

Project Test

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2024-03-16

Data

```
hsbc_data <- read.csv("HSBC.csv")  
head(hsbc_data, 20)
```

##	Date	Open	High	Low	Close	Adj.Close	Volume
## 1	2023-03-16	33.29	34.49	33.29	34.49	31.86238	4600400
## 2	2023-03-17	33.10	33.39	32.84	33.08	30.55981	3440100
## 3	2023-03-20	32.93	33.47	32.90	33.25	30.71685	3593200
## 4	2023-03-21	33.99	34.30	33.86	33.93	31.34504	2954300
## 5	2023-03-22	34.95	34.95	34.30	34.30	31.68685	3846800
## 6	2023-03-23	34.06	34.22	33.23	33.48	30.92932	3164000
## 7	2023-03-24	32.63	33.08	32.41	33.08	30.55981	3583900
## 8	2023-03-27	33.41	33.65	33.30	33.64	31.07713	2071800
## 9	2023-03-28	33.32	33.62	33.25	33.46	30.91085	1620200
## 10	2023-03-29	34.20	34.35	34.07	34.22	31.61295	2183500
## 11	2023-03-30	34.56	34.56	34.24	34.29	31.67761	1263000
## 12	2023-03-31	34.13	34.22	33.99	34.13	31.52981	1716500
## 13	2023-04-03	34.70	34.91	34.56	34.72	32.07486	1168000
## 14	2023-04-04	34.94	34.97	34.40	34.65	32.01019	1297900
## 15	2023-04-05	34.56	34.75	34.41	34.69	32.04714	1184100
## 16	2023-04-06	34.83	35.30	34.82	35.18	32.49981	1420300
## 17	2023-04-10	35.23	35.35	35.01	35.13	32.45362	1226900
## 18	2023-04-11	34.95	35.10	34.92	34.99	32.32429	1291800
## 19	2023-04-12	35.25	35.32	35.02	35.09	32.41667	2040400
## 20	2023-04-13	35.50	35.72	35.37	35.67	32.95248	1259600

```
vn_data <- read.csv("VN Index Historical Data.csv")  
head(vn_data, 20)
```

##	Date	Price	Open	High	Low	Vol.	Change..
## 1	2024-03-15	1,263.78	1,264.26	1,271.63	1,252.36	1.07M	-0.04%
## 2	2024-03-14	1,264.26	1,270.51	1,276.41	1,258.67	1.06M	-0.49%
## 3	2024-03-13	1,270.51	1,245.00	1,270.51	1,245.00	982.23K	2.05%
## 4	2024-03-12	1,245.00	1,235.49	1,248.33	1,233.14	836.22K	0.77%
## 5	2024-03-11	1,235.49	1,247.35	1,254.01	1,233.49	975.99K	-0.95%
## 6	2024-03-08	1,247.35	1,268.46	1,274.30	1,247.35	1.35M	-1.66%
## 7	2024-03-07	1,268.46	1,262.73	1,269.88	1,260.24	1.02M	0.45%
## 8	2024-03-06	1,262.73	1,269.98	1,277.51	1,256.30	1.06M	-0.57%

```
## 9 2024-03-05 1,269.98 1,261.41 1,269.98 1,257.81 1.01M 0.68%
## 10 2024-03-04 1,261.41 1,258.28 1,268.25 1,256.54 1.18M 0.25%
## 11 2024-03-01 1,258.28 1,256.72 1,258.76 1,247.87 961.93K 0.44%
## 12 2024-02-29 1,252.73 1,254.55 1,264.39 1,247.70 1.09M -0.15%
## 13 2024-02-28 1,254.55 1,237.46 1,254.55 1,236.32 970.76K 1.38%
## 14 2024-02-27 1,237.46 1,224.17 1,237.60 1,224.17 986.85K 1.09%
## 15 2024-02-26 1,224.17 1,212.00 1,225.21 1,210.52 889.75K 1.00%
## 16 2024-02-23 1,212.00 1,227.31 1,240.81 1,211.55 1.39M -1.25%
## 17 2024-02-22 1,227.31 1,230.04 1,232.09 1,226.15 840.41K -0.22%
## 18 2024-02-21 1,230.04 1,230.06 1,234.22 1,222.92 988.85K 0.00%
## 19 2024-02-20 1,230.06 1,224.97 1,230.47 1,222.66 939.95K 0.42%
## 20 2024-02-19 1,224.97 1,209.70 1,225.48 1,209.70 1.05M 1.26%
```

```
agg_data <- read.csv("Aggregate East Asia Data.csv")
head(agg_data, 20)
```

```
##          Country.Name Country.Code
## 1 East Asia & Pacific          EAS
## 2 East Asia & Pacific          EAS
## 3 East Asia & Pacific          EAS
## 4 East Asia & Pacific          EAS
## 5 East Asia & Pacific          EAS
## 6 East Asia & Pacific          EAS
## 7 East Asia & Pacific          EAS
## 8 East Asia & Pacific          EAS
## 9 East Asia & Pacific          EAS
## 10 East Asia & Pacific          EAS
## 11 East Asia & Pacific          EAS
## 12 East Asia & Pacific          EAS
## 13 East Asia & Pacific          EAS
## 14 East Asia & Pacific          EAS
## 15 East Asia & Pacific          EAS
## 16 East Asia & Pacific          EAS
## 17 East Asia & Pacific          EAS
## 18 East Asia & Pacific          EAS
## 19 East Asia & Pacific          EAS
## 20 East Asia & Pacific          EAS
##
##                                     Series.Name
## 1                                     Population, total
## 2                               Population growth (annual %)
## 3                               Surface area (sq. km)
## 4       Population density (people per sq. km of land area)
## 5 Poverty headcount ratio at national poverty lines (% of population)
## 6 Poverty headcount ratio at $2.15 a day (2017 PPP) (% of population)
## 7                               GNI, Atlas method (current US$)
## 8       GNI per capita, Atlas method (current US$)
## 9                               GNI, PPP (current international $)
## 10      GNI per capita, PPP (current international $)
## 11      Income share held by lowest 20%
## 12      Life expectancy at birth, total (years)
## 13      Fertility rate, total (births per woman)
## 14      Adolescent fertility rate (births per 1,000 women ages 15-19)
## 15 Contraceptive prevalence, any method (% of married women ages 15-49)
## 16      Births attended by skilled health staff (% of total)
```

## 17	Mortality rate, under-5 (per 1,000 live births)			
## 18	Prevalence of underweight, weight for age (% of children under 5)			
## 19	Immunization, measles (% of children ages 12-23 months)			
## 20	Primary completion rate, total (% of relevant age group)			
##	Series.Code	X1990..YR1990.	X2000..YR2000.	X2013..YR2013.
## 1	SP.POP.TOTL	1818247576	2048148696	2261274500
## 2	SP.POP.GROW	1.51250348046823	0.94409698205007	0.779835746999453
## 3	AG.SRF.TOTL.K2	24824050	24821731	24824253.3
## 4	EN.POP.DNST	74.5368897003233	83.7791810523181	92.450519498081
## 5	SI.POV.NAHC	..	..	..
## 6	SI.POV.DDAY	65.8	39.5	4.5
## 7	NY.GNP.ATLS.CD	5178922689815.37	7927407544863.58	21973847629764.9
## 8	NY.GNP.PCAP.CD	2848.30446534052	3870.52344409646	9717.46138284623
## 9	NY.GNP.MKTP.PP.CD	5882453525681.52	11737405819272.6	31975587566720.5
## 10	NY.GNP.PCAP.PP.CD	3235.23243112055	5730.73910219288	14140.5156988771
## 11	SI.DST.FRST.20	..	..	..
## 12	SP.DYN.LE00.IN	68.2702097598828	71.5525698270665	75.4791162580533
## 13	SP.DYN.TFRT.IN	2.60174459565446	1.86633984501231	1.86671190550473
## 14	SP.ADO.TFRT	35.7546202607548	22.1098778470477	25.169603249648
## 15	SP.DYN.CONU.ZS	..	77.4132715690635	..
## 16	SH.STA.BRTC.ZS	85.0418404935797	85.3056045740565	..
## 17	SH.DYN.MORT	56.6	39.3	18.6
## 18	SH.STA.MALN.ZS	..	12.0500650405884	6.73084449768066
## 19	SH.IMM.MEAS	88.984062258194	83.6779642736933	94.8195630402277
## 20	SE.PRM.CMPT.ZS	99.811279296875	93.6300201416016	99.410758972168
##	X2014..YR2014.	X2015..YR2015.	X2016..YR2016.	X2017..YR2017.
## 1	2278232287	2294507020	2310721864	2327132966
## 2	0.74992164816787	0.714357929736423	0.706680949705699	0.710215377093945
## 3	24824545.3	24827168.4	24827582.5	24830750.8
## 4	93.1424187354138	93.8076755482524	94.434045917774	95.1048853360537
5	..	..	..	..
## 6	3.6	2.7	2.3	1.9
## 7	22642438410638.2	22530618959545.5	22863415146293	23807630755388.2
## 8	9938.59956240633	9819.37242429768	9894.49033330004	10230.4557166366
## 9	33552363898240.3	34643048697799.1	36018229610536.7	38015400761985.3
## 10	14727.3673934375	15098.2535227977	15587.4361911247	16335.7235350966
11	..	..	..	..
## 12	75.7313051135242	75.9488167254261	76.1379237487962	76.2123920164654
## 13	1.89568574246225	1.83003181484091	1.88130162415834	1.89429685385437
## 14	24.890185154292	23.854944871092	23.1996578545524	22.7653394165231
15	..	..	..	..
16	..	..	..	..
## 17	17.6	17	16.1	15.4
## 18	6.43975448608398	6.17226791381836	5.9145655632019	5.66388177871704
## 19	94.6378689529029	94.4708271493127	94.8139258623047	94.6341548562919
## 20	96.4888381958008	94.9776916503906	96.462890625	97.8957366943359
##	X2018..YR2018.	X2019..YR2019.	X2020..YR2020.	X2021..YR2021.
## 1	2341383691	2353856866	2363934334	2370189840
## 2	0.612372615067841	0.532726654240619	0.428125777126169	0.264622663583694
## 3	24830734.1	24830587.67	24830629.419	24830819.77
## 4	95.68732188794	96.1967395912671	96.6077108699602	96.8038695617248
5	..	..	..	..
## 6	1.6	1.2	1.2	..
## 7	25984649921714.3	27520793520030.8	27526996152729.6	30422828295963.5

## 8	11097.9887754392	11691.7871759968	11644.5688684386	12835.6082633295
## 9	40724752293714.2	43209220116092.3	43760120164529	48187621603374.5
## 10	17393.4551821879	18356.7746791331	18511.5633438441	20330.7012755461
11	..	..	..	..
## 12	76.5941638140358	76.7977608621553	76.761923159442	76.3938984674492
## 13	1.73283694190791	1.69204979284288	1.55967009801612	1.48943216659187
## 14	21.7460429921729	21.4174612313992	20.7360804108587	20.2489049900341
## 15	..	75.583954777161	..	..
## 16	..	95.4198638658646	..	..
## 17	15.2	14.9	14.8	14.7
## 18	5.45726203918457	5.29854154586792	5.17910957336426	5.11503648757935
## 19	94.7305696360585	93.7982890492898	91.6312425621094	86.1483798127177
## 20	98.9181976318359	98.20166015625	96.2915191650391	97.6864776611328
##	X2022..YR2022.			
## 1	2375162207			
## 2	0.209787710506774			
## 3	..			
## 4	..			
## 5	..			
## 6	..			
## 7	32074372097110.4			
## 8	13504.0764805797			
## 9	53023601600466.3			
## 10	22324.2022983512			
## 11	..			
## 12	..			
## 13	..			
## 14	..			
## 15	..			
## 16	..			
## 17	..			
## 18	5.10526037216187			
## 19	89.2260230671842			
## 20	97.6632919311523			