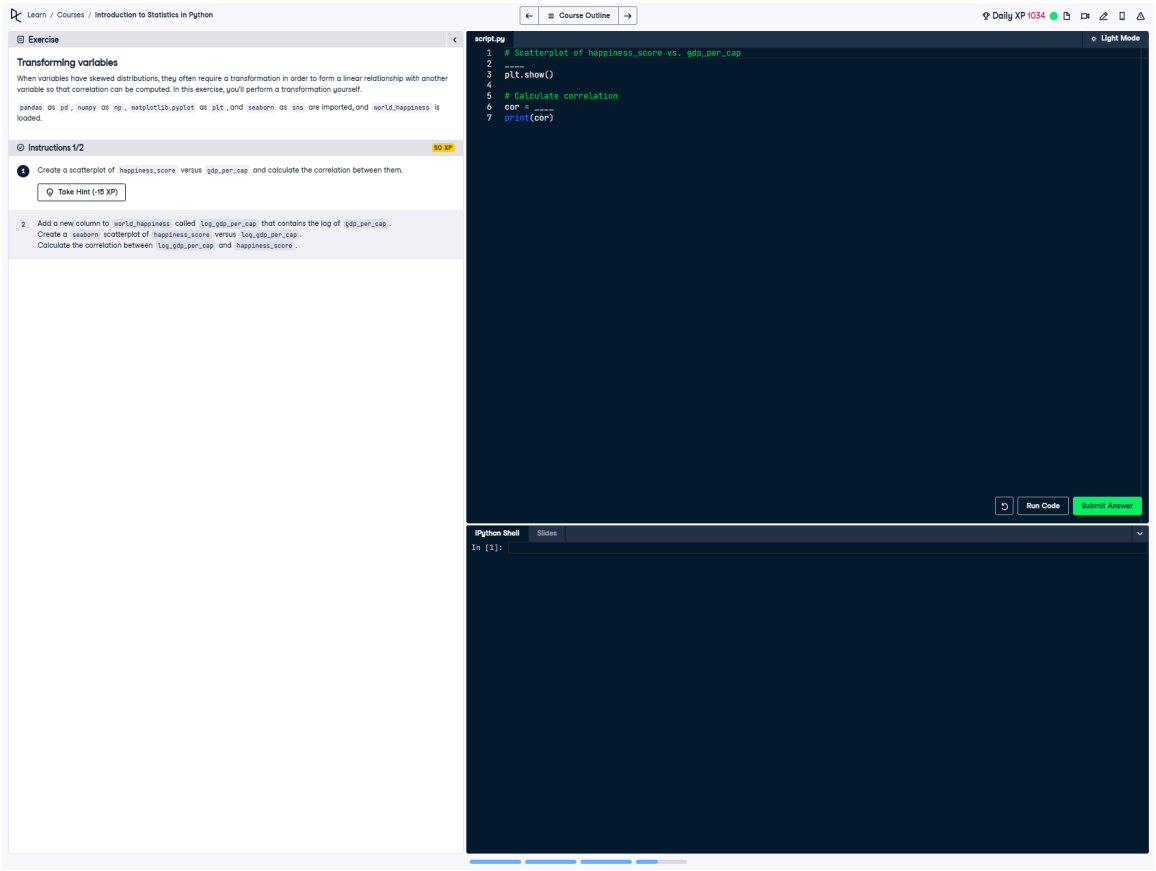
Transforming Variables for Linear Relationships (Corrected Answer)



Question:

When variables have skewed distributions, they require a transformation to form a linear relationship with another variable so that correlation can be computed. Perform the following tasks:

1. Create a scatterplot of `happiness_score` versus `gdp_per_cap`.
2. Calculate the correlation between `gdp_per_cap` and `happiness_score`.

Explanation of the Question:

This question involves visualizing the relationship between `gdp_per_cap` and `happiness_score` using a scatterplot and calculating their correlation coefficient to assess the strength of the linear relationship.

Corrected Answer:

```
# Import necessary libraries
import seaborn as sns
```

```
import matplotlib.pyplot as plt

# Scatterplot of happiness_score vs. gdp_per_cap
sns.scatterplot(x='gdp_per_cap', y='happiness_score',
data=world_happiness)
plt.show()

# Calculate correlation
cor =
world_happiness['gdp_per_cap'].corr(world_happiness['happiness_score'])
print(cor)
```

Explanation of the Corrected Answer:

The scatterplot is created using seaborn's `scatterplot` function, with `gdp_per_cap` on the x-axis and `happiness_score` on the y-axis. The `corr()` function computes the Pearson correlation coefficient, quantifying the strength of the linear relationship between the two variables.