

Combined Example

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```
## Step1: Load packages
```

```
library(tidyverse)
```

```
## Warning: package 'tidyverse' was built under R version 4.4.2
```

```
## Warning: package 'ggplot2' was built under R version 4.4.3
```

```
library(gapminder)
```

```
## Warning: package 'gapminder' was built under R version 4.4.3
```

```
library(knitr)
```

```
library(kableExtra)
```

```
## Step2: Import data
```

```
gap_raw <- gapminder
```

```
lookup <- country_codes
```

```
## Step3: join look up
```

```
gap_joined <- gap_raw %>%
```

```
  left_join(lookup)
```

```
## Joining with 'by = join_by(country)'
```

```
## Step4: Explore: Table
```

```
gap_joined %>%
```

```
  filter(continent== "Asia") %>%
```

```
  group_by(year) %>%
```

```
  summarise(avg_life_exp = mean(lifeExp)) %>%
```

```
  kable(col.names =c("Year","Average Life Expectancy"),digits=3) %>%
```

```
  kable_classic(full_width=F)
```

Year	Average Life Expectancy
1952	46.314
1957	49.319
1962	51.563
1967	54.664

1972	57.319
1977	59.611
1982	62.618
1987	64.851
1992	66.537
1997	68.021
2002	69.234
2007	70.728

```
## Step 5: EXplore: Plot
gap_joined %>%
  group_by(continent,year) %>%
  summarise(ave_life_exp=mean(lifeExp)) %>%
  ggplot(aes(x=year,y=ave_life_exp,fill=continent))+
  geom_col(position="dodge") +
  labs(x="Year","Average Life Expectancy", title="Average Life Expectancy") +
  theme_bw()
```

```
## Warning in geom_col(position = "dodge"): Ignoring unknown parameters: 'postion'
```

