**A COVID-19 Research Article**

Problems:-

1. Identifying the countries as HIGH RISK TRAVEL destination countries for Internship or Project work for next two years.
2. Identifying the TOP FIFTEEN (15) countries as HIGH RISK Age Group Countries for Study.
3. 3.1 Find out the Average number of days it took for a confirmed case to turn to a death state in any country. Which country took the maximum number of days?

3.2Find out the Average number of days it took a confirmed case to turn to a recovery state in any country. Which country took the maximum number of days?

**Group members**

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**FILE NAMES *AND* REFERNCES:**

=>time\_series\_covid\_19\_deaths modified

=>time\_series\_covid\_19\_recovered modified

=>high\_risk\_countries\_deaths

=>high\_risk\_countries\_recovered

**Abstract:**

**Introduction:**

Due to outbreak of COVID-19 pandemic disease in CHINA and now has spread to 213 countries, areas, Territories. World Health Organisation (WHO) has declared COVID-19 as a Public Health Emergency of International Concern (PHEIC) on 30 January 2020. There are over 2,626,321 confirmed cases, 181938 confirmed COVID-19 deaths worldwide as of 24 April, 2020

**Methods:**

=> Some of the COVID-19 queries have been solved in our research through python programming and the queried data is visualised through graphs. This research aims in the Data observation, Data exploration, COVID-19 reported cases, Deaths, recoveries analysis and statistics.

=> Therefore, this research is done to help the people in understanding the effect and the risk of travelling in the future to foreign counties. This helps the people to plan their future travelling spots to safe guard their health and ensure they are free from Corona Virus.

**For problem-1**

**Observations:**

=> We noticed that Death growing rate for some countries like ITALY, USA and its states is increasing more rapidly.

=> If we come to the question 1 of the hackathon the concept used here is lists in list, and the given csv file was converted into a list in list way so that accessing of elements would be easier. After using the data files provided we were able create an accessible database and we were able to obtain death growing rates of all countries,

=>Countries with Death growing rate more than 4%,countries with death growing rate 100%, high risk countries to which students go for internships and study purpose. We can access top 15 high risk countries death vs recoveries graphs.

=> we were also able to plot a graph high risk countries death vs recovered according to the dates

**DATA TYPES USED IN PYTHON:**

=> we used lists concept data types such as time\_series\_covid\_19\_deaths\_modified etc.,

=>we imported pandas , matplotlib, and sys modules and libraries.

**REFERNCES AND LINKS:**

1. John Hopkins University Site:
2. WHO site
3. Kaggle
4. Github.com
5. [https://thispointer.com/python-read-csv-into-a-list-of-lists-or-tuples-or-dictionaries-import-csv-to-list (for](https://thispointer.com/python-read-csv-into-a-list-of-lists-or-tuples-or-dictionaries-import-csv-to-list/(for) lists in list purpose)
6. <https://howtothink.readthedocs.io/en/latest/PvL_H.html>

(for graph purpose)

**CONCLUSION:**

**=>**After processing some Data series and visualizing we have come to conclude that the people going to High risk countries may have most probability to get caught with the Corona virus pandemic.

=> Average death rate above 4% for some countries like suggest that you are entering into a problem to face with COVID-19 disease.

**For problem 2:-**

**Observations:**

=>From the question 2 we have noticed that the deaths of people of age gap in between(15-25) is comparatively low with total number of deaths

=>In this question we considered the country US and gathered the total number of affected cases in each state of US(which are greater than 10,000 cases) and also the number of deaths of people of age gap between(15-25)

=>We had written the data to the excel sheet and used the import xlsr module and saved the each column wise data to the list's to processes the code

=>And also we had drawn the pictograph of the each states death rate for the better convenience.

**DATA TYPES USED IN PYTHON:**

=> We used lists

=> We imported time module, pandas and matplotlib

**REFERNCES AND LINKS:**

=> COVID DATA IN US STATES.xlsx (excel sheet)

=> WHO site

=> https://www.worldometeres.info/coronavirus/country/us/(for collecting data for excel sheet)

**CONCLUSION:**

=> After completion of question 2 in the project we came to know that people between the age (15-25) in US were least effected by disease.

**Observations:**

=>When it comes to the first problem we have noticed that Australia took more number of days to get converted from confirmed state to death state which is approximately equal to 58 days as per the excel spreadsheet time\_series\_covid\_19\_deaths.

=>It means that on an average it takes 58 days for a case to turn from confirmed state to death state.

=>When we see the second problem we have noticed that took more number of days to get converted from confirmed state to recovered state which is approximately equal to days as per the excel spreadsheet time\_series\_covid\_19\_recovered.

=>It means that on an average it takes days for a case to turn from confirmed state to recovered state.

=>In the output we get average number of days of each country given in the excel sheet and then through mapping we get the country which took max number of days

**DATA TYPES USED IN PYTHON:**

The data type used here in the written code is lists and we imported libraries such as openpyxl and datetime.

**FILE NAMES, REFERNCES AND LINKS:**

1.time\_series\_covid\_19\_deaths.xlsx

2.time\_series\_covid\_19\_recovered.xlsx

**CONCLUSION:**

After accessing the data we got to know that Australia is in safe zone and is at low risk to become a victim of this pandemic like every other high risk countries..