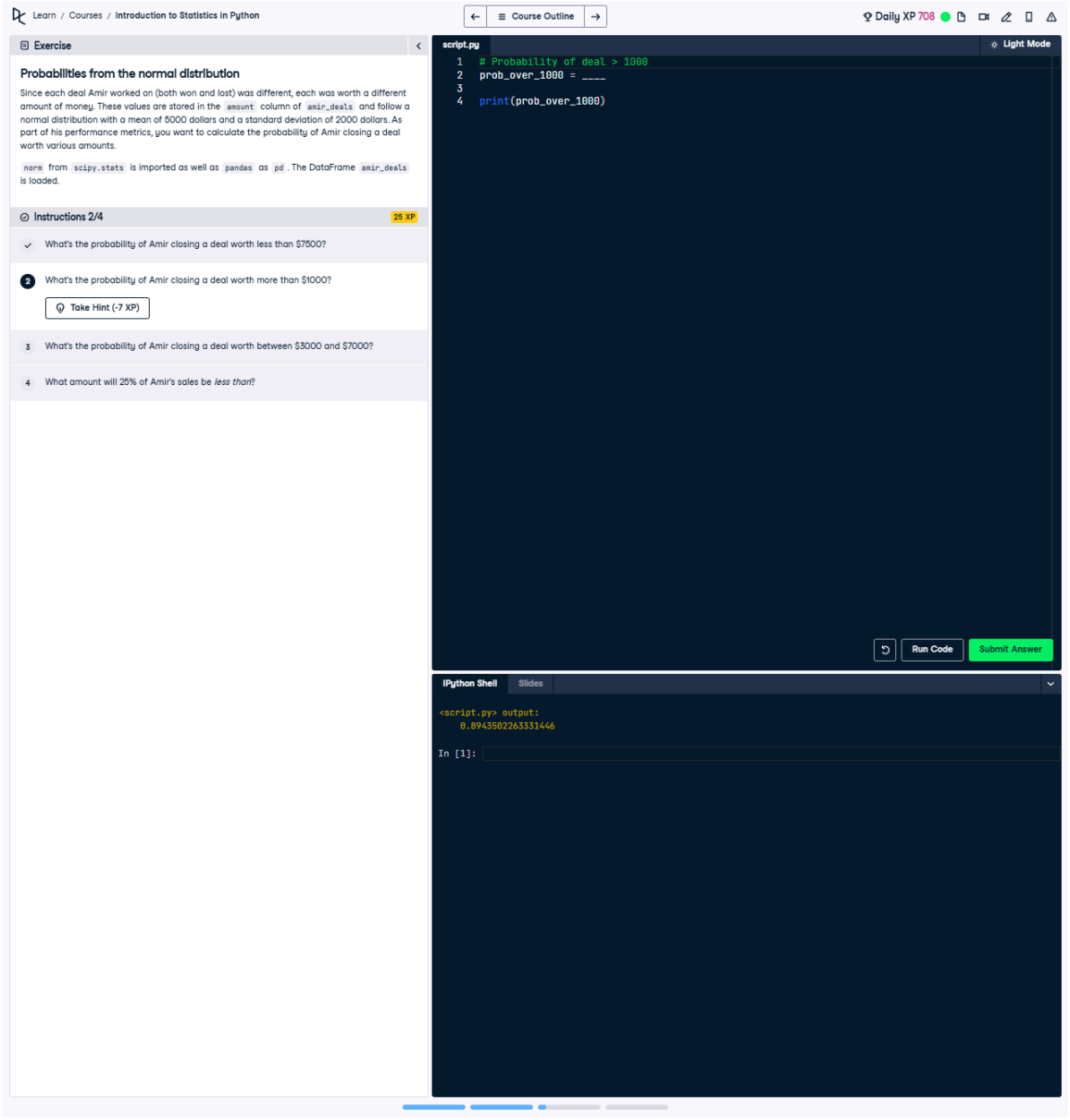
Probabilities from the Normal Distribution



Question:

What's the probability of Amir closing a deal worth more than $1000?
Given: Amir's deals follow a normal distribution with a mean of 5000 dollars and a standard deviation of 2000 dollars.

Explanation of the Question:

This task involves calculating the probability of closing a deal worth more than 1000 dollars using a normal distribution. The probability for values

greater than a given number is determined by subtracting the CDF value at that number from 1.

Answer:

```
from scipy.stats import norm

# Calculate the probability of closing a deal worth more than $1000
prob_over_1000 = 1 - norm.cdf(1000, loc=5000, scale=2000)

print(prob_over_1000)
```

Explanation of the Answer:

The `norm.cdf` function calculates the cumulative probability of values less than 1000 in a normal distribution (mean=5000, std=2000). Subtracting this value from 1 gives the probability of values greater than 1000. This result indicates the likelihood of closing a deal exceeding $1000.