

Extra argument for the recorder object

1: (%4, %5, %1, %2, %3)
%6 = saveir!(%5, <original IR>)

Original IR, stored in recorder

```
%7 = TapeConstant(%1)
%8 = trackedargument(%5, %7, nothing, 1, $(QuoteNode($1:%1)))
%9 = record!(%5, %8)
%10 = TapeConstant(%2)
%11 = trackedargument(%5, %10, nothing, 2, $(QuoteNode($1:%2)))
%12 = record!(%5, %11)
%13 = TapeConstant(%3)
%14 = trackedargument(%5, %13, nothing, 2, $(QuoteNode($1:%3)))
%15 = record!(%5, %14)
%16 = TapeConstant(Main.rand)
%17 = Base.tuple()
%18 = trackedcall(%5, %16, %17, $(QuoteNode($1:%4)))
%19 = record!(%5, %18)
%20 = TapeConstant(Main.:<)
%21 = trackedvariable(%5, $(QuoteNode(%4)), %19)
%22 = trackedvariable(%5, $(QuoteNode(%3)), %3)
%23 = Base.tuple(%21, %22)
%24 = trackedcall(%5, %20, %23, $(QuoteNode($1:%5)))
%25 = record!(%5, %24)
%26 = Base.tuple()
%27 = trackedvariable(%5, $(QuoteNode(%5)), %25)
%28 = trackedjump(%5, 2, %26, %27, $(QuoteNode($1:&1)))
%29 = trackedvariable(%5, $(QuoteNode(%2)), %2)
%30 = trackedreturn(%5, %29, $(QuoteNode($1:&2)))
```

All arguments are recorded as constants in special nodes

```
1: (%1, %2, %3)
%4 = Main.rand()
%5 = %4 < %3
br 2 unless %5
return %2
```

Jumps and returns are passed down to the next block

```
br 2 (%28) unless %25
br 3 (%2, %30)
2: (%31)
```

Actual jump is recorded in next block

First argument

Called function

Argument tuple

```
%32 = record!(%5, %31)
%33 = TapeConstant(Main.:+)
%34 = trackedvariable(%5, $(QuoteNode(%2)), %2)
%35 = Base.tuple(%34, $(QuoteNode({1})))
%36 = trackedcall(%5, %33, %35, $(QuoteNode($2:%6)))
%37 = record!(%5, %36)
%38 = TapeConstant(Main.geom)
%39 = trackedvariable(%5, $(QuoteNode(%6)), %37)
%40 = trackedvariable(%5, $(QuoteNode(%3)), %3)
%41 = Base.tuple(%39, %40)
%42 = trackedcall(%5, %38, %41, $(QuoteNode($2:%7)))
%43 = record!(%5, %42)
%44 = trackedvariable(%5, $(QuoteNode(%7)), %43)
%45 = trackedreturn(%5, %44, $(QuoteNode($2:&1)))
```

Function call expression

SSA statements are translated to trackedcall calls

```
2:
%6 = %2 + 1
%7 = Main.geom(%6, %3)
return %7
```

3: (%46, %47)

```
%48 = record!(%5, %47)
return %46
```