**Project Title**

Explanatory analysis of life-expectancy based on Health and development indicators

**Team members**

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**Project Description/Outline**

Exploratory data analysis in regarding life expectancy and adult mortality from 2004 to 2014, the following countries:

Looking for correlations:

- how life-expectancy and mortality changes

- what parameters and to what extent they can be affected by.

- Comparison of them in the above mentioned countries/regions

- Showing/describing trends and setting up projections for the future.

**Research Question to Answer**

How life expectancy and mortality affected by the following parameters:

* Population
* BMI(body mass index)
* Alcohol consumption
* Education
* GDP (Gross domestic product)

How do these parameters change in the given countries, what is the correlation between them?

What may possibly affects them changing?

Can any trend be observed? If so what is the trend?

Based on these trends, what future projections can be taken?

**Datasets to Be Used**

https://www.kaggle.com/code/khushipitroda/health-development-indicators-global-insights/notebook

**Rough Breakdown of tasks**

1. Assessment of dataset: how does the life expectancy and mortality changed year to year in the given countries, show them in a graph, set up trendline
2. What is the correlation between:
   * GDP - Education
   * Education –Alcohol consumption
   * Alcohol consumption – BMI

Is there any significant difference observe-able among these trends from country to country?

1. How is the life-expectancy affected by:
   * GDP
   * Population
   * Education
   * Alcohol consumption
   * BMI

What future predictions can be taken

DF\_1: Asia, Europe, Africa

1. Do a statistical summary on GDP (mean, max & min) per country within each region (ie, comparing the countries within the region) + visualisations - **Peter**
2. Compare GDP against life expectancy, including population (visualisation) - **Temi**
3. Within Africa and Asia: compare Hepatitis B, Measles, Polio and Diphtheria (absolute counts) in correlation with life expectancy [include HIV/AIDS by converting % into absolute counts per population per year] - **Gwen (Africa) & Adel (Asia)**

DF\_2: North America, South America, Central America, Caribbean - **Farheen**

1. statistical summary table on life expectancy (mean, max & min, mode, variance, SD) +scatterplots (with trend line), [check if future trends came true]

Powerpoint - **Peter**

ReadME - **Adel**

Bonus:

* ratio of developed and developing countries (look at definition just in case)
* Life expectancy comparison between developed and developing (box plot)

To consider:

* average population across each country
* Measles is in absolute count