Call Stack

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- When you call a function, the system sets aside space in memory for that function to do its necessary work.
  - We frequently call such chunks of memory **stack frames** or **function frames**.

- More than one function's stack frame may exist in memory at a given time. If `main()` calls `move()`, which then calls `direction()`, all three functions have open frames.

Call Stack

- These frames are arranged in a **stack**. The frame for the most-recently called function is always on the top of the stack.

- When a new function is called, a new frame is **pushed** onto the top of the stack and becomes the active frame.

- When a function finishes its work, its frame is **popped** off of the stack, and the frame immediately below it becomes the new, active, function on the top of the stack. This function picks up immediately where it left off.

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    if (n == 1)
        return 1;
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int main(void)
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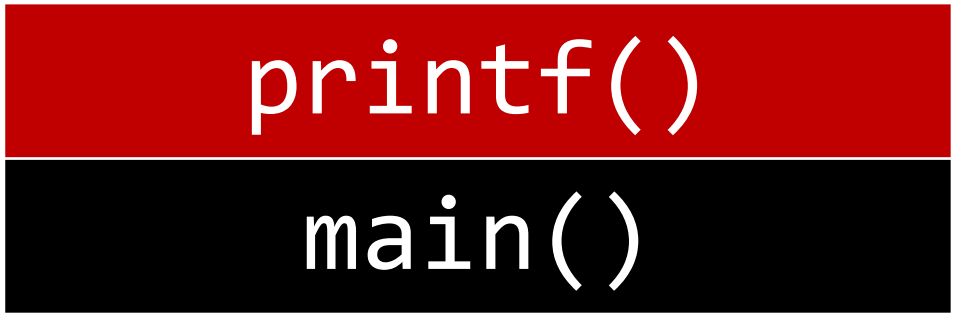

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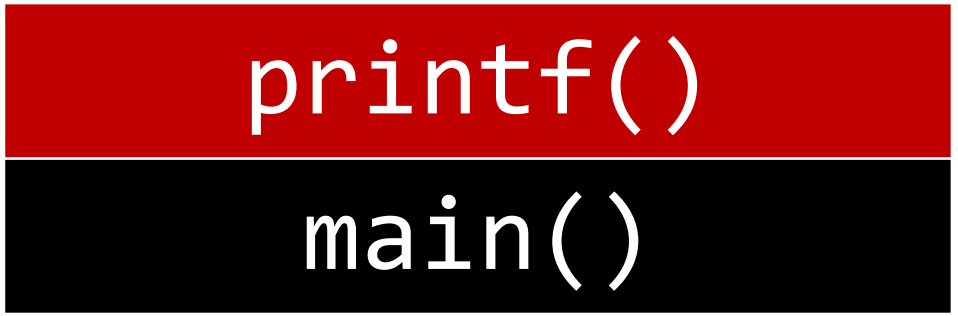

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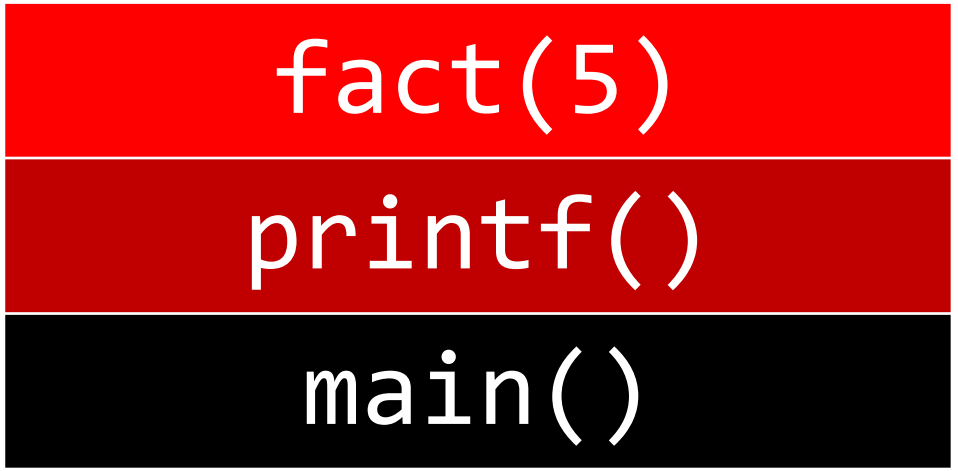

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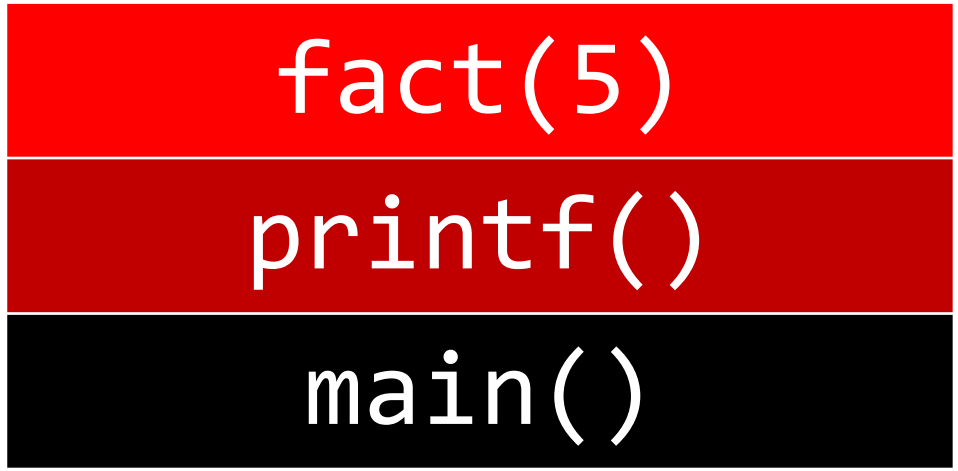

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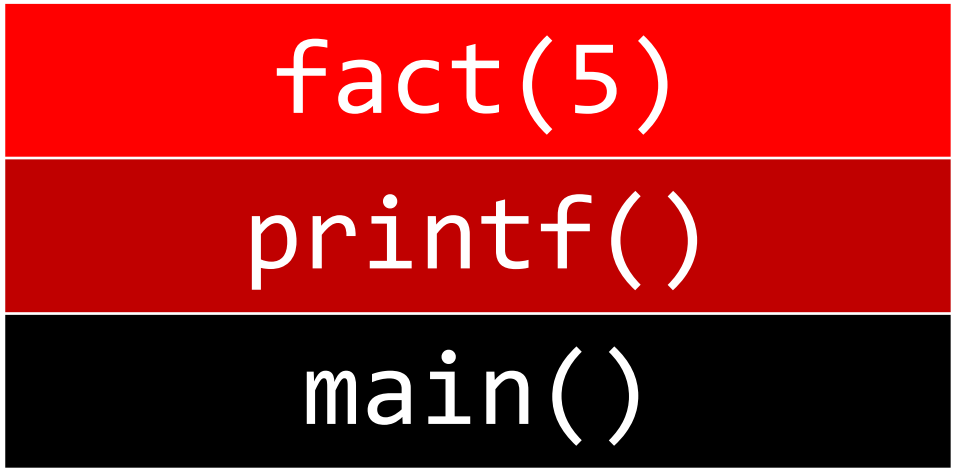

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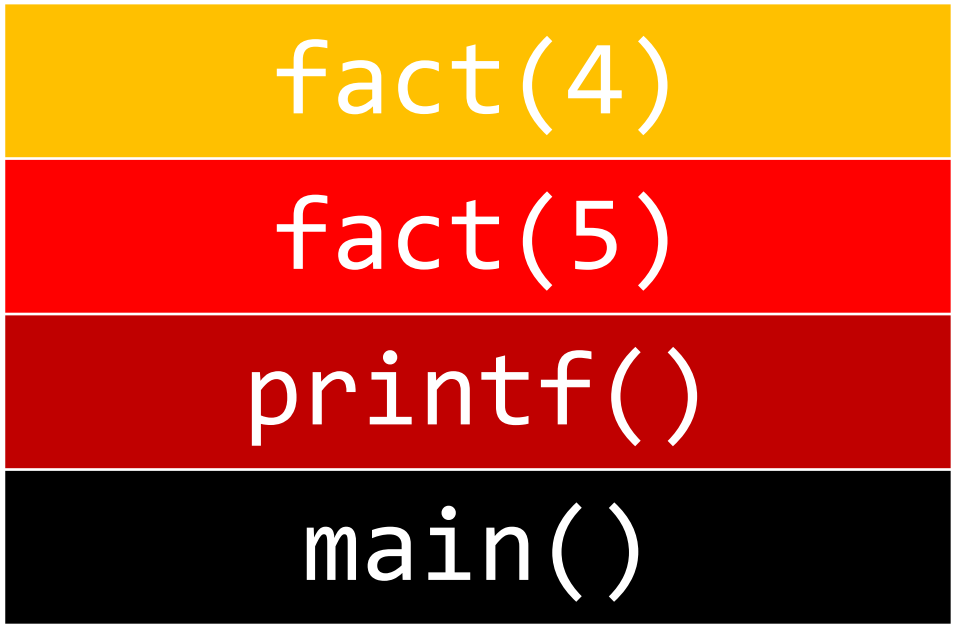

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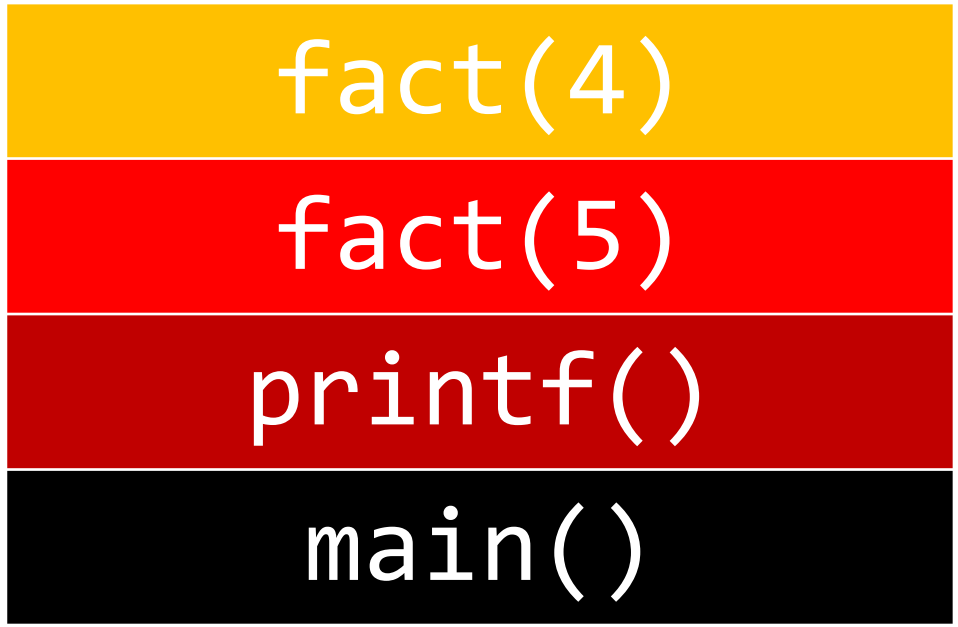

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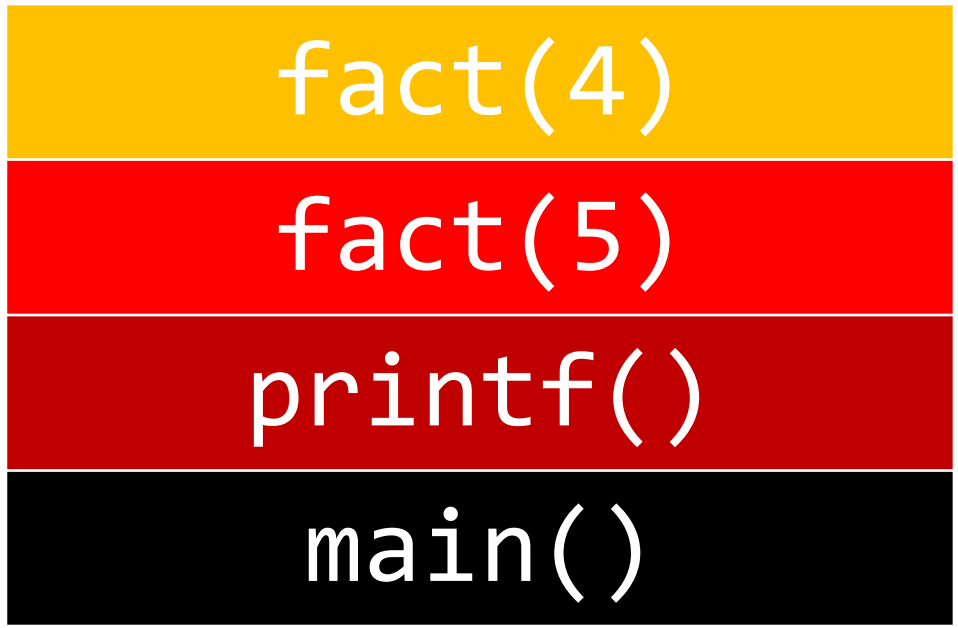

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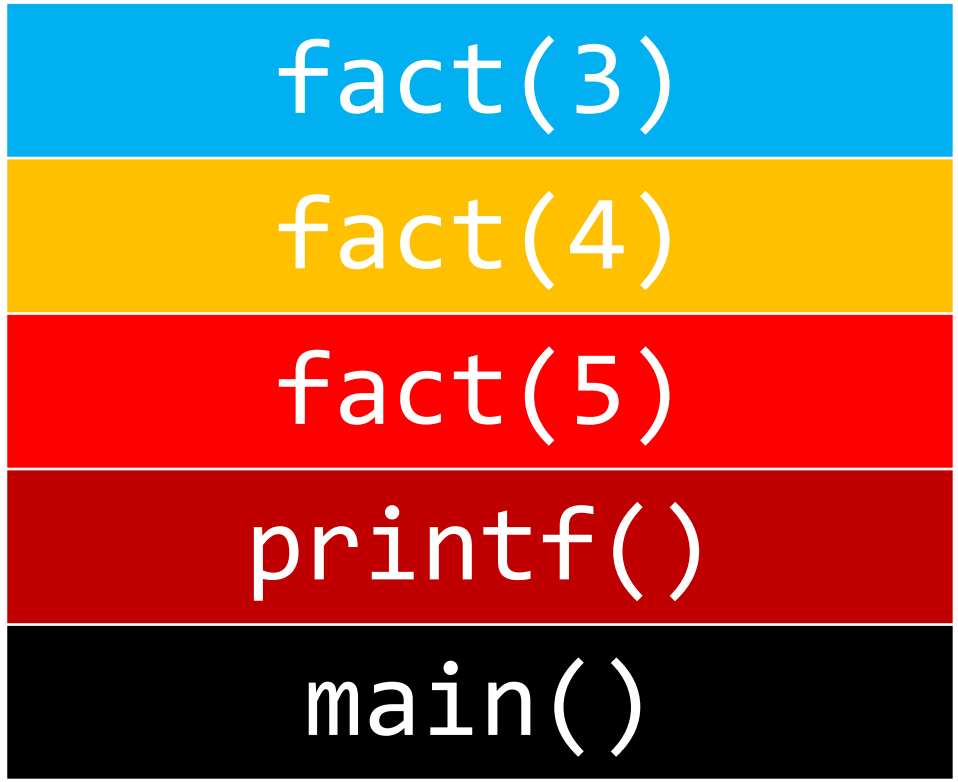

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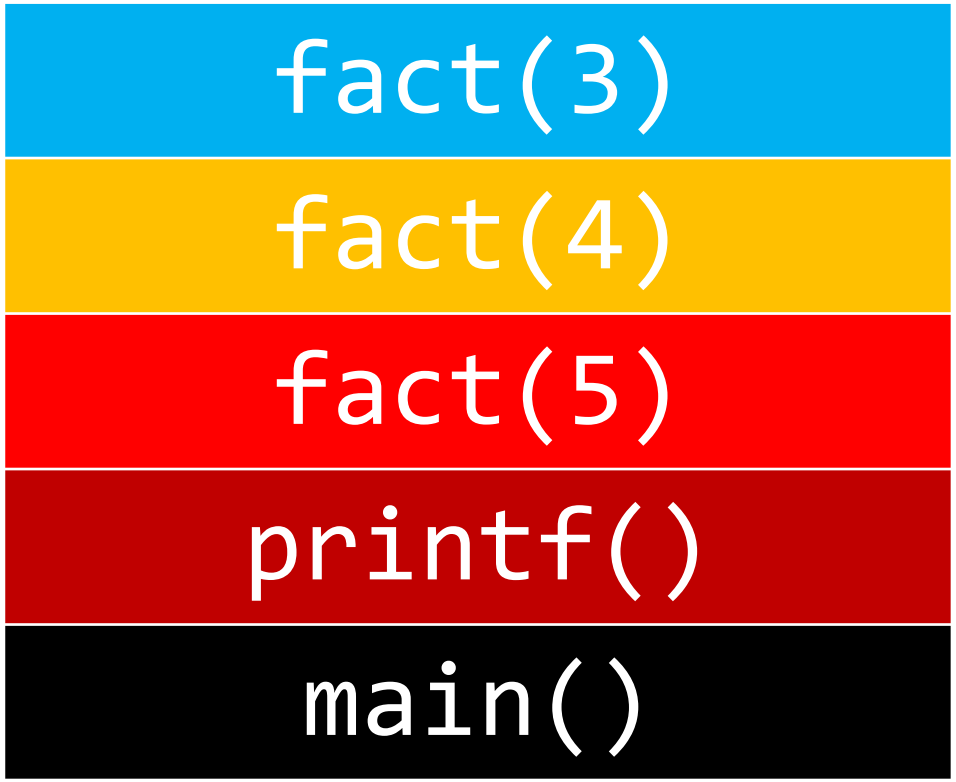

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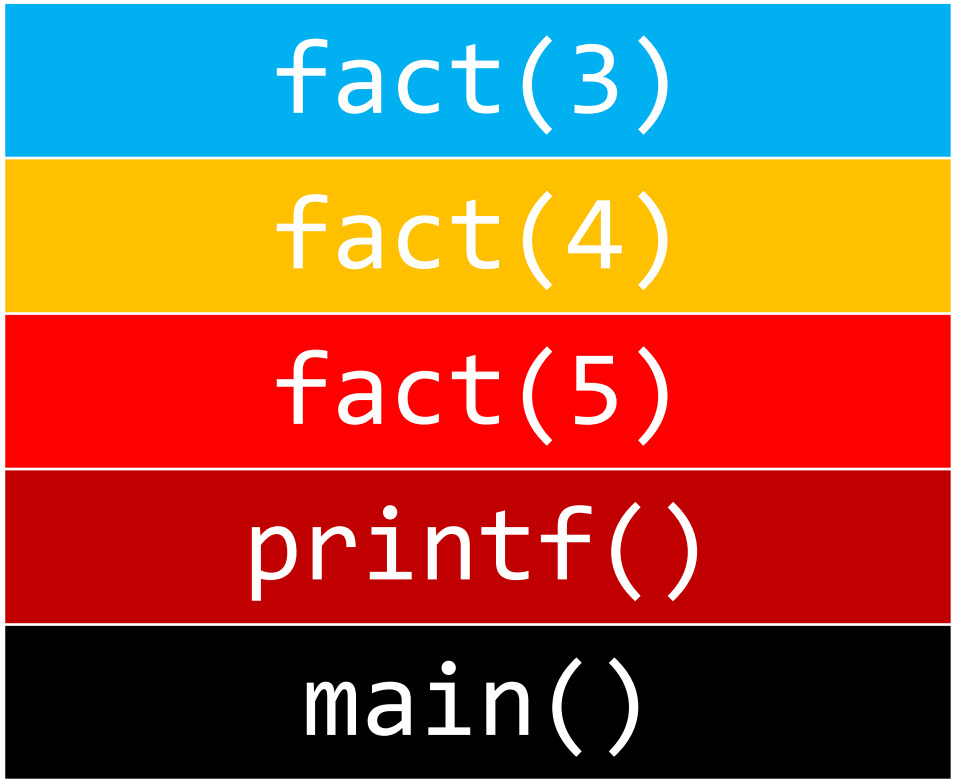

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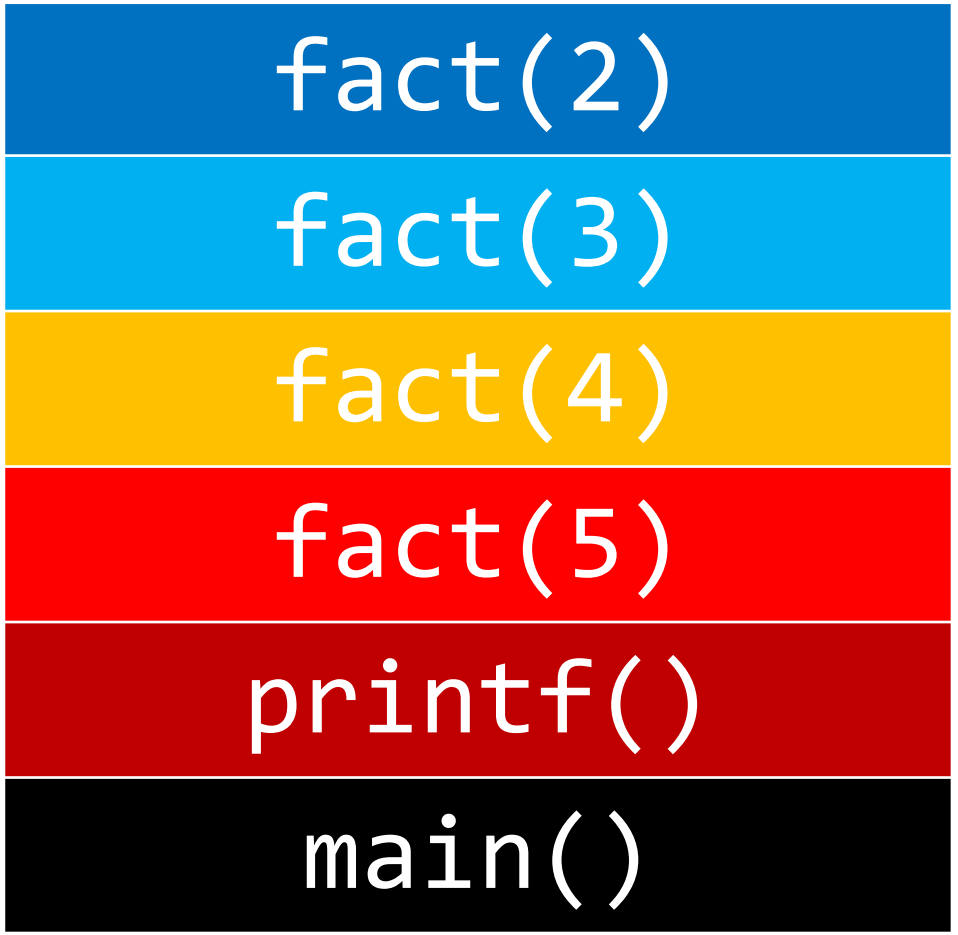

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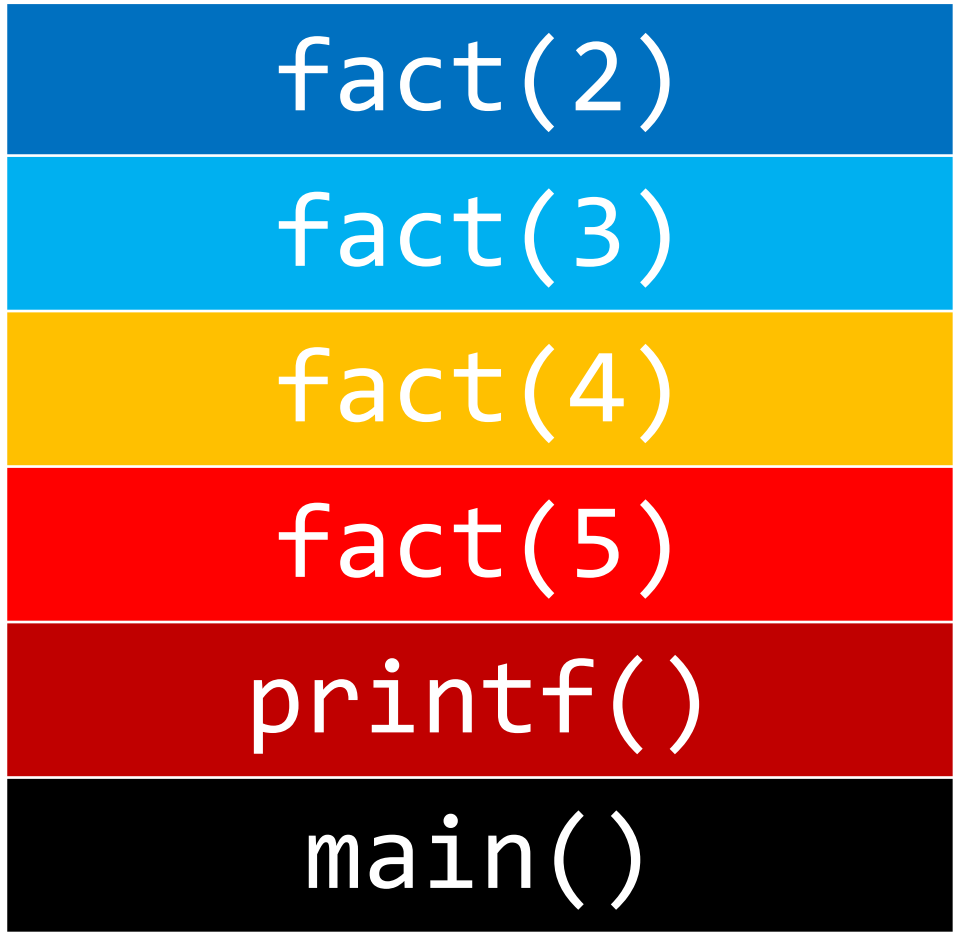

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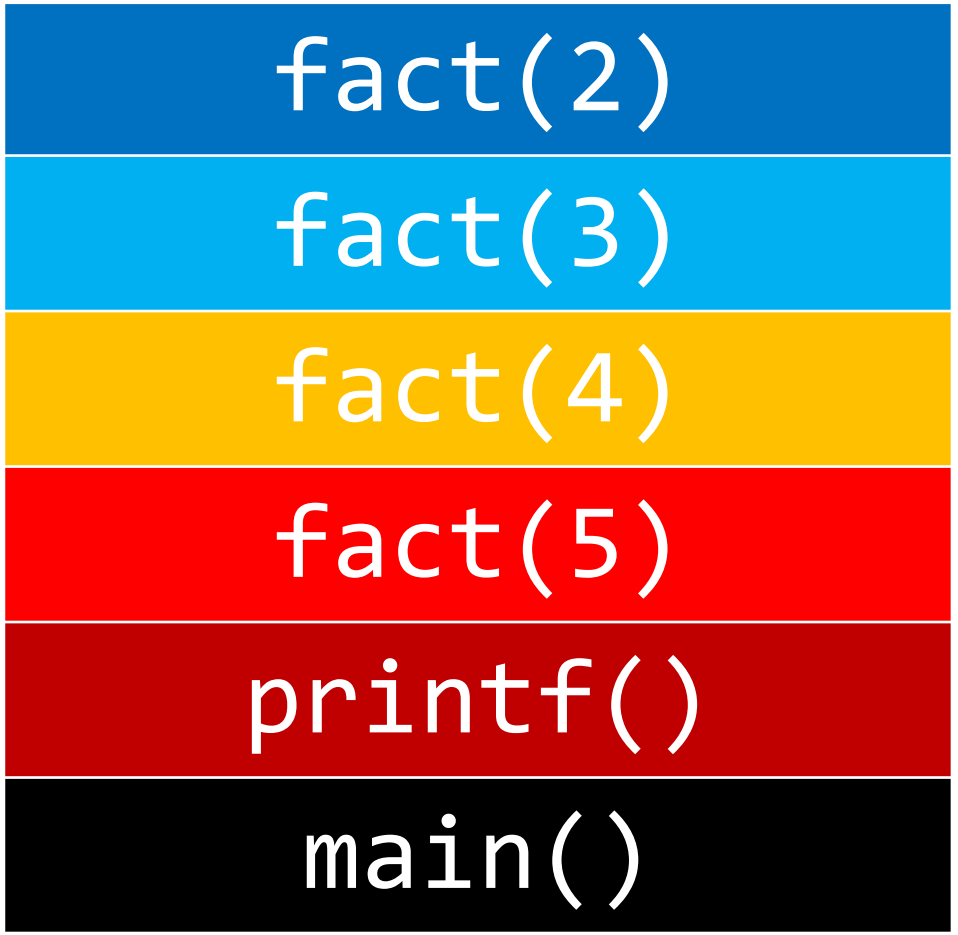

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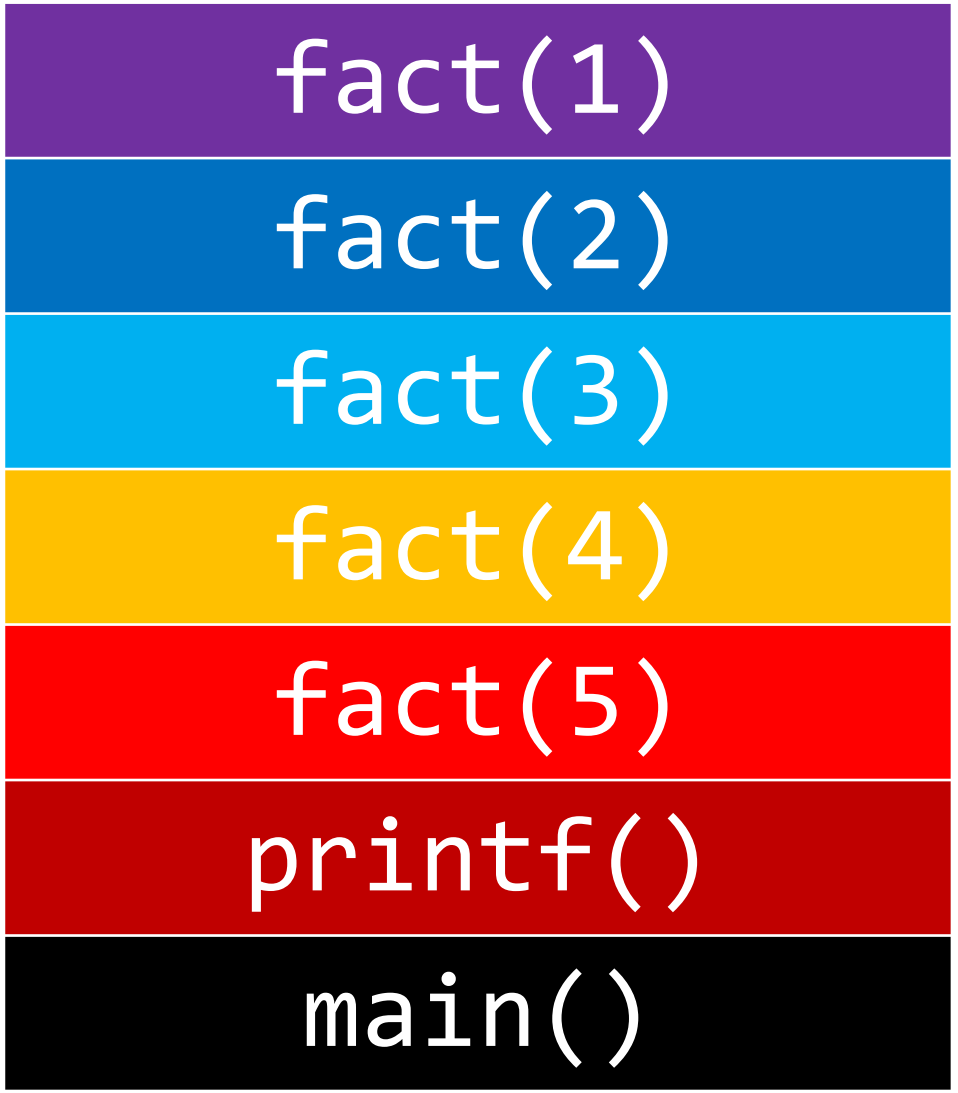

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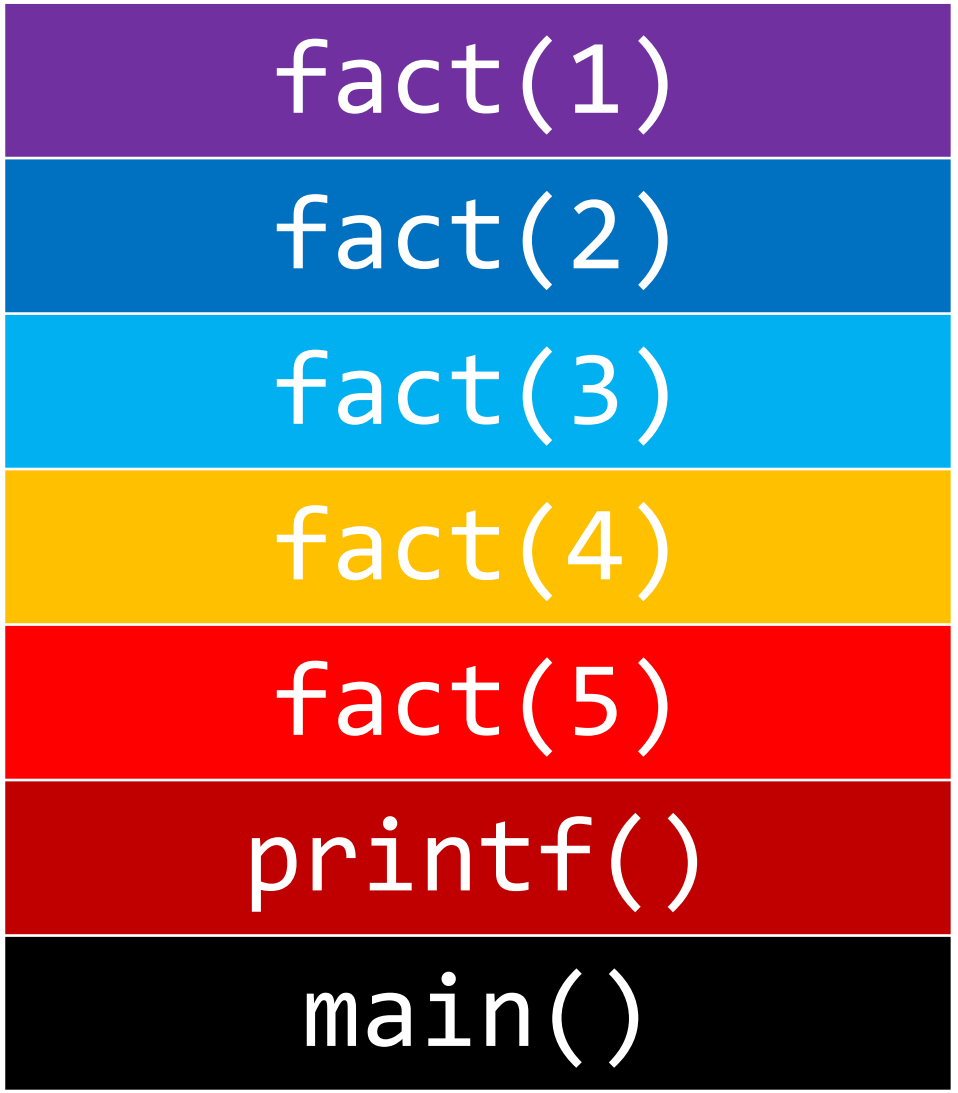

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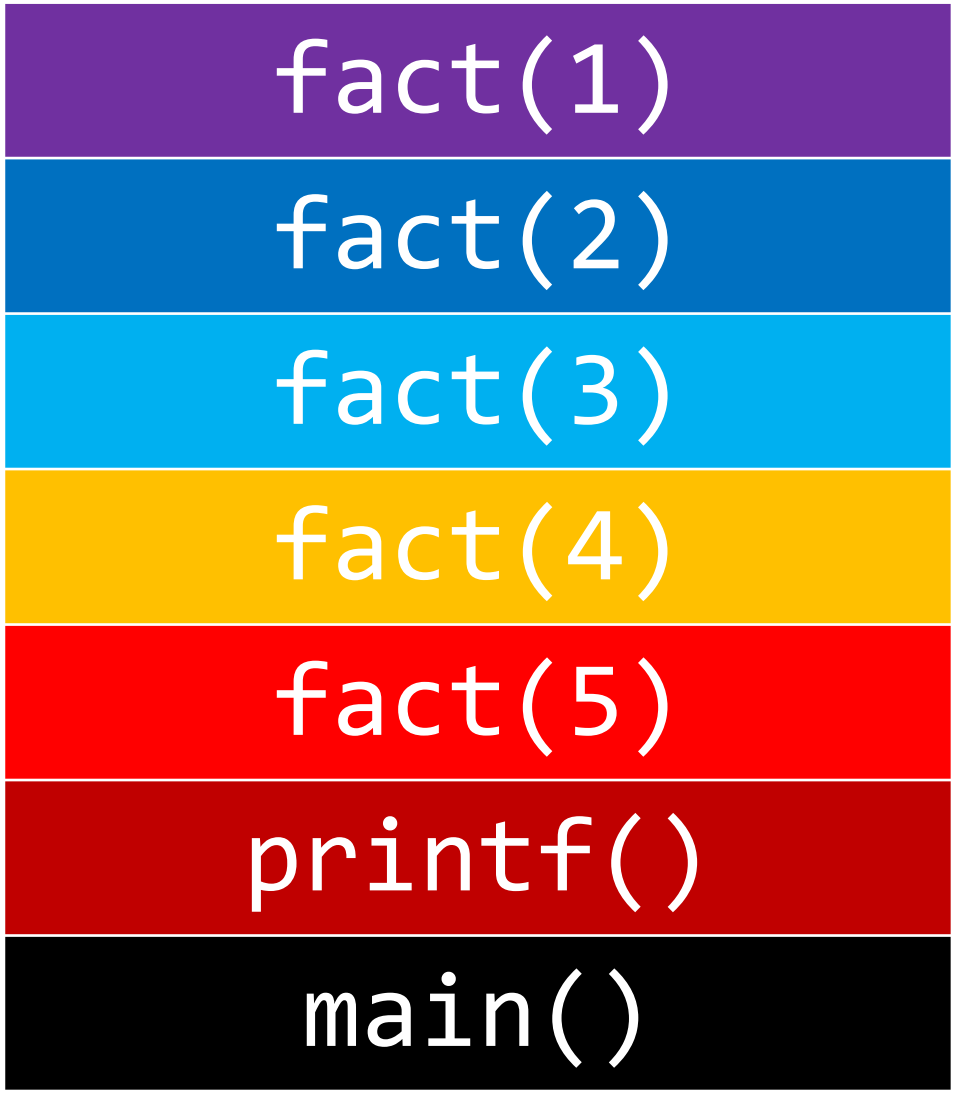

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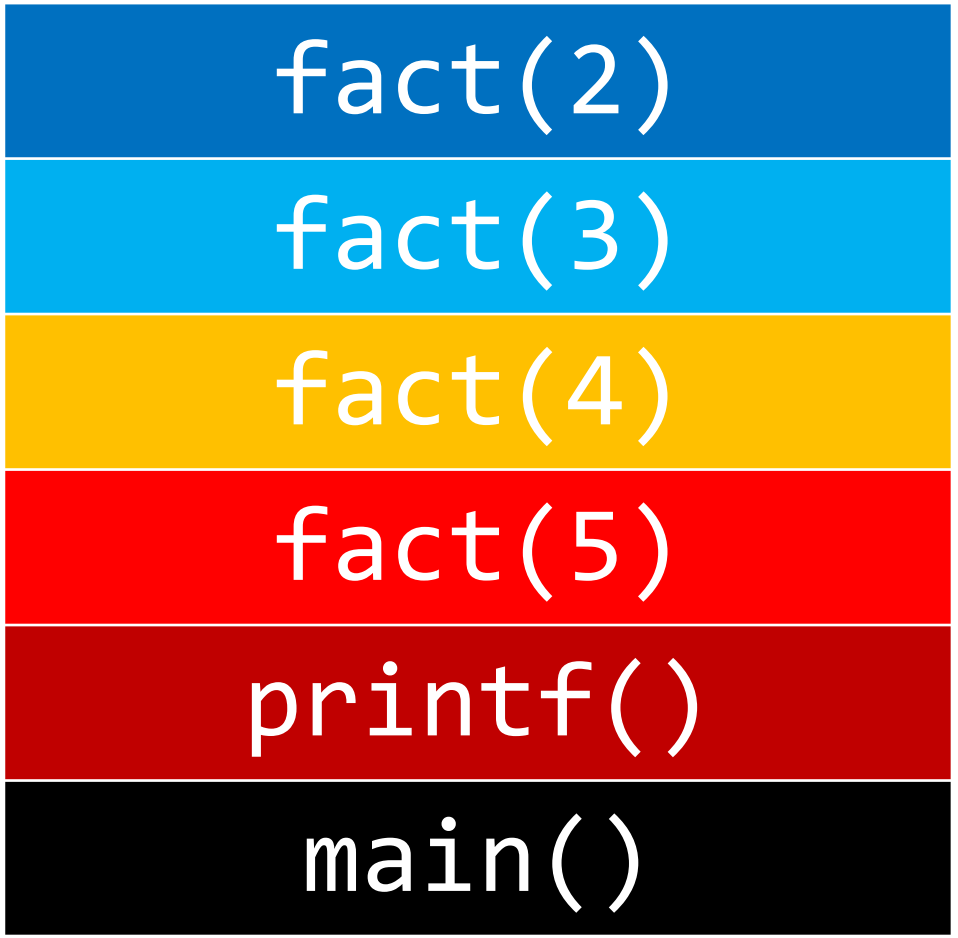

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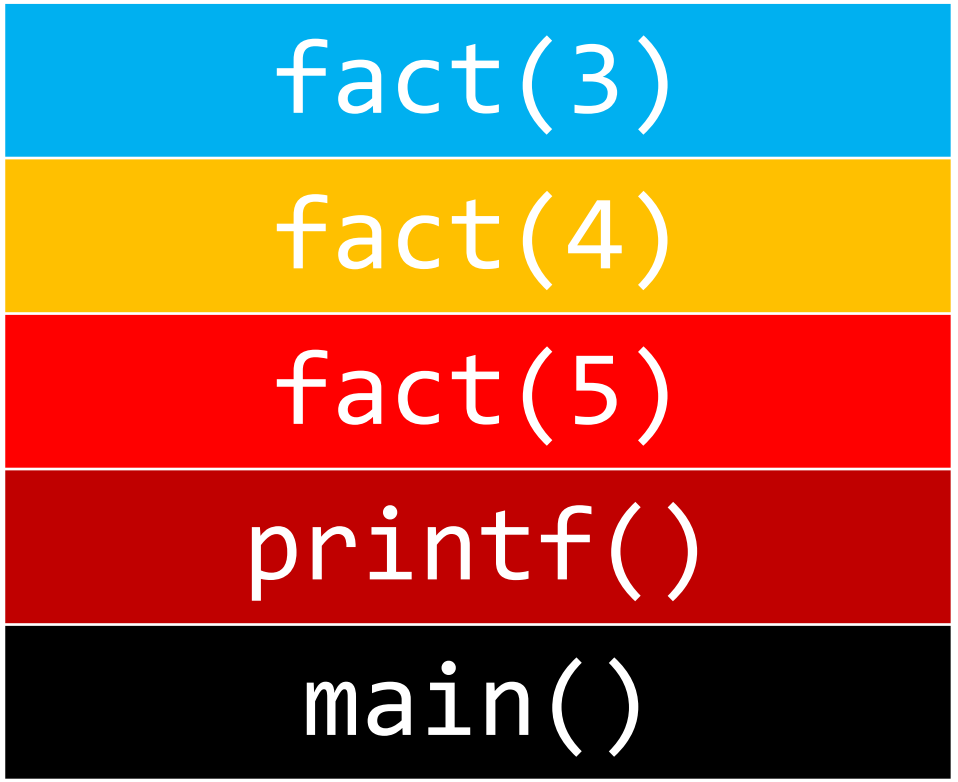

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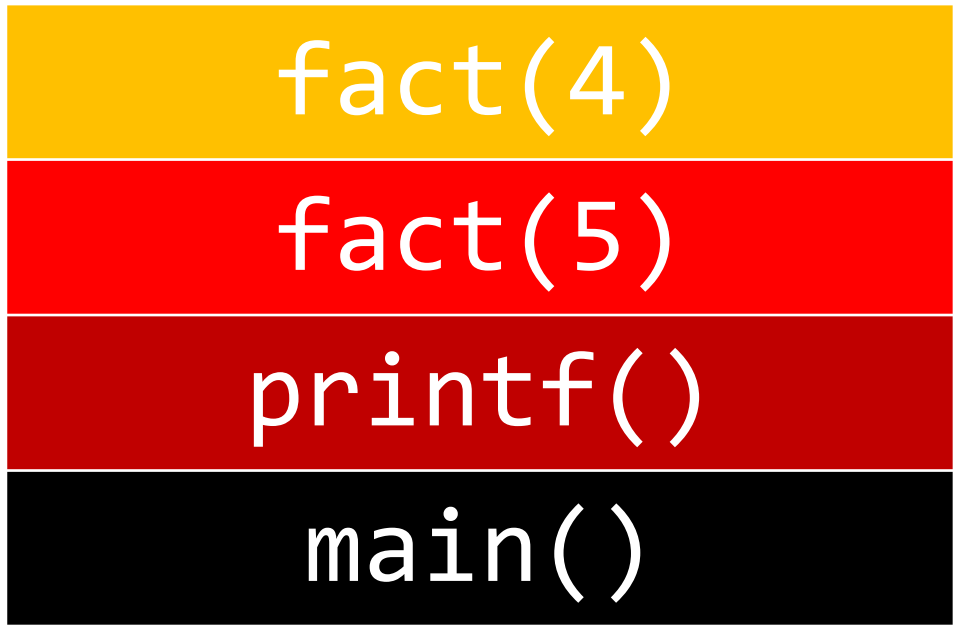

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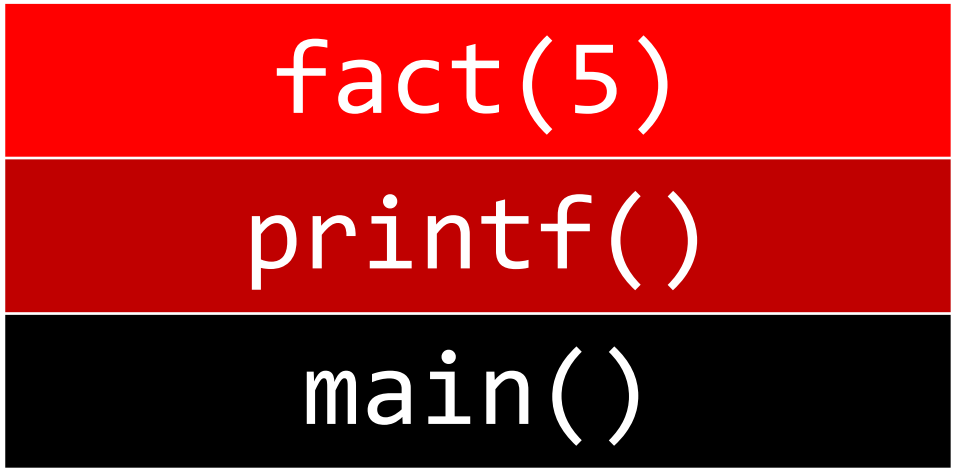

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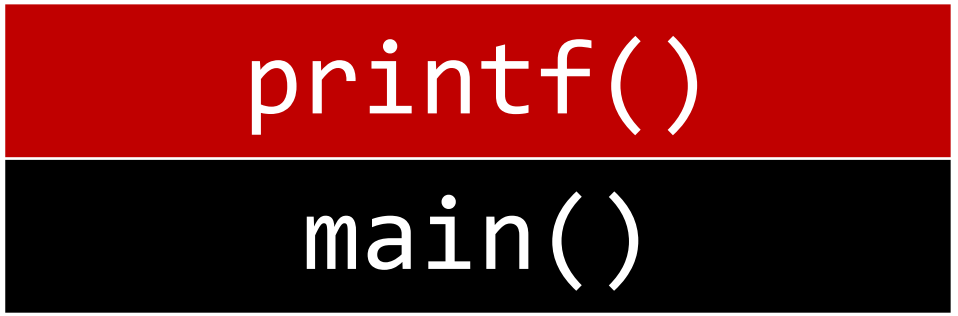

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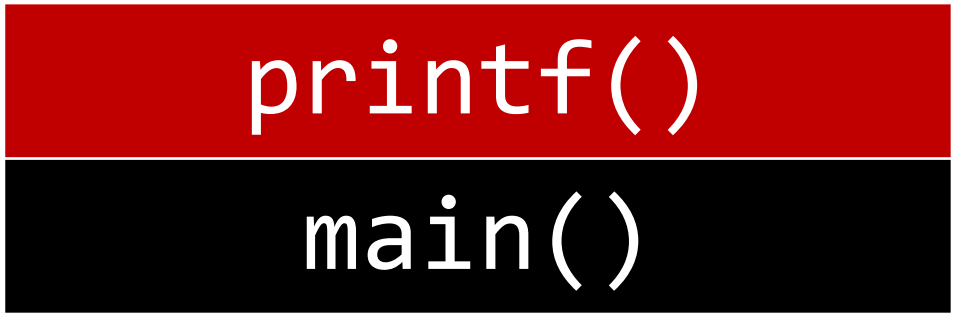

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