

LLVM_17

TestPass.h

TestPass.cpp

Fibonacci02.ll

Fibonacci02.ll M X

Fibonacci.c

PassBuilder.cpp

PassRegistry.def

CMakeLists.txt

TEST> Exercise1> Fibonacci02.ll

36 declare void @llvm.va_end(ptr) #1

37

38 ; Function Attrs: noinline nounwind optnone ssp uwtable(sync)

39 define i32 @Fibonacci(i32 noundef %0) #0 !dbg !21 { ; int Fibonacci(int n)

40 ; %1 = BB1

41 %2 = alloca i32, align 4 ; int %2

42 %3 = alloca i32, align 4 ; int %3

43 store i32 %0, ptr %3, align 4 ; %3 = %0 -> %3 = n

44 %4 = load i32, ptr %3, align 4, !dbg !22 ; %4 = %3 -> %4 = n

45 %5 = icmp eq i32 %4, 0, !dbg !23 ; %5 = true if n == 0 else false

46 br i1 %5, label %6, label %8, !dbg !22 ; jump based on %5 to label 6 or label 8

47

48

6: ; preds = %1

49 ; %6 = BB2

50 %7 = call i32 @printf(ptr, ...) @printf(ptr noundef @.str, !dbg !24 ; %7 = printf(.str) -> %7 = printf("f(0) = 0")

51 store i32 0, ptr %2, align 4, !dbg !25 ; %2 = 0

52 br label %27, !dbg !25 ; unconditional jump to label 27

53

54

8: ; preds = %1

55 ; %8 = BB3

56 %9 = load i32, ptr %3, align 4, !dbg !26 ; %9 = %3 -> %9 = n

57 %10 = icmp eq i32 %9, 1, !dbg !27 ; %10 = true if n == 1 else false

58 br i1 %10, label %11, label %13, !dbg !26 ; jump based on %10 to label 11 or label 13

59

60

11: ; preds = %8

61 ; %11 = BB4

62 %12 = call i32 @printf(ptr, ...) @printf(ptr noundef @.str.1, !dbg !28 ; %12 = printf(.str.1) -> %12 = printf("f(1) = 1")

63 store i32 1, ptr %2, align 4, !dbg !29 ; %2 = 1

64 br label %27, !dbg !29

65

66

13: ; preds = %8

67 ; %13 = BB5

68 %14 = load i32, ptr %3, align 4, !dbg !30 ; %14 = %3 -> %14 = n

69 %15 = load i32, ptr %3, align 4, !dbg !31 ; %15 = %3 -> %15 = n

70 %16 = sub nsw i32 %15, 1, !dbg !32 ; %16 = %15 - 1 -> %16 = n - 1

71 %17 = load i32, ptr %3, align 4, !dbg !33 ; %17 = %3 -> %17 = n

72 %18 = sub nsw i32 %17, 2, !dbg !34 ; %18 = %17 - 2 -> %18 = n - 2

73 %19 = call i32 @printf(ptr, ...) @printf(ptr noundef @.str.2, i32 noundef %14, i32 noundef %16, i32 noundef %18, !dbg !35 ; %19 = printf(.str.2, %14, %16, %18) -> %19 = printf("f(%d) = f(%d) + f(%d)", %14, %16, %18)

74 %20 = load i32, ptr %3, align 4, !dbg !36 ; %20 = %3 -> %20 = n

75 %21 = sub nsw i32 %20, 1, !dbg !37 ; %21 = %20 - 1 -> %21 = n - 1

76 %22 = call i32 @Fibonacci(i32 noundef %21), !dbg !38 ; %22 = Fibonacci(%21) -> %22 = Fibonacci(n - 1)

77 %23 = load i32, ptr %3, align 4, !dbg !39 ; %23 = %3 -> %23 = n

78 %24 = sub nsw i32 %23, 2, !dbg !40 ; %24 = %23 - 2 -> %24 = n - 2

79 %25 = call i32 @Fibonacci(i32 noundef %24), !dbg !41 ; %25 = Fibonacci(%24) -> %25 = Fibonacci(n - 2)

80 %26 = add nsw i32 %22, %25, !dbg !42 ; %26 = %22 + %25 -> %26 = Fibonacci(n - 1) + Fibonacci(n - 2)

81 store i32 %26, ptr %2, align 4, !dbg !43 ; %2 = %26

82 br label %27, !dbg !43 ; unconditional jump to label 27

83

27: ; preds = %13, %11, %6

84 ; %27 = BB6

85 %28 = load i32, ptr %2, align 4, !dbg !44 ; %28 = %2

86 ret i32 %28, !dbg !44 ; return %28

87

88

89

90 attributes #0 = { noinline nounwind optnone ssp uwtable(sync) "frame-pointer"="non-leaf" "min-legal-vector-width"="0" "no-trapping-math"="true" "probe-stack"="\$_chkstk_darwin" "stack-protector-buffer-size"="8" "target-cpu"="

91 attributes #1 = { nocallback nofree nosync nounwind willreturn }

main*

0 0 0 0

Ln 23, Col 155 Spaces: 2 UTF-8 LF LLVM