


Step-by-Step Explanation:

1. Function Decorator Creation:

- First, we create a decorator function, which will take another function (like `say_hello()`) as an argument. We usually name this argument `func` to show that it's a function.

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```
def simple_decorator(func):  
    def wrapper():  
        print("Function se pehle kuch ho raha hai")  
        func() # This is where the original function (like say_hello) is called  
        print("Function ke baad kuch ho raha hai")  
    return wrapper
```

- `func` yahan par `say_hello()` jaisa koi bhi function ho sakta hai. Jab `func()` likha gaya hai, tab yeh `say_hello()` ko call karega.

2. Applying the Decorator:

- Now, when you apply the decorator to a function using `@simple_decorator`, Python automatically passes the `say_hello()` function as the `func` parameter to `simple_decorator`.

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```
@simple_decorator  
def say_hello():  
    print("Hello!")
```



- This means, `@simple_decorator`` se ``say_hello`` ko decorate karte hi, Python ``say_hello`` function ko ``simple_decorator`` function mein ``func`` ke naam se pass kar deta hai.


3. Wrapper Function Returns:

- The ``simple_decorator`` function returns the ``wrapper`` function, which now becomes the new version of ``say_hello()``. Essentially, ``say_hello()`` ab ``wrapper()`` function ban gaya hai.

4. Calling the Function:

- Finally, when you call ``say_hello()``, what you're really calling is the ``wrapper()`` function.

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```
say_hello()
```

- When you run ``say_hello()``, the following happens:
 - ``wrapper()`` function executes.
 - Inside ``wrapper()``, ``func()`` is called, which is the original ``say_hello()`` function.
 - The extra code before and after ``func()`` runs as well.

Final Code in Summary:

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```
def simple_decorator(func): # 'func' is 'say_hello' here
    def wrapper(): # 'wrapper' is the new version of 'say_hello'
        print("Function se pehle kuch ho raha hai")
        func() # Call the original 'say_hello'
        print("Function ke baad kuch ho raha hai")
    return wrapper # Return 'wrapper' as the new 'say_hello'

@simple_decorator
def say_hello():
    print("Hello!")

say_hello() # This actually calls 'wrapper()'
```

So, when you call `say_hello()`, you're actually running the `wrapper()` function, which includes both the original `say_hello()` (referred to as `func()`) and the extra code that the decorator adds.