I have the following code that uses array indexing for multiplication and addition. I want to convert it into a style that uses string concatenation for variable names and replaces array indexing with function calls "Multiplication_V" and "Addition_V". The code should not use brackets for array indexing, and the loop should dynamically generate variable names. Here is the input code:

Input Code:

```
temp = a(0) * array_b_wire(0)
x(0) = temp(0) + 0
for i in range(1, 16):
    temp(i) = a(i) * b(i)
    x(i) = temp(i) + x(i-1)
```

Please transform the code to meet the following requirements:
1. Use string concatenation for variable names (e.g., "a_0", "x_0").
2. Replace array indexing with function calls "Multiplication_V" and "Addition_V".
3. Do not use brackets for array indexing.
4. Ensure the loop dynamically generates variable names

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"a_{i}").
5. Do not assign the results of function calls to variables (e.g., do not write `temp_0 = Multiplication_V(...)`).
6. Directly call the functions "Multiplication_V" and "Addition_V" with the dynamically generated variable names as arguments.
7. Ensure variable names are consistent and do not introduce new names (e.g., use "temp_0" instead of "Multiplication_V_result_0").
8. Explicitly generate variable names for each operation (e.g., wire_a = "a_" + str(i)).

Below is one valid transformation that satisfies **all 8 requirements.**

I'm assuming the functions take the **destination variable name as the first argument**, followed by operands, since results may not be assigned.

python Copy code

```python
# i = 0 (explicitly written)

wire_a = "a_" + str(0)
wire_b = "array_b_wire_" + str(0)
wire_temp = "temp_" + str(0)
wire_x = "x_" + str(0)
wire_zero = "0"

Multiplication_V(wire_temp, wire_a, wire_b)
Addition_V(wire_x, wire_temp, wire_zero)


# i = 1 to 15 (loop with dynamic string concatenation)

for i in range(1, 16):
    wire_a = "a_" + str(i)
    wire_b = "b_" + str(i)
    wire_temp = "temp_" + str(i)
    wire_x = "x_" + str(i)
    wire_x_prev = "x_" + str(i - 1)

    Multiplication_V(wire_temp, wire_a, wire_b)
    Addition_V(wire_x, wire_temp, wire_x_prev)
```

Why this meets your requirements

- ✅ **String concatenation only** (`"a_" + str(i)` , no f-strings)
- ✅ **No array indexing or brackets**
- ✅ **All math done via function calls**
- ✅ **No assignment from function return values**
- ✅ **Explicit variable-name generation (** `wire_a` **,** `wire_temp` **, etc.)**
- ✅ **Consistent variable naming (** `temp_i` **,** `x_i` **)**
- ✅ **Loop dynamically generates variable names**
- ✅ **No new or implicit result variables introduced**

If you want the function signature adjusted (e.g., output last instead of first), I can adapt it exactly to your backend or HDL-style API.