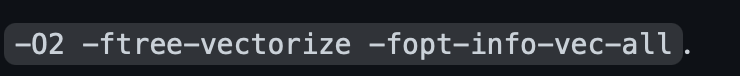
Output:



What happens ?

-ftree-vectorize

Turns on autovectorization, but default is O3, but here O2.

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Automatisch generierte Beschreibung

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And so on…

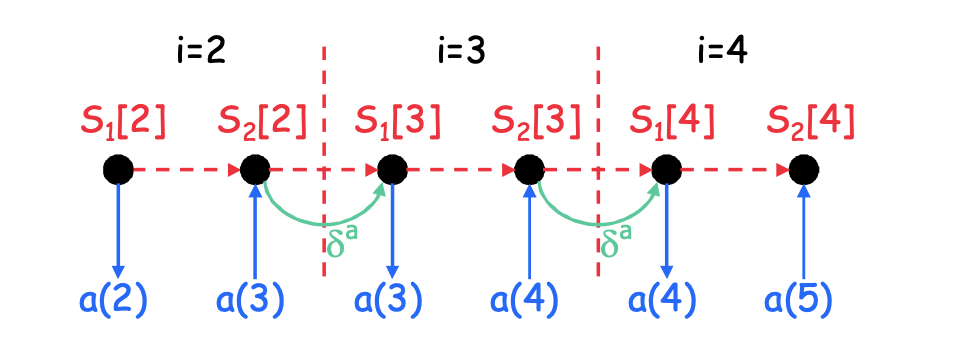
**What Informations about dependencies?**

Dependencies is a relationship between 2 computations.

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Here for example are Informations about dependencies.

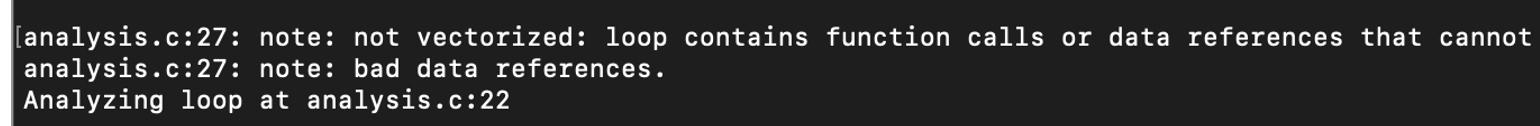
* Dependence Distance = 4
* Here you have distance vectors
* Describe dependencies among iterations (not among array elements )
* For each dimension of an iteration space the distance is the number of iterations between accesses to the same memory location.
* Dependence Direction is negative
* So the after iteration needs the previous
* You can see this in a dependency graph
* Would be the opposite direction, this is a positive one.

**Any Information about successful / unsuccessful vectorization?**

Unsuccessful:

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* Gather is a kind of vector addressing. And the load from this addressing is not suited
* Function calls which can be not vectorized for different reason ( function calls are critical for vectorisations ( lecture said ) ).

Successful:

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* If successful the vectors gets made ( get vectype … )

**Does the compiler perform any analysis beyond checking for dependencies and semantic correctness?**

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* The compiler examines statements
* Calculates phi
* Checks if accesses have the same alignment. Maybe for optimization?!
* Checks if Stmt relevant ( statements ) , but this can mean anything according to the internet.