In this report, we are going to briefly discuss about the analysis that we have performed for world bank data. First, we have downloaded the world bank data directly into our IDE by using WBGAPI. We have selected two categories, and in those two categories we have selected four indicators for each category. The two categories that we have selected are life expectancy and financial sector. We have selected the data from 10 different years which ranges from 2011 to 2020. We have also chosen some countries which are as follows.

- South Africa
- India
- China
- Thailand
- New Zealand
- Pakistan
- Great Britain
- Ireland
- Canada
- America

Now, we are going to discuss about the analysis and visualizations that we have created.

economy	YR2011	YR2012	YR2013	YR2014	YR2015	YR2016	YR2017	YR2018	YR2019	YR2020
CAN	17.850268	17.517520	17.084882	16.402050	17.059779	17.498604	17.606595	17.532536	18.105529	18.883411
CHN	26.568189	25.492522	24.599254	23.510061	21.354080	19.584380	19.692277	19.112104	18.409992	18.496911
GBR	13.931493	12.444477	11.676085	12.456976	12.528582	12.481657	14.598532	14.118801	15.193879	14.025618
IND	14.489839	16.166712	16.638683	14.803138	15.125690	15.271950	15.614110	15.673674	18.429387	18.663180
IRL	15.323468	15.789563	20.659171	23.850139	27.422744	26.177893	24.664732	23.549843	22.159159	37.382715
NZL	17.469267	17.445580	19.616586	19.616475	20.753660	20.558642	20.739269	20.363934	21.057826	18.027178
PAK	13.966670	12.396663	13.277153	12.242584	10.604411	9.145727	8.257320	8.971966	10.088750	10.031589
THA	19.417458	18.621620	19.093727	19.304782	18.682550	18.929806	18.379541	18.407654	17.927253	27.749853
USA	13.613337	13.692036	13.625270	13.564134	12.438939	11.907714	12.197516	12.291520	11.756173	10.134143
ZAF	16.102059	13.497377	13.837844	13.681773	14.288976	14.287909	14.243707	13.565234	13.465737	14.649085

Figure 1: Minimum

The screenshot that we have inserted above tells us about the minimum value of each indicator of all countries for all the years. But here we have no idea that how the countries are linked based on indicators in terms of 10 years. So, therefore it is important to draw the correlation plot. Next, there is a screenshot depicting the life expectancy and climate change indicators.

	YR2011	YR2012	YR2013	YR2014	YR2015	YR2016	YR2017	YR2018	YR2019	YR2020
YR2011	1.000000	0.999958	0.999834	0.999628	0.999339	0.998970	0.998530	0.998006	0.997402	0.996713
YR2012	0.999958	1.000000	0.999959	0.999836	0.999630	0.999344	0.998985	0.998542	0.998020	0.997413
YR2013	0.999834	0.999959	1.000000	0.999959	0.999835	0.999630	0.999351	0.998990	0.998548	0.998021
YR2014	0.999628	0.999836	0.999959	1.000000	0.999959	0.999836	0.999636	0.999355	0.998994	0.998549
YR2015	0.999339	0.999630	0.999835	0.999959	1.000000	0.999959	0.999840	0.999640	0.999361	0.998997
YR2016	0.998970	0.999344	0.999630	0.999836	0.999959	1.000000	0.999961	0.999842	0.999643	0.999361
YR2017	0.998530	0.998985	0.999351	0.999636	0.999840	0.999961	1.000000	0.999960	0.999840	0.999637
YR2018	0.998006	0.998542	0.998990	0.999355	0.999640	0.999842	0.999960	1.000000	0.999960	0.999837
YR2019	0.997402	0.998020	0.998548	0.998994	0.999361	0.999643	0.999840	0.999960	1.000000	0.999959
YR2020	0.996713	0.997413	0.998021	0.998549	0.998997	0.999361	0.999637	0.999837	0.999959	1.000000

```
corr = my_dataframe2.corr()
corr.style.background_gradient(cmap='coolwarm')
```

	YR2011	YR2012	YR2013	YR2014	YR2015	YR2016	YR2017	YR2018	YR2019	YR2020
YR2011	1.000000	0.994699	0.989220	0.988531	0.962645	0.952774	0.944118	0.939877	0.923542	0.924843
YR2012	0.994699	1.000000	0.997341	0.991348	0.951867	0.940685	0.957943	0.954860	0.939370	0.932726
YR2013	0.989220	0.997341	1.000000	0.993858	0.952042	0.939318	0.970315	0.967958	0.954237	0.944922
YR2014	0.988531	0.991348	0.993858	1.000000	0.976202	0.968610	0.983333	0.981220	0.970368	0.957922
YR2015	0.962645	0.951867	0.952042	0.976202	1.000000	0.997595	0.996903	0.996236	0.991303	0.977809
YR2016	0.952774	0.940685	0.939318	0.968610	0.997595	1.000000	0.999016	0.998230	0.994192	0.980614
YR2017	0.944118	0.957943	0.970315	0.983333	0.996903	0.999016	1.000000	0.999427	0.995768	0.979339
YR2018	0.939877	0.954860	0.967958	0.981220	0.996236	0.998230	0.999427	1.000000	0.997631	0.982013
YR2019	0.923542	0.939370	0.954237	0.970368	0.991303	0.994192	0.995768	0.997631	1.000000	0.989513
YR2020	0.924843	0.932726	0.944922	0.957922	0.977809	0.980614	0.979339	0.982013	0.989513	1.000000

Figure 2: Scatter Plot

From Figure 2, we can clearly see that almost all the years have strong correlation with the other year. So, we can say that in all the selected countries, the indicators of life expectancy and financial sectors are linked to each other. As, a result we can conclude that financial sectors play an important role in improving the life expectancy.