



The diagram illustrates the execution of a program with four functions: `main`, `f1`, `f2`, and `f3`. The execution flow is as follows:

- Initial state:** The program counter (PC) is at the start of the `main` function.
- Call to `f1`:** The PC moves to the start of `f1`, and `f1`'s frame is pushed onto the stack.
- Call to `f2`:** The PC moves to the start of `f2`, and `f2`'s frame is pushed onto the stack.
- Return from `f2`:** The PC moves back to the instruction following the call to `f2` in `f1`'s frame.
- Return from `f1`:** The PC moves back to the instruction following the call to `f1` in the `main` function's frame.
- End of program:** The PC is at the end of the `main` function's frame.



