Homework 01 Gapminder

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Load packages:

```
library(gapminder)
library(ggplot2)
```

Homework 01 Exercise - Task 1

Modified to provide the standard deviation, median and sample size for life expectancy, set `digits=2` :

The standard deviation of life expectancy is 12.92 years. The median life expectancy is 60.71 years. The sample size for life expectancy is 1704 years.

Homework 01 Exercise - Task 2

Modified r code chunk to provide the mean and standard deviation for life expectancy by continent:

```
aggregate(lifeExp ~ continent, gapminder, mean)
```

```
##   continent  lifeExp
## 1    Africa 48.86533
## 2  Americas 64.65874
## 3      Asia 60.06490
## 4    Europe 71.90369
## 5   Oceania 74.32621
```

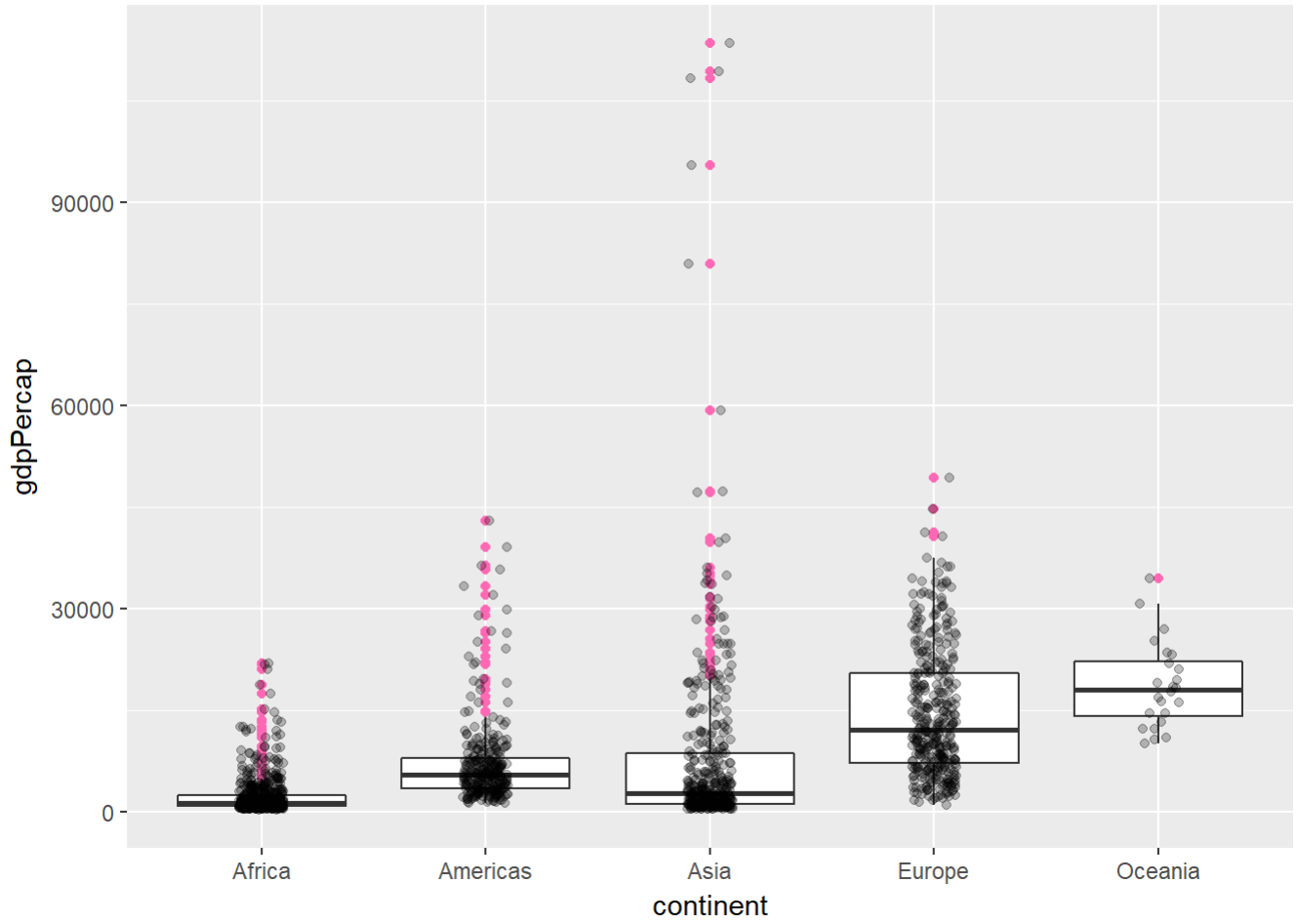
```
aggregate(lifeExp ~ continent, gapminder, sd)
```

```
##   continent   lifeExp
## 1    Africa  9.150210
## 2  Americas  9.345088
## 3      Asia 11.864532
## 4    Europe  5.433178
## 5   Oceania  3.795611
```

Homework 01 Exercise - Task 3

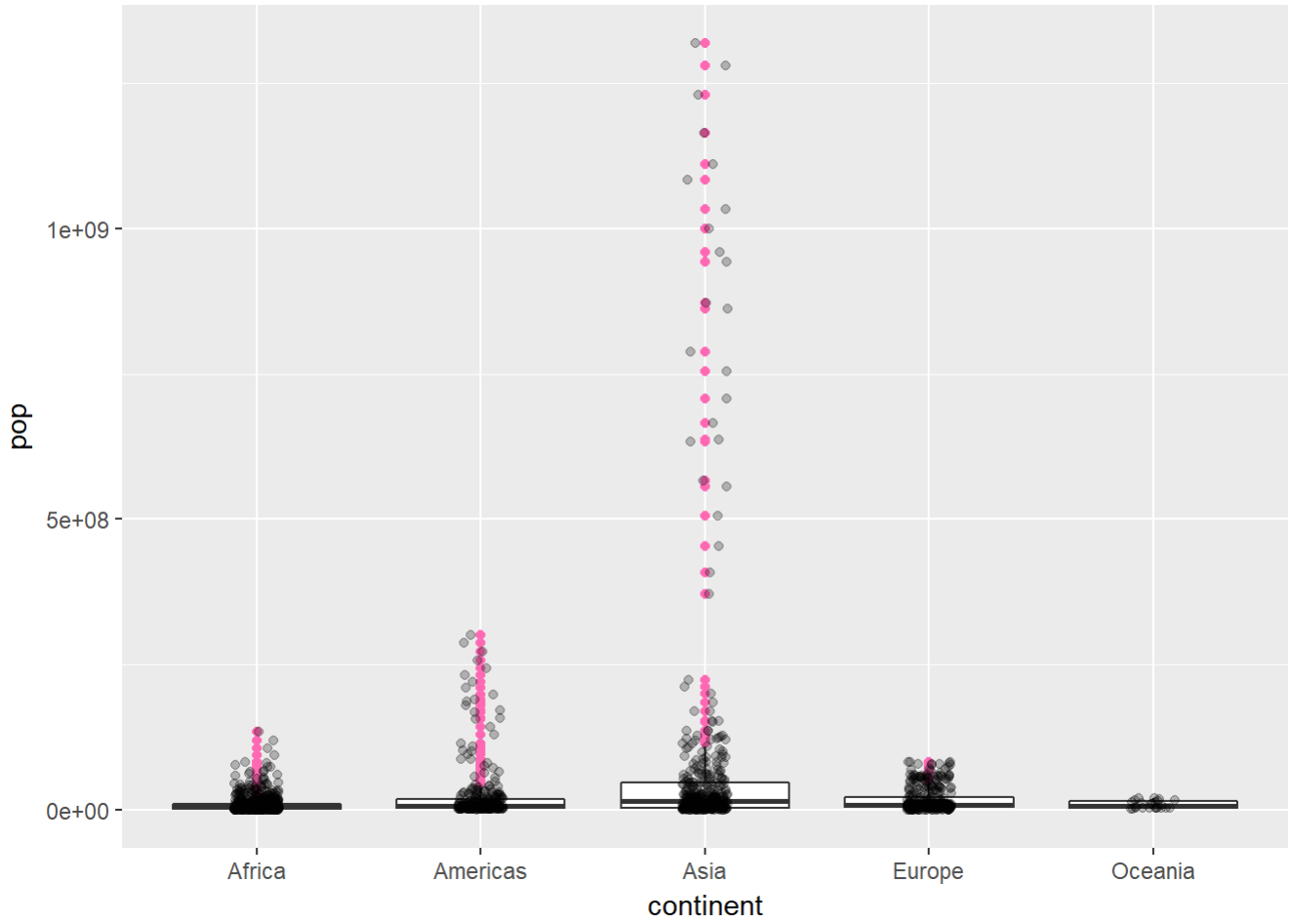
Produces box plot with jittered points of GDP per capita by continents:

```
library(ggplot2)
ggplot(gapminder, aes(x = continent, y = gdpPercap)) +
  geom_boxplot(outlier.colour = "hotpink") +
  geom_jitter(position = position_jitter(width = 0.1, height = 0), alpha = 1/4)
```



Produces box plot with jittered points of population by continents:

```
  library(ggplot2)
ggplot(gapminder, aes(x = continent, y = pop)) +
  geom_boxplot(outlier.colour = "hotpink") +
  geom_jitter(position = position_jitter(width = 0.1, height = 0), alpha = 1/4)
```

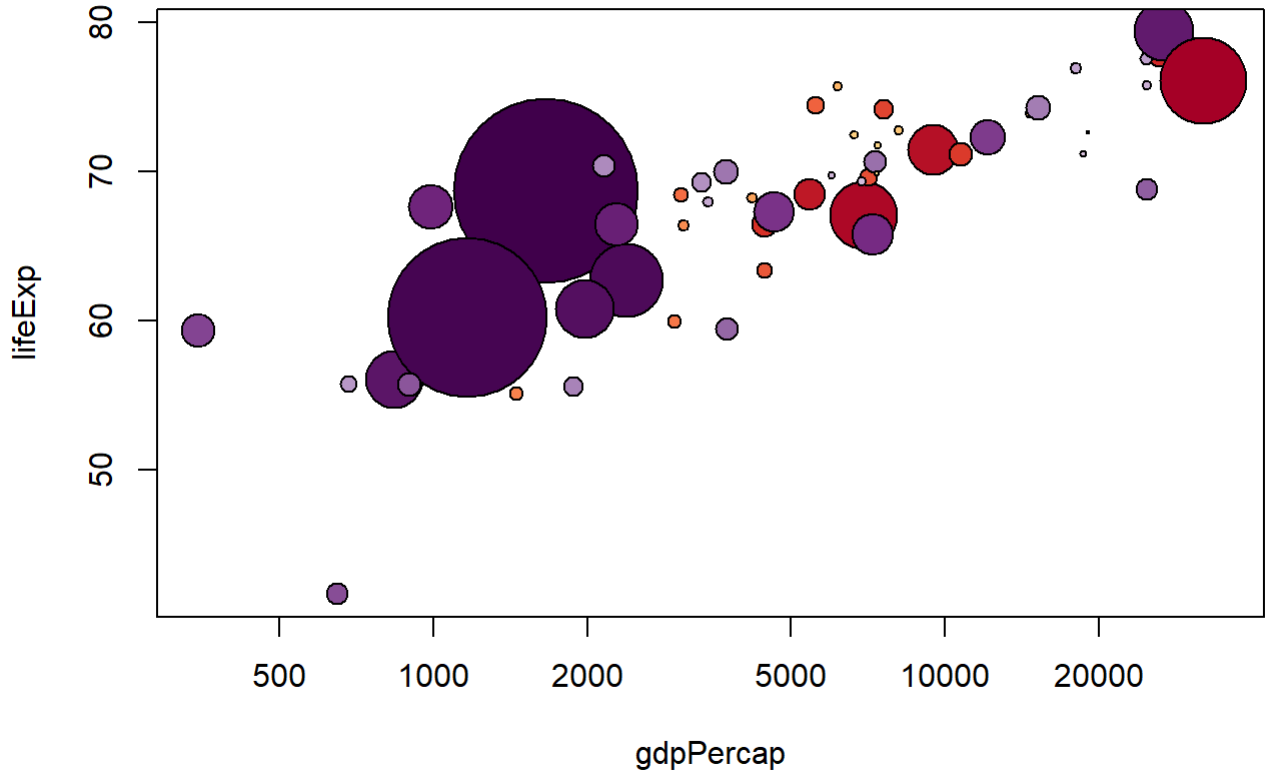


Homework 01 Exercise - Task 4

Produces bubble splot for life expectancy by GDP per cpaita for Asia and Americas in 1992. Size of bubbles represents population size:

```
gap_with_colors <-
  data.frame(gapminder,
             cc = I(country_colors[match(gapminder$country,
                                         names(country_colors))]))

keepers <- with(gap_with_colors,
                continent %in% c("Americas","Asia") & year == 1992)
plot(lifeExp ~ gdpPercap, gap_with_colors,
     subset = keepers, log = "x", pch = 21,
     cex = sqrt(gap_with_colors$pop[keepers]/pi)/1500,
     bg = gap_with_colors$cc[keepers])
```



Homework 01 Exercise - Task 5

Link to repository: https://github.com/jynakay/N741Homework1 (https://github.com/jynakay/N741Homework1).