

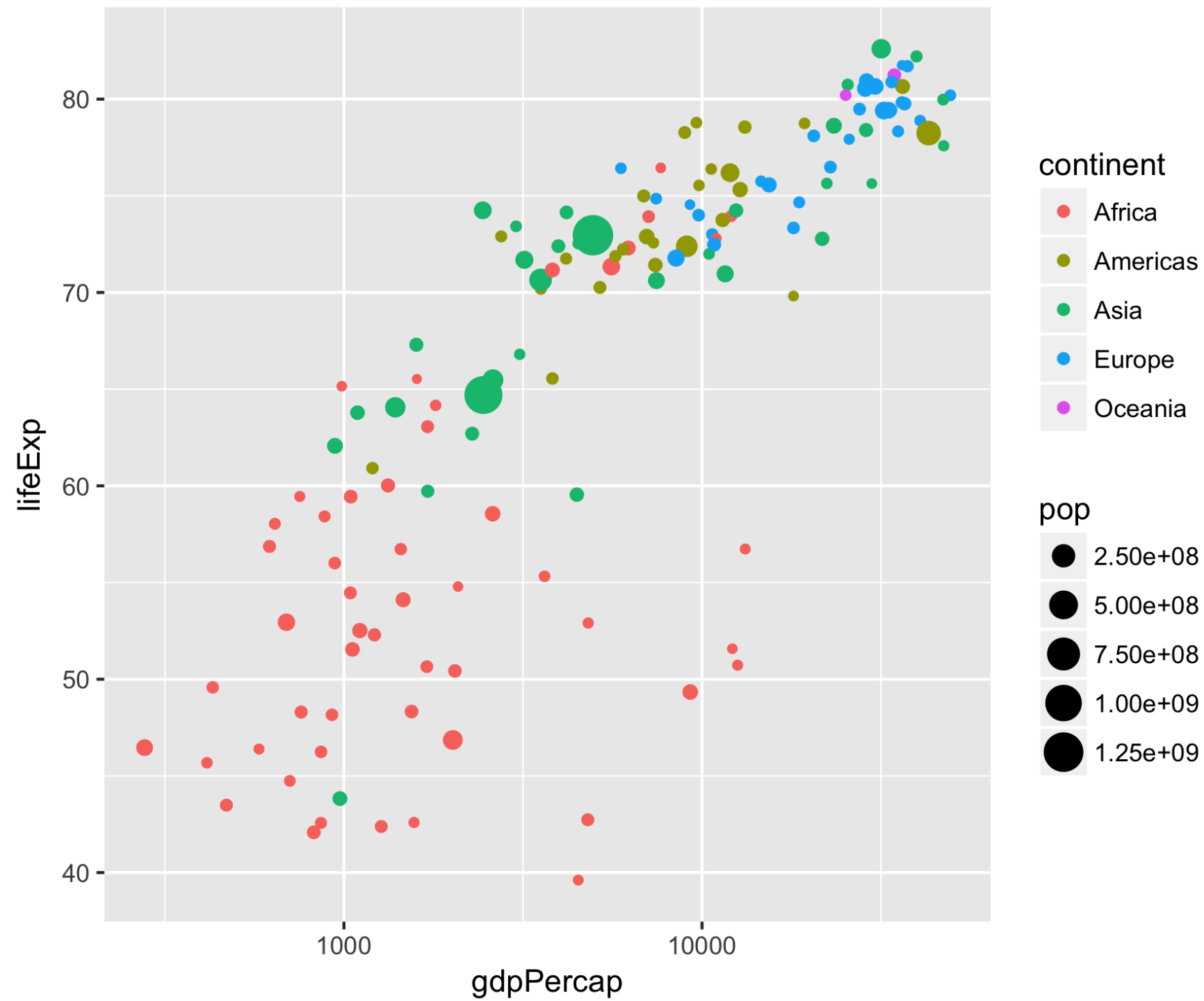
Visualizing with ggplot2

INTRODUCTION TO THE TIDYVERSE



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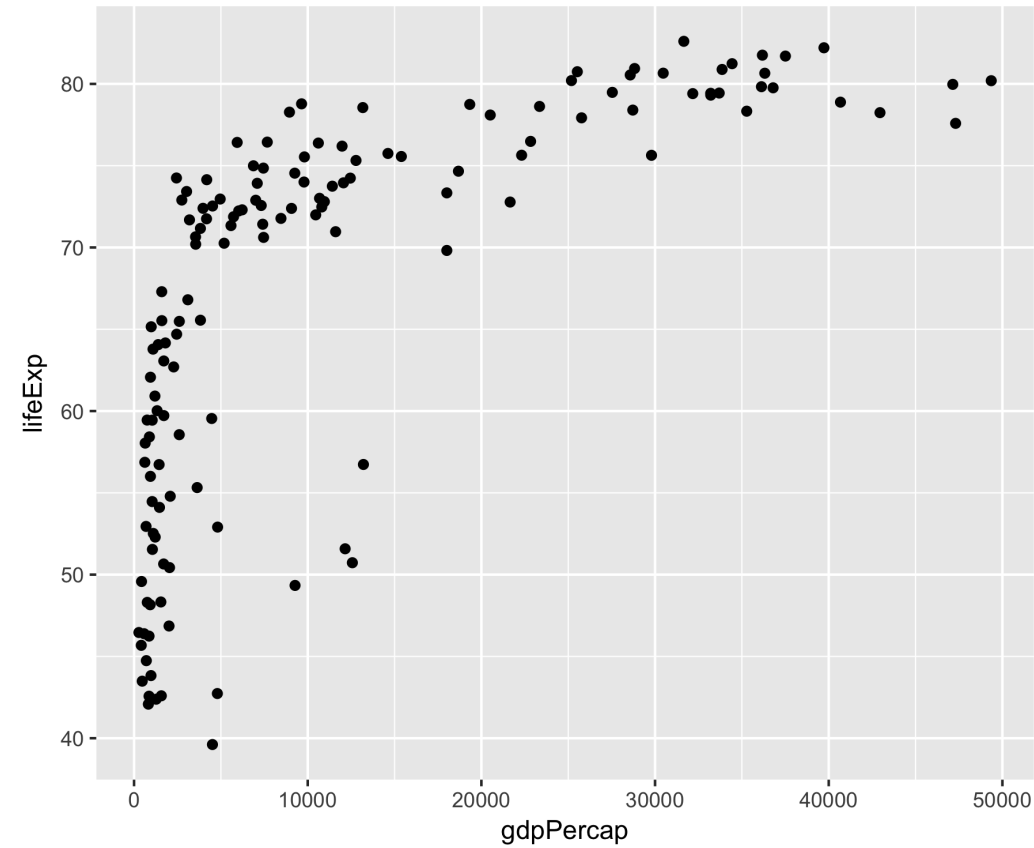
Variable Assignment

```
gapminder_2007 <- gapminder %>%  
  filter(year == 2007)
```

```
gapminder_2007
```

```
# A tibble: 142 x 6  
  country continent year lifeExp      pop gdpPercap  
  <fctr>    <fctr> <int>   <dbl>    <int>    <dbl>  
1 Afghanistan      Asia  2007  43.828  31889923  974.5803  
2   Albania    Europe  2007  76.423   3600523  5937.0295  
3   Algeria    Africa  2007  72.301  33333216  6223.3675  
4    Angola    Africa  2007  42.731  12420476  4797.2313  
5  Argentina Americas  2007  75.320  40301927 12779.3796  
6  Australia Oceania  2007  81.235  20434176 34435.3674  
7   Austria    Europe  2007  79.829   8199783 36126.4927  
8   Bahrain      Asia  2007  75.635    708573 29796.0483  
9 Bangladesh      Asia  2007  64.062 150448339 1391.2538  
10   Belgium    Europe  2007  79.441  10392226 33692.6051  
# ... with 132 more rows
```

Visualizing with ggplot2



```
library(ggplot2)
```

```
ggplot(gapminder_2007, aes(x = gdpPerCap, y = lifeExp)) +  
  geom_point()
```

Let's practice!

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Log scales

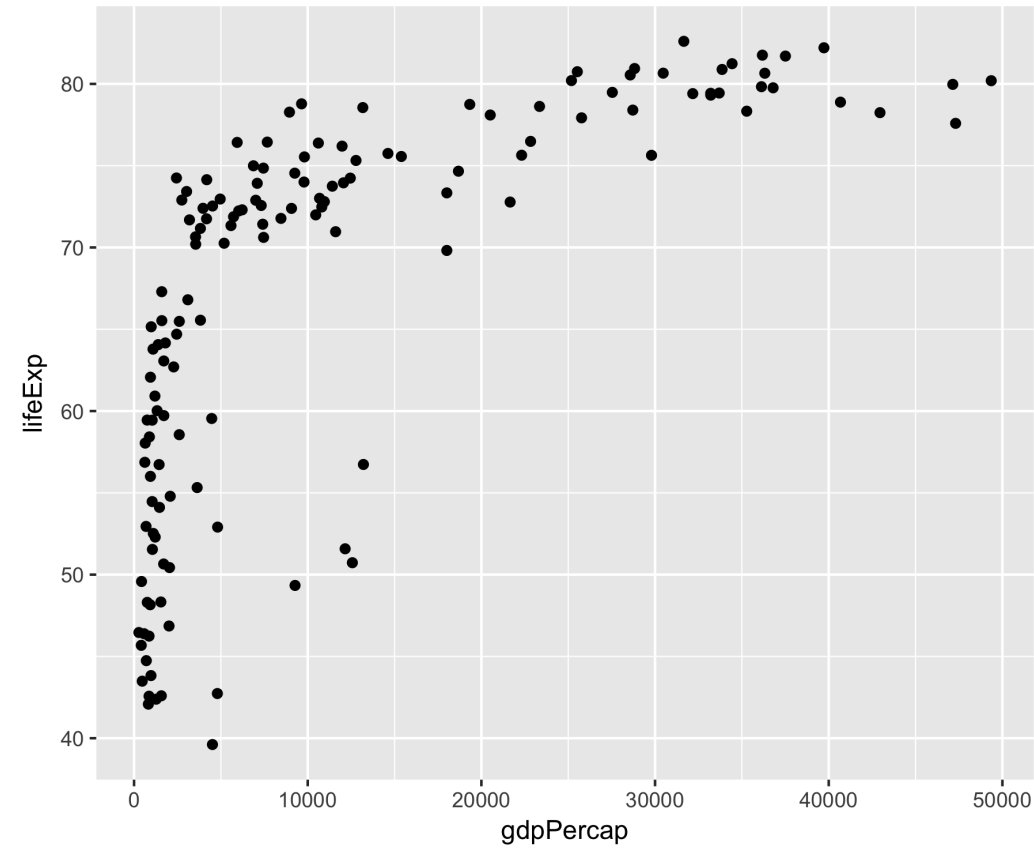
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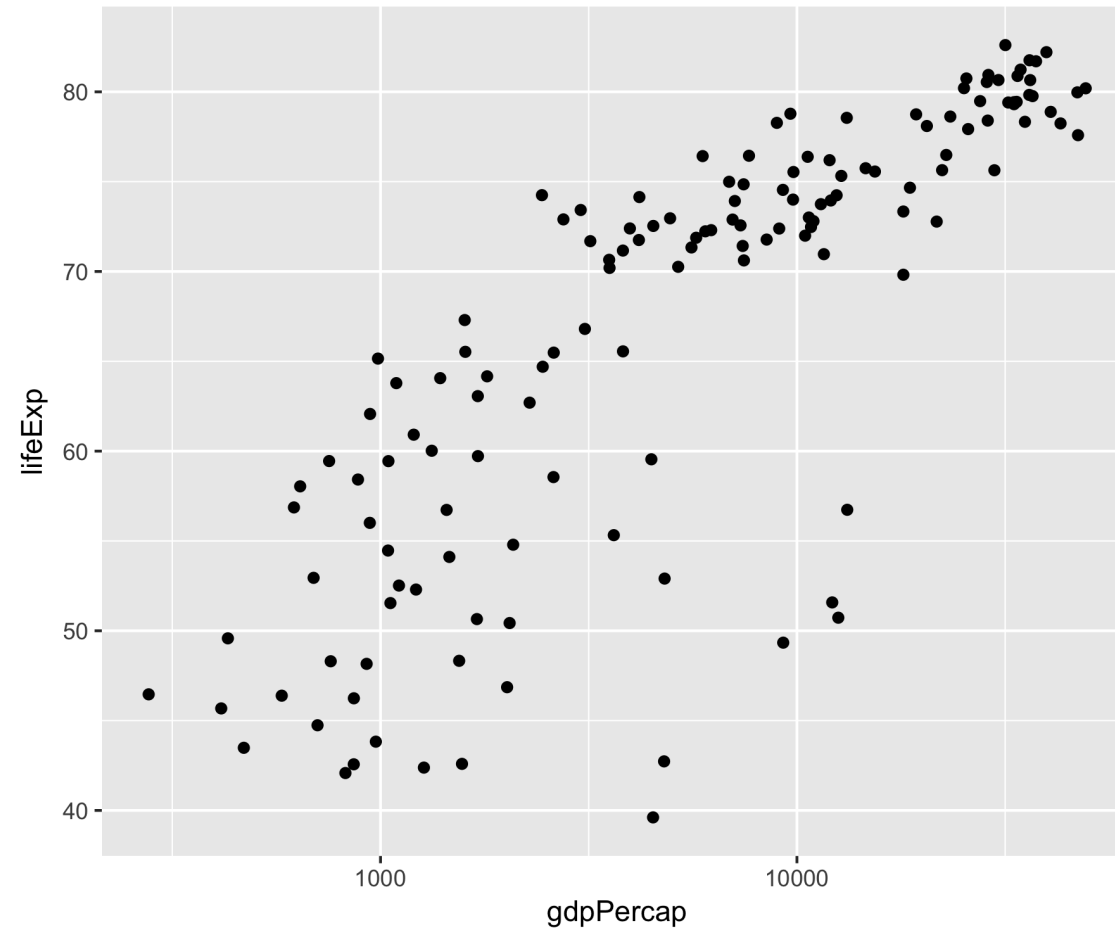
Scatter plot



```
library(ggplot2)

ggplot(gapminder, aes(x = gdpPerCap, y = lifeExp)) +
  geom_point()
```

Log scale



```
ggplot(gapminder_2007, aes(x = gdpPercap, y = lifeExp)) +  
  geom_point() +  
  scale_x_log10()
```


Let's practice!

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Additional aesthetics

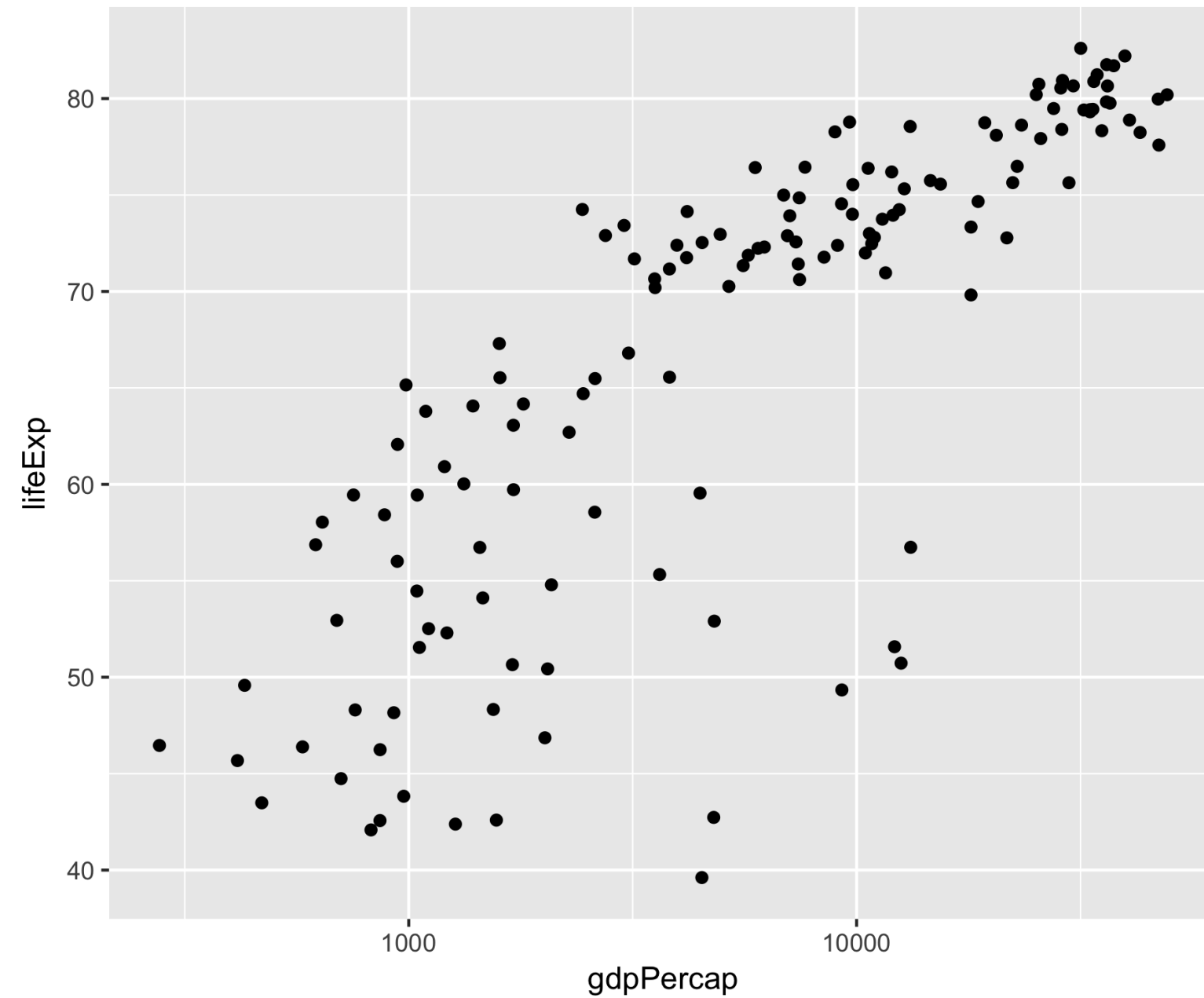
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Scatter plots



Additional variables

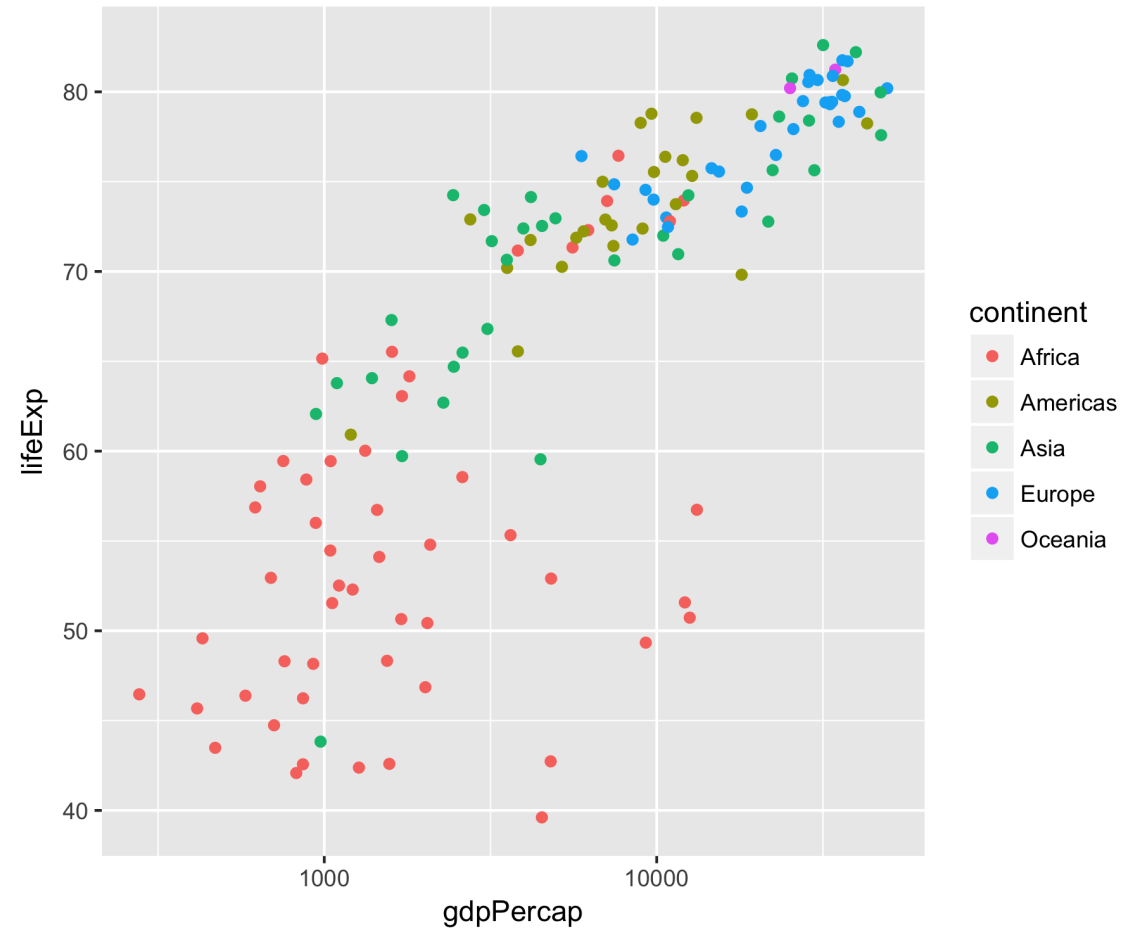
```
gapminder_2007
```

```
# A tibble: 142 x 6
```

	country	continent	year	lifeExp	pop	gdpPercap
	<fctr>	<fctr>	<int>	<dbl>	<dbl>	<dbl>
1	Afghanistan	Asia	2007	43.828	31889923	974.5803
2	Albania	Europe	2007	76.423	3600523	5937.0295
3	Algeria	Africa	2007	72.301	33333216	6223.3675
4	Angola	Africa	2007	42.731	12420476	4797.2313
5	Argentina	Americas	2007	75.320	40301927	12779.3796
6	Australia	Oceania	2007	81.235	20434176	34435.3674
7	Austria	Europe	2007	79.829	8199783	36126.4927
8	Bahrain	Asia	2007	75.635	708573	29796.0483
9	Bangladesh	Asia	2007	64.062	150448339	1391.2538
10	Belgium	Europe	2007	79.441	10392226	33692.6051

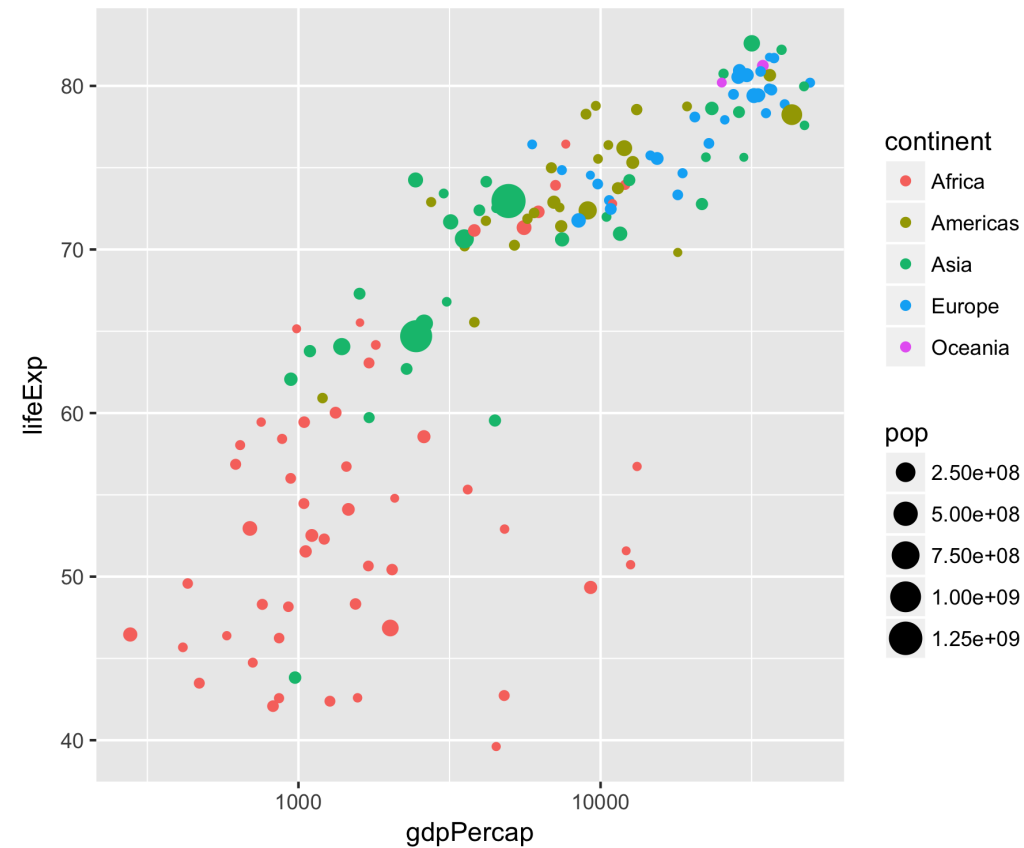
```
# ... with 132 more rows
```

The color aesthetic



```
ggplot(gapminder_2007, aes(x = gdpPerCap, y = lifeExp, color = continent)) +  
  geom_point() +  
  scale_x_log10()
```

The size aesthetic



```
ggplot(gapminder_2007, aes(x = gdpPercap, y = lifeExp, color = continent,  
                           size = pop)) +  
  geom_point() +  
  scale_x_log10()
```

Aesthetics

Aesthetic	Variable
x	gdpPerCap
y	lifeExp
color	continent
size	pop

Let's practice!

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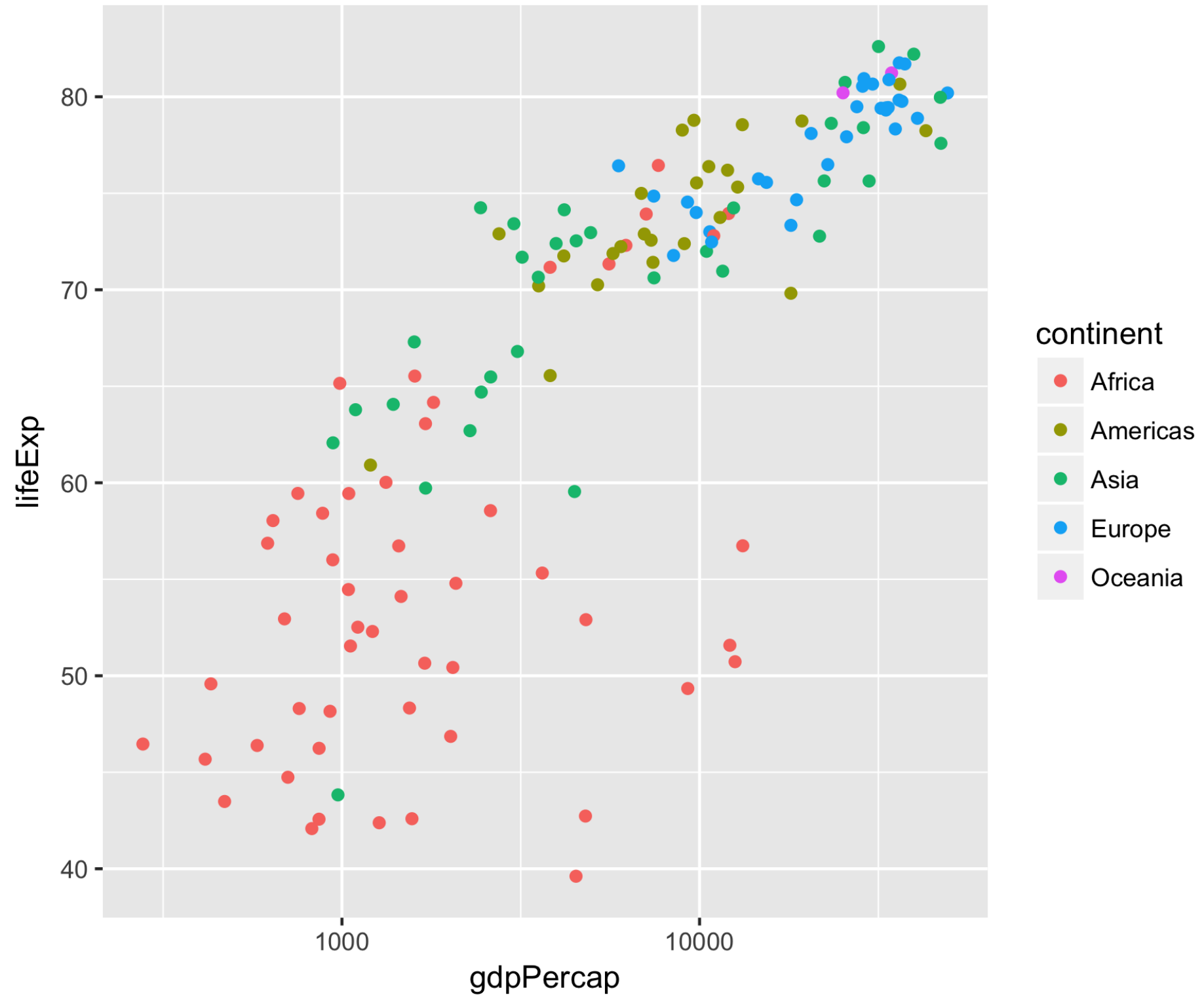
Faceting

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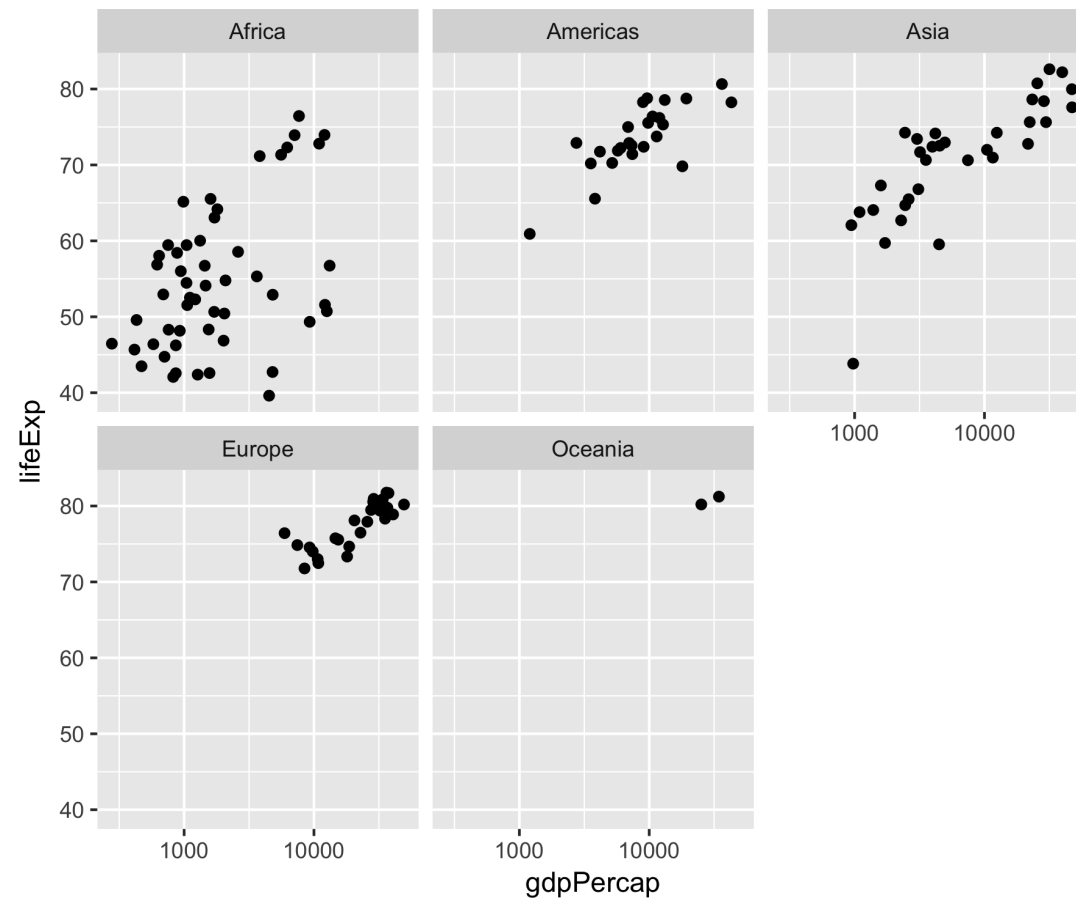


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Faceting



```
ggplot(gapminder_2007, aes(x = gdpPercap, y = lifeExp)) +  
  geom_point() +  
  scale_x_log10() +  
  facet_wrap(~ continent)
```



Let's practice!

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