


Cake and Frosting Analogy

1. Basic Cake (Function):

Imagine you have a basic cake recipe (your main function) that just bakes a plain cake.

python


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```
def bake_cake():  
    print("Baking a plain cake")
```

2. Frosting (Decorator):

Now, you want to add some frosting to make your cake more exciting. The frosting function is like a decorator that adds something extra to your cake (the original function).

python


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```
def add_frosting(cake):  
    def decorated_cake():  
        print("Adding frosting on the cake")  
        cake() # Call the original cake function  
        print("Cake is now ready with frosting!")  
    return decorated_cake
```

3. Applying Frosting:

You use the `@` symbol to apply frosting to your cake, making it more special.

python


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```
@add_frosting  
def bake_cake():  
    print("Baking a plain cake")
```

4. Making the Cake:

When you call the `bake_cake()` function, it will include both the plain cake baking and the frosting.


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```
bake_cake()
```

Output:

csharp

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```
Adding frosting on the cake
Baking a plain cake
Cake is now ready with frosting!
```

Summary:

- `bake_cake`` is your basic cake.
- `add_frosting`` is the decorator that adds extra steps (frosting) before and after baking the cake.
- When you call `bake_cake()`, it's like enjoying a cake with frosting on top, thanks to the decorator!