while Loop: Conditional Iteration

Start: price = 100

while price < 150?

Repeat

True

False

Increase price:

`price *= 1.05`

(5% increase)

Exit loop:

`price >= 150`
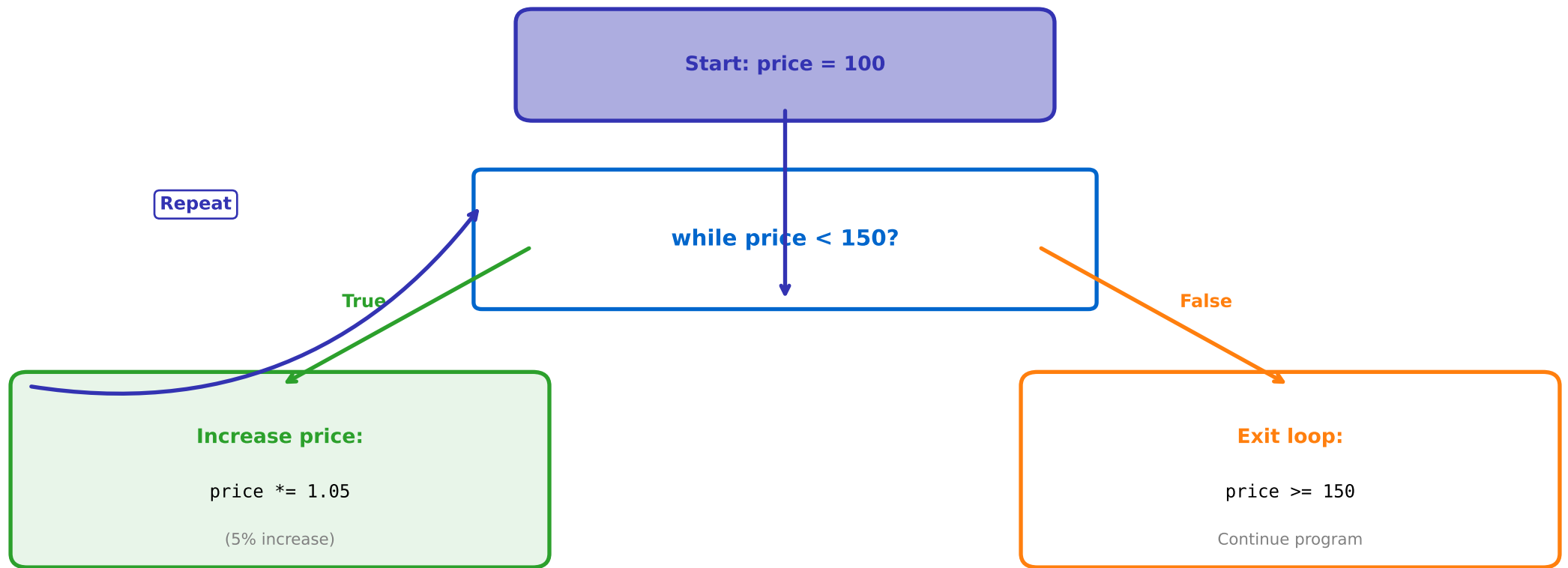
Continue program

while Loop Example: Growth Simulation

```python
# Simulate stock price growth until target

price = 100.00

target = 150.00

years = 0

growth_rate = 0.05  # 5% per year


while price < target:

    price *= (1 + growth_rate)

    years += 1

    print(f"Year {years}: ${price:.2f}")


print(f"Reached ${target} in {years} years")


# Output: Reached $150.00 in 9 years
```