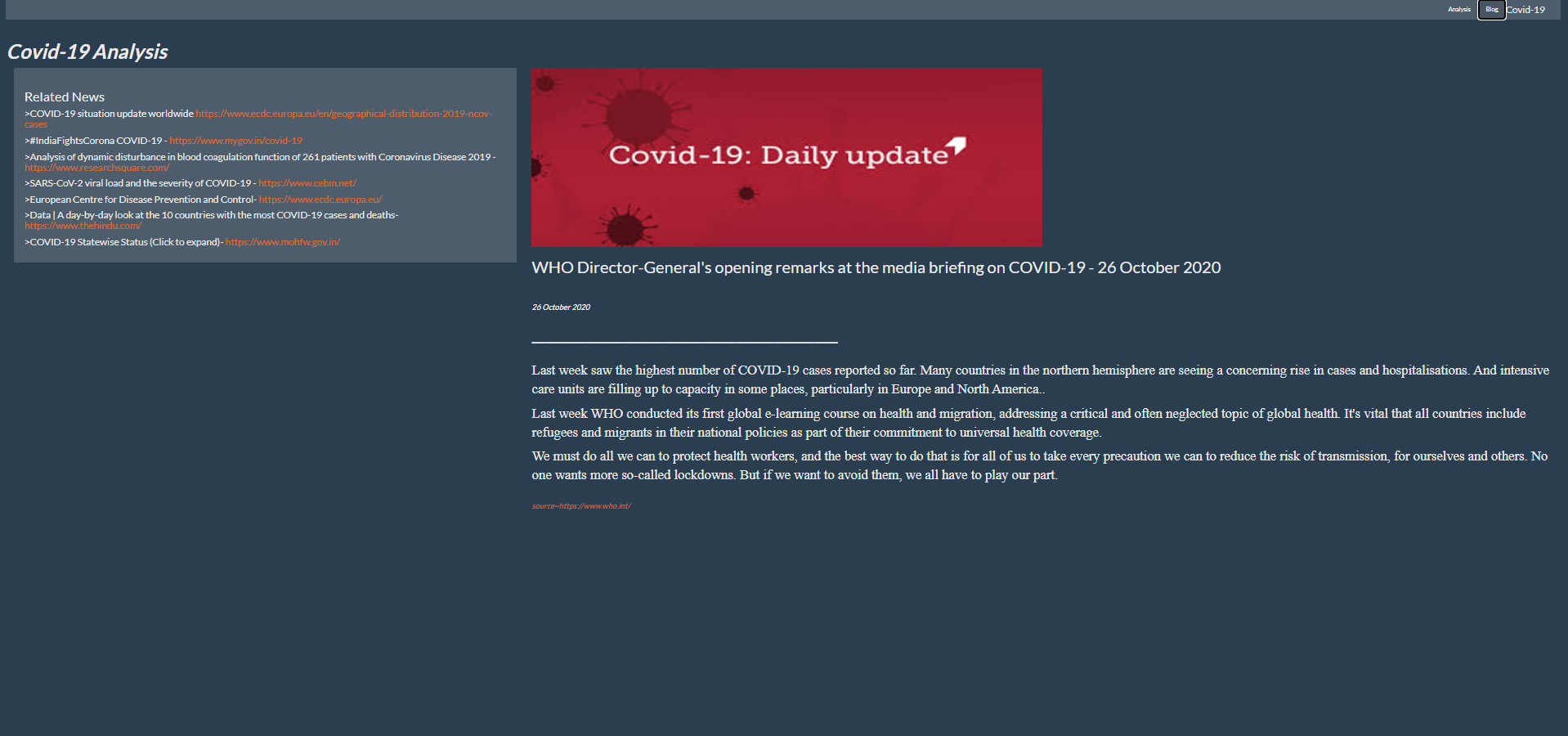
 No paper work requirement

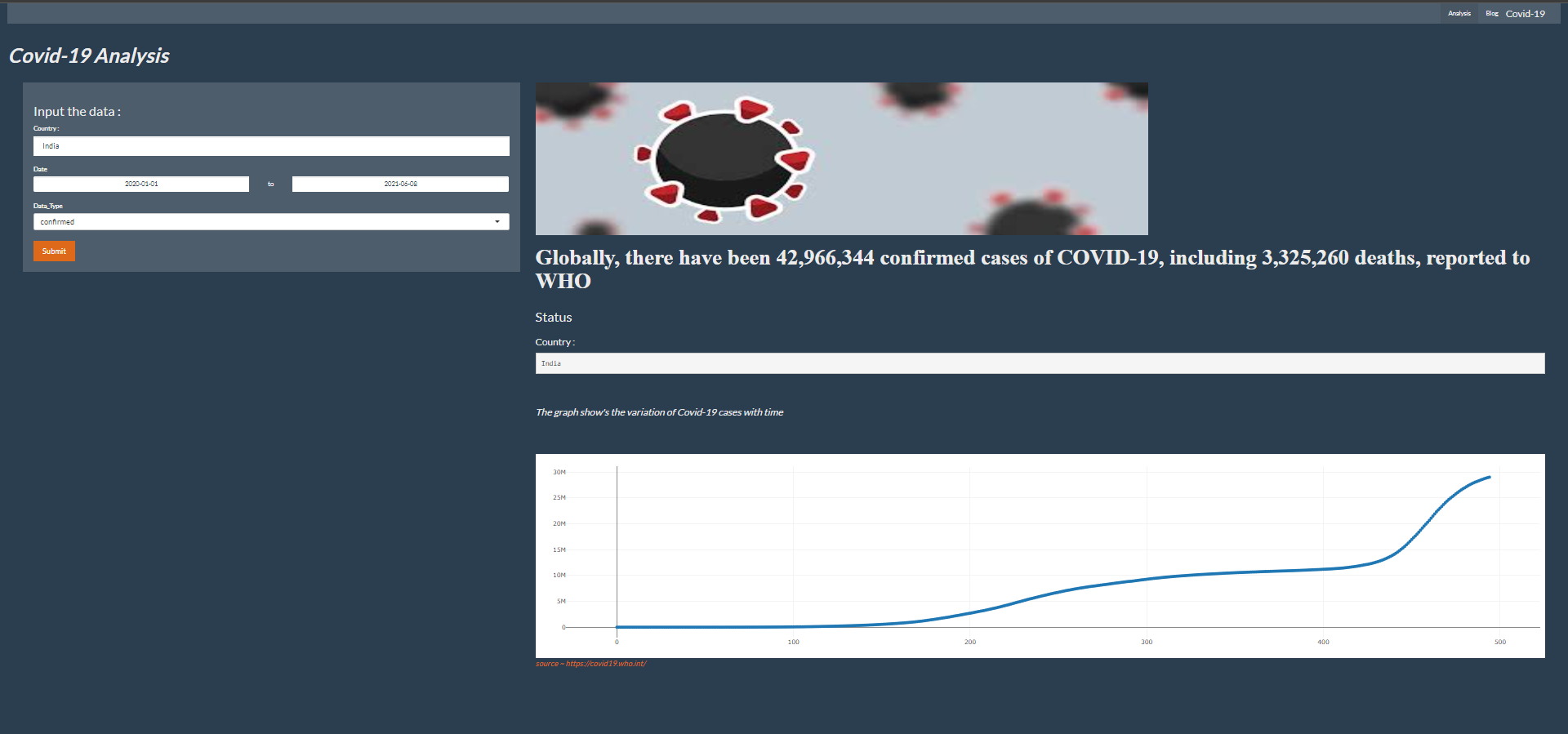
NEED AND IMPORTANCE

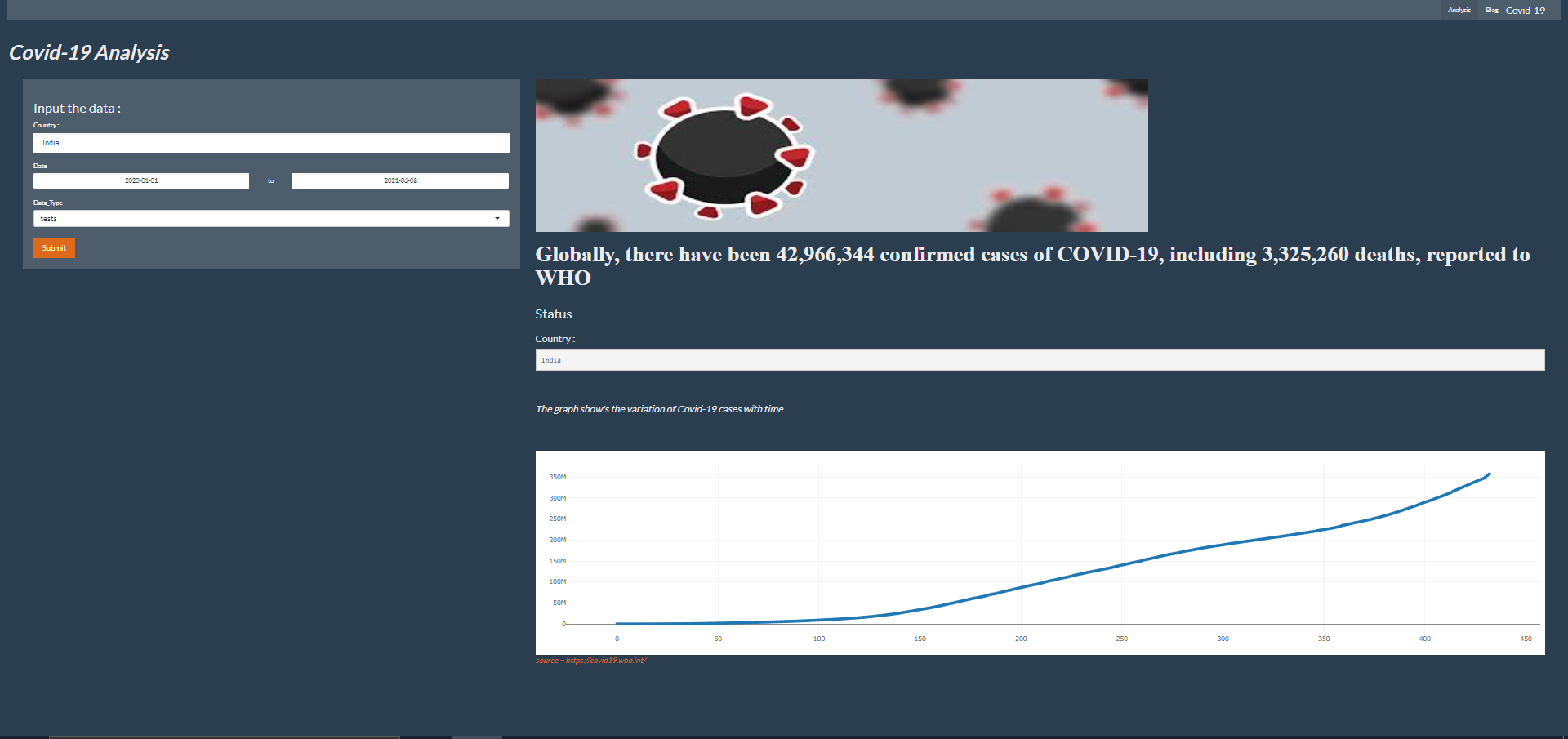
The statistical representation of data helps to study large chunks of data together at one time which reduces time consumption and also the easiness of reading the data is increased. Also its capable of representing the data of not only one country but of various other countries too so it makes the collection and representation at one point.

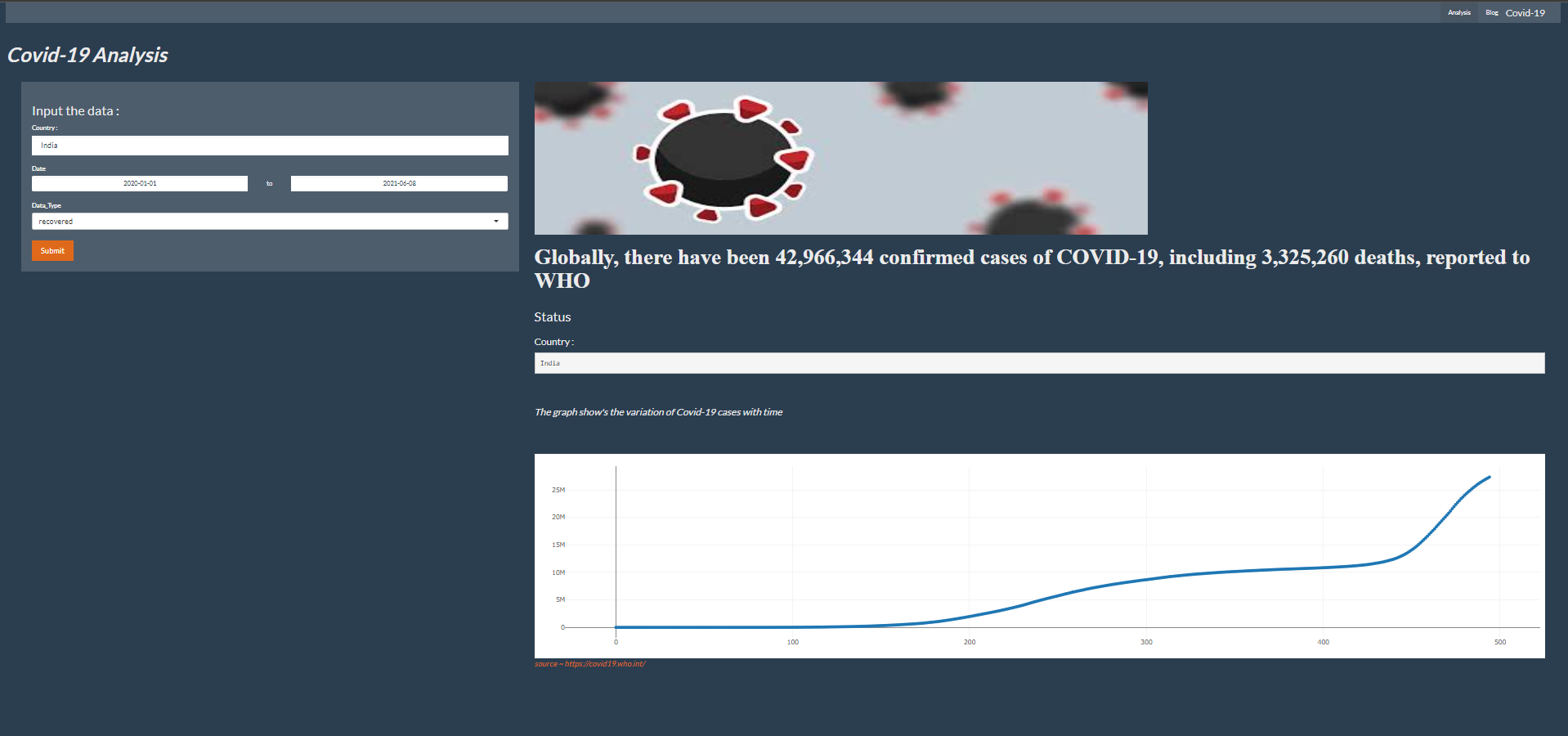
SCREENSHOTS OF THE APPLICATION

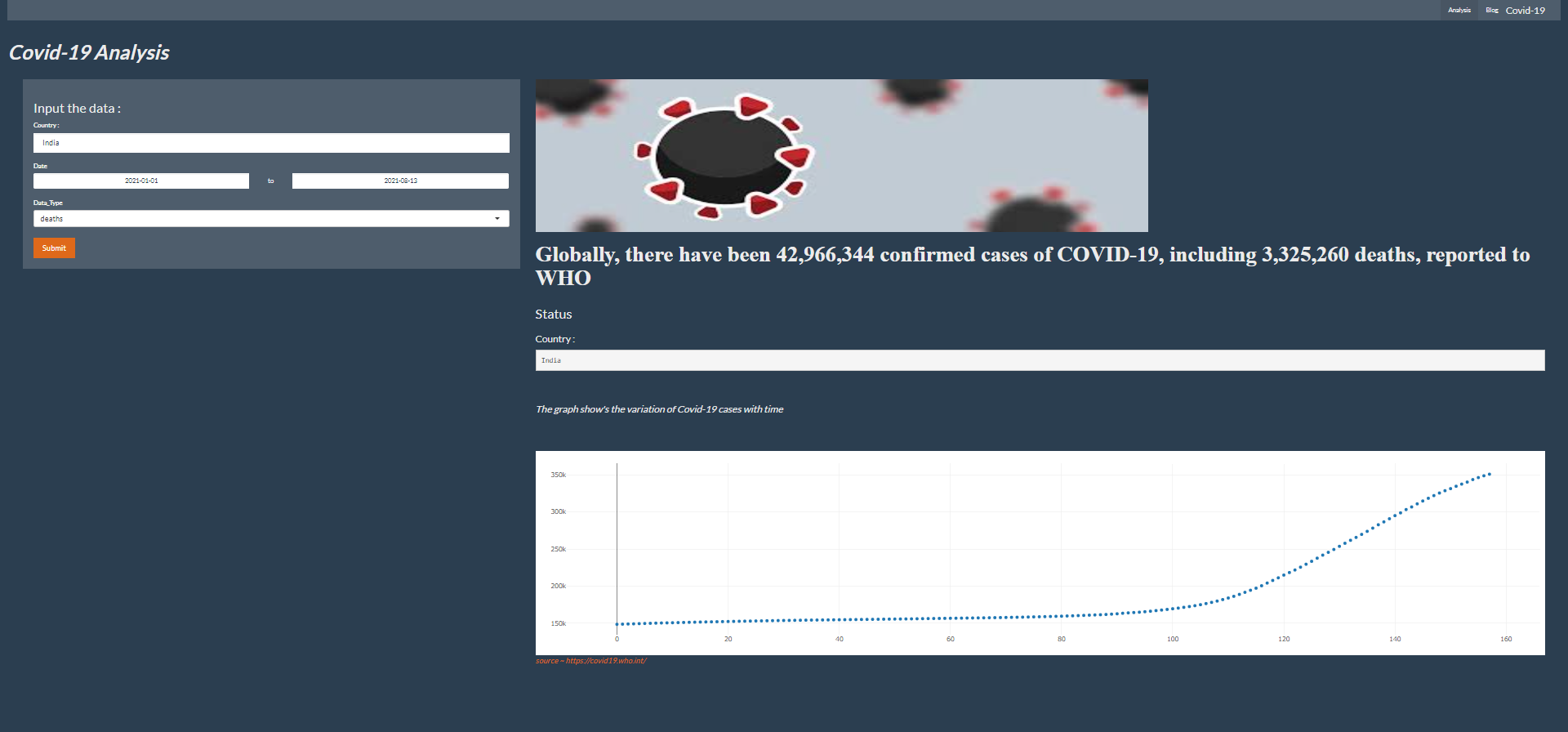












CONCLUSION

The project successfully displays the graph of variation of Covid-19 VS Time and also helps to make the study of the increasing/decreasing values with the help of statistical representation as well as it even displays the various latest news articles and blogs regarding the Covid-19 Analysis.

APPENDIX/CODE

library(shiny)

library(shinythemes)

library (COVID19)

library(plotly)

ui <- fluidPage(theme = shinytheme("superhero"),

tags$head(

tags$style(HTML("

.navbar .navbar-nav {float: right}

.navbar .navbar-header {float: right}

"))

),

navbarPage(

"Covid-19",

header = h1(em(strong("Covid-19 Analysis"))),

tabPanel("Analysis",

br(),

sidebarPanel(

tags$h3("Input the data : "),

textInput("country",label = "Country : ",""),

dateRangeInput("range",label = "Date",start="2020-01-01"),

selectInput("type",label = "Data\_Type",choices = c("confirmed", "tests", "recovered", "deaths")),

actionButton("submitbutton","Submit",class= "btn btn-primary")

), # sidebarPanel

mainPanel(

img(src = "data:image/jpeg;base64,/ =",height=300,width=1200)

h2(strong("Globally, there have been 42,966,344 confirmed cases of COVID-19, including 3,325,260 deaths, reported to WHO", ),style = "font-family: 'times'; font-size: 32pt "),

tags$label(h3('Status')),

h4("Country :"),

verbatimTextOutput("txtout"),

HTML("<br><br><h4><em>The graph show's the variation of Covid-19 cases with time</em></h4><br><br>"),

br(),

plotlyOutput("covid19plot"),

a(em("source ~ https://covid19.who.int/"))

) # mainPanel

), # ANALYSIS

tabPanel(

"Blog",

sidebarLayout(

sidebarPanel(

h3("Related News"),

h4(">COVID-19 situation update worldwide",a("https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases")),

h4(">#IndiaFightsCorona COVID-19 -",a("https://www.mygov.in/covid-19")),

h4(">Analysis of dynamic disturbance in blood coagulation function of 261 patients with Coronavirus Disease 2019 - ",a("https://www.researchsquare.com/")),

h4(">SARS-CoV-2 viral load and the severity of COVID-19 -",a("https://www.cebm.net/")),

h4(">European Centre for Disease Prevention and Control-",a("https://www.ecdc.europa.eu/")),

h4(">Data | A day-by-day look at the 10 countries with the most COVID-19 cases and deaths-",a("https://www.thehindu.com/")),

h4(">COVID-19 Statewise Status (Click to expand)-",a("https://www.mohfw.gov.in/")) ),

mainPanel(

img(src="https://encrypted-tbn0.gstatic.com/images?q=tbn%3AANd9GcSaIxQEtLpaavHXCT8MQAy-cLgUqRo6Ofw4lg&usqp=CAU",height=350,width=1000),

h2("WHO Director-General's opening remarks at the media briefing on COVID-19 - 26 October 2020"),

br(),

br(),

a(em("26 October 2020",style = "color:white")),

h1("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"),

br(),

p("Last week saw the highest number of COVID-19 cases reported so far. Many countries in the northern hemisphere are seeing a concerning rise in cases and hospitalisations. And intensive care units are filling up to capacity in some places, particularly in Europe and North America..", style = "font-family: 'times'; font-size: 20pt "),

p("Last week WHO conducted its first global e-learning course on health and migration, addressing a critical and often neglected topic of global health. It's vital that all countries include refugees and migrants in their national policies as part of their commitment to universal health coverage.",style = "font-family: 'times'; font-size: 20pt"),

p("We must do all we can to protect health workers, and the best way to do that is for all of us to take every precaution we can to reduce the risk of transmission, for ourselves and others. No one wants more so-called lockdowns. But if we want to avoid them, we all have to play our part. ",style = "font-family: 'times'; font-size: 20pt"),

br(),

a(em("source~https://www.who.int/")),

br(),

br(),

br()

) #main panel

) #sidebarlayout

) #BLOG

) # navbarPage

) # fluidPage

#SERVER.R #

server <- function(input, output) {

output$txtout <- renderText({

paste( input$country, sep = " " )

})

output$covid19plot <- renderPlotly({

if(!is.null(input$country)){

i <- covid19(

country = input$country,

start = input$range[1],

end = input$range[2]

)

plot\_ly(x = i[["range"]], y = i[[input$type]]

}

}

}

shinyApp(ui = ui, server = server)