library(tidyverse)

## ─ Attaching packages ───────────────────────────── tidyverse 1.3.0 ─

## ✓ ggplot2 3.3.2 ✓ purrr 0.3.4  
## ✓ tibble 3.0.3 ✓ dplyr 1.0.2  
## ✓ tidyr 1.1.2 ✓ stringr 1.4.0  
## ✓ readr 1.3.1 ✓ forcats 0.5.0

## ─ Conflicts ────────────────────────────── tidyverse\_conflicts() ─  
## x dplyr::filter() masks stats::filter()  
## x dplyr::lag() masks stats::lag()

library(dplyr)  
library(gapminder)

# 1

gapminder %>%  
 mutate(logpop= log2(gapminder$pop))%>%  
 filter(continent=="Americas", year== 1997)%>%  
 arrange(desc(lifeExp)) ->gapminder1  
  
print(gapminder1, n=25)

## # A tibble: 25 x 7  
## country continent year lifeExp pop gdpPercap logpop  
## <fct> <fct> <int> <dbl> <int> <dbl> <dbl>  
## 1 Canada Americas 1997 78.6 30305843 28955. 24.9  
## 2 Costa Rica Americas 1997 77.3 3518107 6677. 21.7  
## 3 United States Americas 1997 76.8 272911760 35767. 28.0  
## 4 Cuba Americas 1997 76.2 10983007 5432. 23.4  
## 5 Chile Americas 1997 75.8 14599929 10118. 23.8  
## 6 Puerto Rico Americas 1997 74.9 3759430 16999. 21.8  
## 7 Uruguay Americas 1997 74.2 3262838 9230. 21.6  
## 8 Panama Americas 1997 73.7 2734531 7114. 21.4  
## 9 Mexico Americas 1997 73.7 95895146 9767. 26.5  
## 10 Argentina Americas 1997 73.3 36203463 10967. 25.1  
## 11 Ecuador Americas 1997 72.3 11911819 7429. 23.5  
## 12 Jamaica Americas 1997 72.3 2531311 7122. 21.3  
## 13 Venezuela Americas 1997 72.1 22374398 10165. 24.4  
## 14 Colombia Americas 1997 70.3 37657830 6117. 25.2  
## 15 Dominican Republic Americas 1997 70.0 7992357 3614. 22.9  
## 16 El Salvador Americas 1997 69.5 5783439 5155. 22.5  
## 17 Trinidad and Tobago Americas 1997 69.5 1138101 8793. 20.1  
## 18 Paraguay Americas 1997 69.4 5154123 4247. 22.3  
## 19 Brazil Americas 1997 69.4 168546719 7958. 27.3  
## 20 Nicaragua Americas 1997 68.4 4609572 2253. 22.1  
## 21 Peru Americas 1997 68.4 24748122 5838. 24.6  
## 22 Honduras Americas 1997 67.7 5867957 3160. 22.5  
## 23 Guatemala Americas 1997 66.3 9803875 4684. 23.2  
## 24 Bolivia Americas 1997 62.0 7693188 3326. 22.9  
## 25 Haiti Americas 1997 56.7 6913545 1342. 22.7