Demonstration of Main Function and Methods

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```
<style>
.figure {
  margin: 2px;  /* Adjust the margin around figures */
}
</style>


# Load the library
library(readSumHumData)

# Read data for Ireland and Japan using the read_hdi function
data_irl <- read_hdi("irl")  # Reads HDI data for Ireland
data_jpn <- read_hdi("jpn")  # Reads HDI data for Japan

# Print the datasets to view their structure and a snapshot of their contents
print_hdiData(data_irl)
#> HDI Data Object
#> Country:  Ireland
#> Data Points:  894
#> Columns:  country_code, country_name, indicator_id, indicator_name, index_id,
index_name, value, year
#>
#> First few rows of the dataset:
#>    country_code country_name indicator_id
#> 1:          IRL      Ireland          abr
#> 2:          IRL      Ireland          abr
#> 3:          IRL      Ireland          abr
#> 4:          IRL      Ireland          abr
#> 5:          IRL      Ireland          abr
#> 6:          IRL      Ireland          abr
#>                                       indicator_name index_id
#> 1: Adolescent Birth Rate (births per 1,000 women ages 15-19)     GII
#> 2: Adolescent Birth Rate (births per 1,000 women ages 15-19)     GII
#> 3: Adolescent Birth Rate (births per 1,000 women ages 15-19)     GII
#> 4: Adolescent Birth Rate (births per 1,000 women ages 15-19)     GII
#> 5: Adolescent Birth Rate (births per 1,000 women ages 15-19)     GII
#> 6: Adolescent Birth Rate (births per 1,000 women ages 15-19)     GII
#>                 index_name  value year
#> 1: Gender Inequality Index 15.814 1990
#> 2: Gender Inequality Index 16.584 1991
#> 3: Gender Inequality Index 16.457 1992
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#> 4: Gender Inequality Index 15.454 1993
#> 5: Gender Inequality Index 14.375 1994
#> 6: Gender Inequality Index 14.338 1995
print_hdiData(data_jpn)
#> HDI Data Object
#> Country:  Japan
#> Data Points:  894
#> Columns:  country_code, country_name, indicator_id, indicator_name, index_id,
index_name, value, year
#>
#> First few rows of the dataset:
#>     country_code country_name indicator_id
#> 1:           JPN         Japan          abr
#> 2:           JPN         Japan          abr
#> 3:           JPN         Japan          abr
#> 4:           JPN         Japan          abr
#> 5:           JPN         Japan          abr
#> 6:           JPN         Japan          abr
#>                                             indicator_name index_id
#> 1: Adolescent Birth Rate (births per 1,000 women ages 15-19)      GII
#> 2: Adolescent Birth Rate (births per 1,000 women ages 15-19)      GII
#> 3: Adolescent Birth Rate (births per 1,000 women ages 15-19)      GII
#> 4: Adolescent Birth Rate (births per 1,000 women ages 15-19)      GII
#> 5: Adolescent Birth Rate (births per 1,000 women ages 15-19)      GII
#> 6: Adolescent Birth Rate (births per 1,000 women ages 15-19)      GII
#>                 index_name value year
#> 1: Gender Inequality Index 3.484 1990
#> 2: Gender Inequality Index 3.779 1991
#> 3: Gender Inequality Index 3.989 1992
#> 4: Gender Inequality Index 4.036 1993
#> 5: Gender Inequality Index 4.087 1994
#> 6: Gender Inequality Index 3.981 1995


# Generate summaries of the datasets
summary_hdiData(data_irl)  # Print the data object for Ireland to inspect its
contents
#> Summary for HDI Data Object:
#>
#> Value Summary:
#>     Min.  1st Qu.   Median     Mean  3rd Qu.      Max.
#>    -4.00    10.45    18.46  5234.48    78.28 108423.61
#>
#> Country Distribution:
#>      Var1 Freq
#> 1 Ireland  894
#>
#> Indicator Distribution:
#>
Var1
#> 1                  Adolescent Birth Rate (births per 1,000 women ages 15-
19)
```

```
#> 2                       Carbon dioxide emissions per capita (production)
(tonnes)
#> 3                                                Coefficient of human
inequality
#> 4                                                     Difference from HDI
rank
#> 5                                                  Difference from HDI value
(%)
#> 6                                                  Expected Years of Schooling
(years)
#> 7                                             Expected Years of Schooling, female
(years)
#> 8                                              Expected Years of Schooling, male
(years)
#> 9                                                                    GDI
Group
#> 10                                                                   GII
Rank
#> 11                                      Gross National Income Per Capita (2017
PPP$)
#> 12                               Gross National Income Per Capita, female (2017
PPP$)
#> 13                                Gross National Income Per Capita, male (2017
PPP$)
#> 14                                                                   HDI
female
#> 15                                                                   HDI
male
#> 16                                                                   HDI
Rank
#> 17                                                        Inequality in
eduation
#> 18                                                        Inequality in
income
#> 19                                                     Inequality in life
expectancy
#> 20                            Labour force participation rate, female (% ages 15 and
older)
#> 21                              Labour force participation rate, male (% ages 15 and
older)
#> 22                                                 Life Expectancy at Birth
(years)
#> 23                                             Life Expectancy at Birth, female
(years)
#> 24                                              Life Expectancy at Birth, male
(years)
#> 25                                                 Material footprint per capita
(tonnes)
#> 26                             Maternal Mortality Ratio (deaths per 100,000 live
births)
#> 27                                                    Mean Years of Schooling
```

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(years)
#> 28                                    Mean Years of Schooling, female
(years)
#> 29                                      Mean Years of Schooling, male
(years)
#> 30                                                       Overall loss
(%)
#> 31 Population with at least some secondary education, female (% ages 25 and
older)
#> 32   Population with at least some secondary education, male (% ages 25 and
older)
#> 33                          Share of seats in parliament, female (% held by
women)
#> 34                            Share of seats in parliament, male (% held by
men)
#>    Freq
#> 1    33
#> 2    33
#> 3    13
#> 4     1
#> 5    33
#> 6    33
#> 7    33
#> 8    33
#> 9     1
#> 10    1
#> 11   33
#> 12   33
#> 13   33
#> 14   33
#> 15   33
#> 16    1
#> 17   13
#> 18   13
#> 19   13
#> 20   33
#> 21   33
#> 22   33
#> 23   33
#> 24   33
#> 25   33
#> 26   33
#> 27   33
#> 28   33
#> 29   33
#> 30   13
#> 31   33
#> 32   33
#> 33   33
#> 34   33
#>
```

```
#> Index Distribution:
#>                                                         Var1 Freq
#> 1                               Gender Development Index  331
#> 2                               Gender Inequality Index  265
#> 3                               Human Development Index  133
#> 4        Inequality-adjusted Human Development Index   65
#> 5 Planetary pressures-adjusted Human Development Index  100
#>
#> Year Range:  1990  to  2022
summary_hdiData(data_jpn)  # Print the data object for Japan to inspect its contents
#> Summary for HDI Data Object:
#>
#> Value Summary:
#>     Min.  1st Qu.   Median     Mean  3rd Qu.     Max.
#>     0.82    10.19    15.36  4331.27    82.27 56382.96
#>
#> Country Distribution:
#>    Var1 Freq
#> 1 Japan  894
#>
#> Indicator Distribution:
#>
Var1
#> 1                 Adolescent Birth Rate (births per 1,000 women ages 15-
19)
#> 2                 Carbon dioxide emissions per capita (production)
(tonnes)
#> 3                                         Coefficient of human
inequality
#> 4                                         Difference from HDI
rank
#> 5                                         Difference from HDI value
(%)
#> 6                                 Expected Years of Schooling
(years)
#> 7                         Expected Years of Schooling, female
(years)
#> 8                         Expected Years of Schooling, male
(years)
#> 9                                                       GDI
Group
#> 10                                                      GII
Rank
#> 11                         Gross National Income Per Capita (2017
PPP$)
#> 12                 Gross National Income Per Capita, female (2017
PPP$)
#> 13                 Gross National Income Per Capita, male (2017
PPP$)
#> 14                                                      HDI
female
```

```
#> 15                                                              HDI
male
#> 16                                                              HDI
Rank
#> 17                                               Inequality in
eduation
#> 18                                               Inequality in
income
#> 19                                           Inequality in life
expectancy
#> 20               Labour force participation rate, female (% ages 15 and
older)
#> 21               Labour force participation rate, male (% ages 15 and
older)
#> 22                                      Life Expectancy at Birth
(years)
#> 23                              Life Expectancy at Birth, female
(years)
#> 24                                Life Expectancy at Birth, male
(years)
#> 25                                   Material footprint per capita
(tonnes)
#> 26                     Maternal Mortality Ratio (deaths per 100,000 live
births)
#> 27                                     Mean Years of Schooling
(years)
#> 28                              Mean Years of Schooling, female
(years)
#> 29                                Mean Years of Schooling, male
(years)
#> 30                                                     Overall loss
(%)
#> 31 Population with at least some secondary education, female (% ages 25 and
older)
#> 32   Population with at least some secondary education, male (% ages 25 and
older)
#> 33                           Share of seats in parliament, female (% held by
women)
#> 34                            Share of seats in parliament, male (% held by
men)
#>     Freq
#> 1     33
#> 2     33
#> 3     13
#> 4      1
#> 5     33
#> 6     33
#> 7     33
#> 8     33
#> 9      1
#> 10     1
```

```
#> 11    33
#> 12    33
#> 13    33
#> 14    33
#> 15    33
#> 16     1
#> 17    13
#> 18    13
#> 19    13
#> 20    33
#> 21    33
#> 22    33
#> 23    33
#> 24    33
#> 25    33
#> 26    33
#> 27    33
#> 28    33
#> 29    33
#> 30    13
#> 31    33
#> 32    33
#> 33    33
#> 34    33
#>
#> Index Distribution:
#>                                                         Var1 Freq
#> 1                             Gender Development Index   331
#> 2                              Gender Inequality Index   265
#> 3                              Human Development Index   133
#> 4          Inequality-adjusted Human Development Index    65
#> 5 Planetary pressures-adjusted Human Development Index   100
#>
#> Year Range:  1990  to  2022

# Setting larger margins: bottom, left, top, right
par(mar=c(5.1, 4.1, 4.1, 2.1))

plot_hdiData(data_irl)  # Summarizes the Ireland data showing key statistical
measures
```
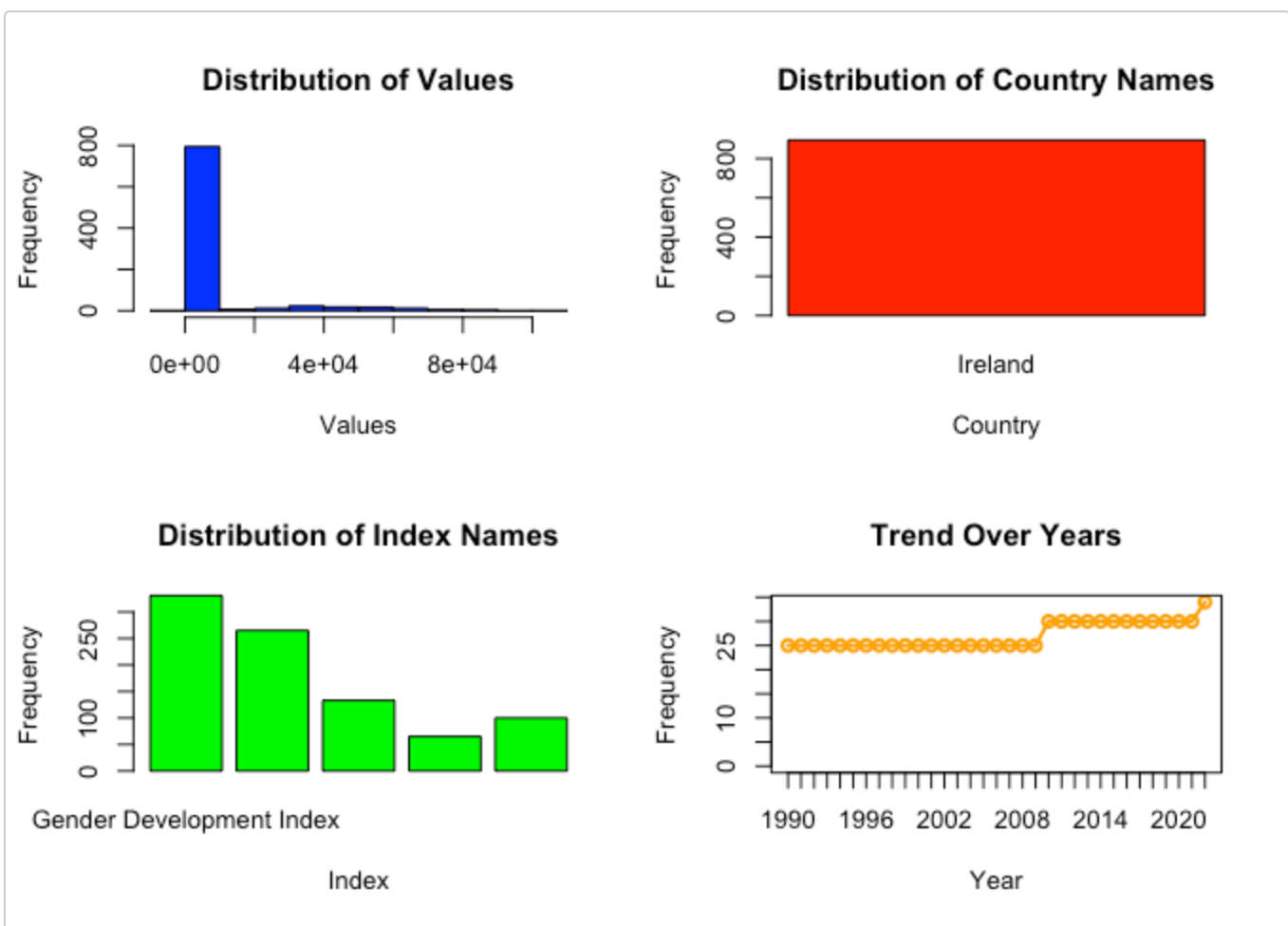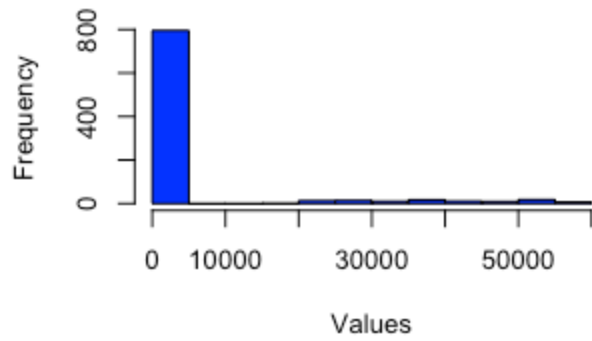
Distribution of Values

Distribution of Country Names

Ireland

Distribution of Index Names
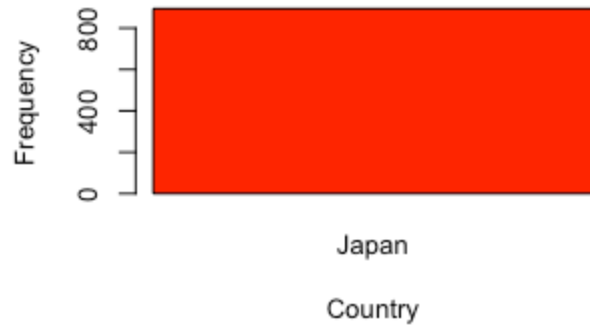
Gender Development Index

Trend Over Years

```
plot_hdiData(data_jpn)   # Summarizes the Japan data showing key statistical measures
```
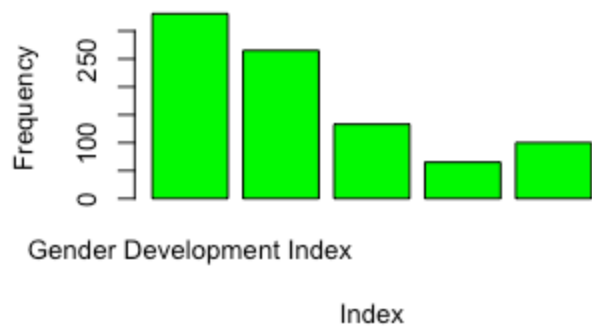
Distribution of Values

Distribution of Country Names

Distribution of Index Names

Trend Over Years