In [5]:
```
# 연습문제 01 , p181
from scipy.stats import uniform

a = 0
b = 10
x = 7
x1 = 2

prob = 1 - uniform.cdf(x, a, b-a)
print(f'승객이 7분 이상 기다릴 확률 : {round((prob), 1)}')
prob = uniform.cdf(x1, a, b-a) - uniform.cdf(x, a, b-a)
print(f'승객이 2분에서 7분 이상 기다릴 확률 : {round((abs(prob)), 1)}')
```

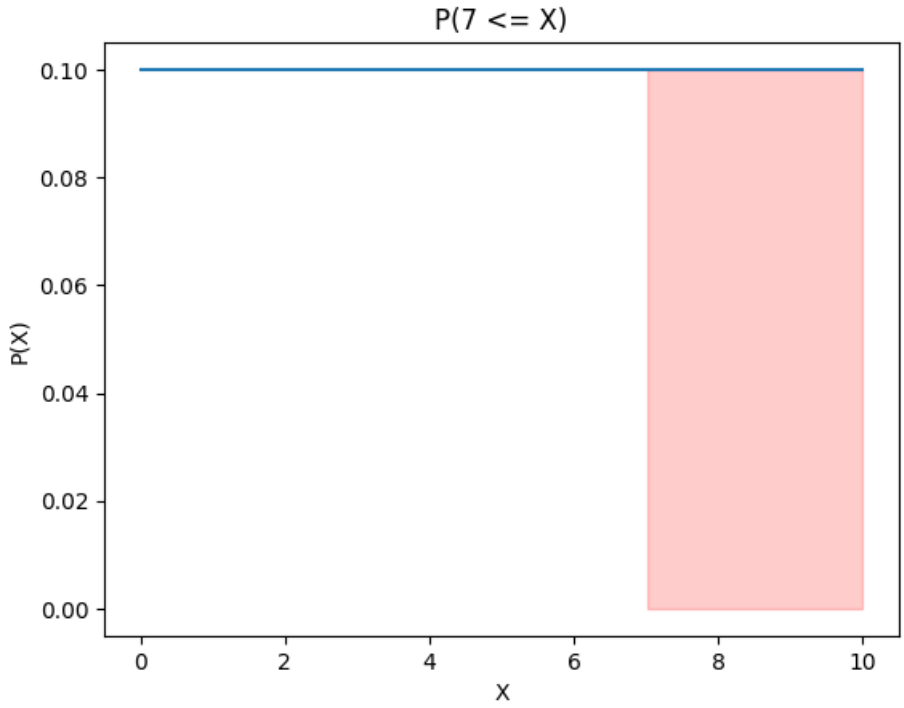
```
승객이 7분 이상 기다릴 확률 : 0.3
승객이 2분에서 7분 이상 기다릴 확률 : 0.5
```

In [13]:
```
# 연습문제 01 , p181, + 시각화 - 1
import matplotlib.pyplot as plt
import numpy as np
from scipy.stats import uniform

a = 0
b = 10
x = np.linspace(a, b, 1000)
y = uniform.pdf(x, a, b-a)

fig, ax = plt.subplots()
ax.plot(x, y)
ax.fill_between(x, y, where=(x >= 7), color='red', alpha=0.2)
ax.set_xlabel('X')
ax.set_ylabel('P(X)')
ax.set_title('P(7 <= X)')

plt.show()
```



In [14]:

```
# 연습문제 01 , p181, + 시각화 - 2
import matplotlib.pyplot as plt
import numpy as np
from scipy.stats import uniform

a = 0
b = 10
x = np.linspace(a, b, 1000)
y = uniform.pdf(x, a, b-a)

fig, ax = plt.subplots()
ax.plot(x, y)
ax.fill_between(x, y, where=(2 <= x) & (x <= 7), color='red', alpha=0.2)
ax.set_xlabel('X')
ax.set_ylabel('P(X)')
ax.set_title('P(2 <= X <= 7)')

plt.show()
```