admin@DESKTOP-HC0QD4M MINGW64 ~/downloads/assignment2/assingment2

$ objdump -l -d -r A-1.o

A-1.o: file format pe-x86-64

Disassembly of section .text:

0000000000000000 <main>:

0: 55 push %rbp

1: 48 89 e5 mov %rsp,%rbp

4: 48 83 ec 40 sub $0x40,%rsp

8: e8 00 00 00 00 callq d <main+0xd>

9: R\_X86\_64\_PC32 \_\_main

d: c7 45 fc 06 00 00 00 movl $0x6,-0x4(%rbp)

14: c7 45 f8 0a 00 00 00 movl $0xa,-0x8(%rbp)

1b: c7 45 f4 14 00 00 00 movl $0x14,-0xc(%rbp)

22: 8b 45 f8 mov -0x8(%rbp),%eax

25: 0f af 45 f4 imul -0xc(%rbp),%eax

29: 83 c0 19 add $0x19,%eax

2c: 89 45 f0 mov %eax,-0x10(%rbp)

2f: c7 45 fc 06 00 00 00 movl $0x6,-0x4(%rbp)

36: 48 8d 05 00 00 00 00 lea 0x0(%rip),%rax # 3d <main+0x3d>

39: R\_X86\_64\_PC32 Z-0x4

3d: 8b 00 mov (%rax),%eax

3f: 89 45 ec mov %eax,-0x14(%rbp)

42: 90 nop

43: 48 83 c4 40 add $0x40,%rsp

47: 5d pop %rbp

48: c3 retq

49: 90 nop

4a: 90 nop

4b: 90 nop

4c: 90 nop

4d: 90 nop

4e: 90 nop

4f: 90 nop

admin@DESKTOP-HC0QD4M MINGW64 ~/downloads/assignment2/assingment2

$ objdump -l -d -r A-2.o

A-2.o: file format pe-x86-64

Disassembly of section .text:

0000000000000000 <f>:

0: 55 push %rbp

1: 48 89 e5 mov %rsp,%rbp

4: 48 83 ec 10 sub $0x10,%rsp

8: 48 8d 05 00 00 00 00 lea 0x0(%rip),%rax # f <f+0xf>

b: R\_X86\_64\_PC32 Z-0x4

f: 8b 00 mov (%rax),%eax

11: 89 45 f4 mov %eax,-0xc(%rbp)

14: 83 7d f4 09 cmpl $0x9,-0xc(%rbp)

18: 7f 10 jg 2a <f+0x2a>

1a: c7 45 fc 05 00 00 00 movl $0x5,-0x4(%rbp)

21: c7 45 f8 11 00 00 00 movl $0x11,-0x8(%rbp)

28: eb 1b jmp 45 <f+0x45>

2a: c7 45 fc 06 00 00 00 movl $0x6,-0x4(%rbp)

31: c7 45 f8 14 00 00 00 movl $0x14,-0x8(%rbp)

38: 83 7d f4 00 cmpl $0x0,-0xc(%rbp)

3c: 75 07 jne 45 <f+0x45>

3e: c7 45 f8 00 00 00 00 movl $0x0,-0x8(%rbp)

45: 8b 55 fc mov -0x4(%rbp),%edx

48: 89 d0 mov %edx,%eax

4a: c1 e0 02 shl $0x2,%eax

4d: 01 d0 add %edx,%eax

4f: 01 c0 add %eax,%eax

51: 89 c2 mov %eax,%edx

53: 8b 45 f8 mov -0x8(%rbp),%eax

56: 01 c2 add %eax,%edx

58: 48 8d 05 00 00 00 00 lea 0x0(%rip),%rax # 5f <f+0x5f>

5b: R\_X86\_64\_PC32 Z-0x4

5f: 89 10 mov %edx,(%rax)

61: 90 nop

62: 48 83 c4 10 add $0x10,%rsp

66: 5d pop %rbp

67: c3 retq

68: 90 nop

69: 90 nop

6a: 90 nop

6b: 90 nop

6c: 90 nop

6d: 90 nop

6e: 90 nop

6f: 90 nop

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$ objdump -l -d -r A-3.o

A-3.o: file format pe-x86-64

Disassembly of section .text:

0000000000000000 <main>:

0: 55 push %rbp

1: 48 89 e5 mov %rsp,%rbp

4: 48 83 ec 30 sub $0x30,%rsp

8: e8 00 00 00 00 callq d <main+0xd>

9: R\_X86\_64\_PC32 \_\_main

d: c7 45 fc 00 00 00 00 movl $0x0,-0x4(%rbp)

14: eb 03 jmp 19 <main+0x19>

16: d1 65 fc shll -0x4(%rbp)

19: 83 7d fc 63 cmpl $0x63,-0x4(%rbp)

1d: 7e f7 jle 16 <main+0x16>

1f: c7 45 f8 00 00 00 00 movl $0x0,-0x8(%rbp)

26: eb 21 jmp 49 <main+0x49>

28: c7 45 f4 00 00 00 00 movl $0x0,-0xc(%rbp)

2f: eb 0e jmp 3f <main+0x3f>

31: 8b 45 f8 mov -0x8(%rbp),%eax

34: 0f af 45 f4 imul -0xc(%rbp),%eax

38: 01 45 fc add %eax,-0x4(%rbp)

3b: 83 45 f4 01 addl $0x1,-0xc(%rbp)

3f: 83 7d f4 31 cmpl $0x31,-0xc(%rbp)

43: 7e ec jle 31 <main+0x31>

45: 83 45 f8 01 addl $0x1,-0x8(%rbp)

49: 83 7d f8 18 cmpl $0x18,-0x8(%rbp)

4d: 7e d9 jle 28 <main+0x28>

4f: b8 00 00 00 00 mov $0x0,%eax

54: 48 83 c4 30 add $0x30,%rsp

58: 5d pop %rbp

59: c3 retq

5a: 90 nop

5b: 90 nop

5c: 90 nop

5d: 90 nop

5e: 90 nop

5f: 90 nop

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$ objdump -l -d -r A-4.o

A-4.o: file format pe-x86-64

Disassembly of section .text:

0000000000000000 <main>:

0: 55 push %rbp

1: 48 89 e5 mov %rsp,%rbp

4: 48 83 ec 50 sub $0x50,%rsp

8: e8 00 00 00 00 callq d <main+0xd>

9: R\_X86\_64\_PC32 \_\_main

d: c7 45 d8 01 00 00 00 movl $0x1,-0x28(%rbp)

14: c7 45 dc 02 00 00 00 movl $0x2,-0x24(%rbp)

1b: c7 45 e0 03 00 00 00 movl $0x3,-0x20(%rbp)

22: c7 45 fc 00 00 00 00 movl $0x0,-0x4(%rbp)

29: eb 16 jmp 41 <main+0x41>

2b: 8b 45 fc mov -0x4(%rbp),%eax

2e: 48 98 cltq

30: 8b 54 85 d8 mov -0x28(%rbp,%rax,4),%edx

34: 8b 45 fc mov -0x4(%rbp),%eax

37: 48 98 cltq

39: 89 54 85 e4 mov %edx,-0x1c(%rbp,%rax,4)

3d: 83 45 fc 01 addl $0x1,-0x4(%rbp)

41: 83 7d fc 02 cmpl $0x2,-0x4(%rbp)

45: 7e e4 jle 2b <main+0x2b>

47: 48 8d 45 e4 lea -0x1c(%rbp),%rax

4b: 48 89 45 f0 mov %rax,-0x10(%rbp)

4f: 48 8b 45 f0 mov -0x10(%rbp),%rax

53: 48 83 c0 08 add $0x8,%rax

57: c7 00 05 00 00 00 movl $0x5,(%rax)

5d: b8 00 00 00 00 mov $0x0,%eax

62: 48 83 c4 50 add $0x50,%rsp

66: 5d pop %rbp

67: c3 retq

68: 90 nop

69: 90 nop

6a: 90 nop

6b: 90 nop

6c: 90 nop

6d: 90 nop

6e: 90 nop

6f: 90 nop

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$ objdump -l -d -r A-5.o

A-5.o: file format pe-x86-64

Disassembly of section .text:

0000000000000000 <main>:

0: 55 push %rbp

1: 48 89 e5 mov %rsp,%rbp

4: 48 83 ec 30 sub $0x30,%rsp

8: e8 00 00 00 00 callq d <main+0xd>

9: R\_X86\_64\_PC32 \_\_main

d: c7 45 f4 0a 00 00 00 movl $0xa,-0xc(%rbp)

14: 8b 45 f0 mov -0x10(%rbp),%eax

17: 3b 45 f4 cmp -0xc(%rbp),%eax

1a: 7e 10 jle 2c <main+0x2c>

1c: c7 45 fc 03 00 00 00 movl $0x3,-0x4(%rbp)

23: c7 45 f8 02 00 00 00 movl $0x2,-0x8(%rbp)

2a: eb 0e jmp 3a <main+0x3a>

2c: c7 45 fc 02 00 00 00 movl $0x2,-0x4(%rbp)

33: c7 45 f8 03 00 00 00 movl $0x3,-0x8(%rbp)

3a: 8b 55 fc mov -0x4(%rbp),%edx

3d: 8b 45 f8 mov -0x8(%rbp),%eax

40: 01 d0 add %edx,%eax

42: 89 45 f0 mov %eax,-0x10(%rbp)

45: b8 00 00 00 00 mov $0x0,%eax

4a: 48 83 c4 30 add $0x30,%rsp

4e: 5d pop %rbp

4f: c3 retq

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$ objdump -l -d -r B-1.o

B-1.o: file format pe-x86-64

Disassembly of section .text:

0000000000000000 <AddTwo>:

0: 55 push %rbp

1: 48 89 e5 mov %rsp,%rbp

4: 89 4d 10 mov %ecx,0x10(%rbp)

7: 83 45 10 02 addl $0x2,0x10(%rbp)

b: 8b 45 10 mov 0x10(%rbp),%eax

e: 5d pop %rbp

f: c3 retq

0000000000000010 <main>:

10: 55 push %rbp

11: 48 89 e5 mov %rsp,%rbp

14: 48 83 ec 30 sub $0x30,%rsp

18: e8 00 00 00 00 callq 1d <main+0xd>

19: R\_X86\_64\_PC32 \_\_main

1d: c7 45 fc 03 00 00 00 movl $0x3,-0x4(%rbp)

24: 8b 45 fc mov -0x4(%rbp),%eax

27: 89 c1 mov %eax,%ecx

29: e8 d2 ff ff ff callq 0 <AddTwo>

2e: 89 45 fc mov %eax,-0x4(%rbp)

31: 8b 45 fc mov -0x4(%rbp),%eax

34: 48 83 c4 30 add $0x30,%rsp

38: 5d pop %rbp

39: c3 retq

3a: 90 nop

3b: 90 nop

3c: 90 nop

3d: 90 nop

3e: 90 nop

3f: 90 nop

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$ objdump -l -d -r B-2.o

B-2.o: file format pe-x86-64

Disassembly of section .text:

0000000000000000 <main>:

0: 55 push %rbp

1: 48 89 e5 mov %rsp,%rbp

4: 48 83 ec 30 sub $0x30,%rsp

8: e8 00 00 00 00 callq d <main+0xd>

9: R\_X86\_64\_PC32 \_\_main

d: c7 45 f8 0a 00 00 00 movl $0xa,-0x8(%rbp)

14: c7 45 fc 00 00 00 00 movl $0x0,-0x4(%rbp)

1b: eb 10 jmp 2d <main+0x2d>

1d: 48 8d 05 00 00 00 00 lea 0x0(%rip),%rax # 24 <main+0x24>

20: R\_X86\_64\_PC32 N-0x4

24: 8b 00 mov (%rax),%eax

26: 01 45 f8 add %eax,-0x8(%rbp)

29: 83 45 fc 01 addl $0x1,-0x4(%rbp)

2d: 83 7d fc 03 cmpl $0x3,-0x4(%rbp)

31: 7e ea jle 1d <main+0x1d>

33: 8b 45 f8 mov -0x8(%rbp),%eax

36: 48 83 c4 30 add $0x30,%rsp

3a: 5d pop %rbp

3b: c3 retq

3c: 90 nop

3d: 90 nop

3e: 90 nop

3f: 90 nop

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$ objdump -l -d -r B-3.o

B-3.o: file format pe-x86-64

Disassembly of section .text:

0000000000000000 <main>:

0: 55 push %rbp

1: 48 89 e5 mov %rsp,%rbp

4: 48 83 ec 30 sub $0x30,%rsp

8: e8 00 00 00 00 callq d <main+0xd>

9: R\_X86\_64\_PC32 \_\_main

d: c7 45 fc 04 00 00 00 movl $0x4,-0x4(%rbp)

14: eb 13 jmp 29 <main+0x29>

16: 83 7d fc 03 cmpl $0x3,-0x4(%rbp)

1a: 7f 06 jg 22 <main+0x22>

1c: 83 45 f8 02 addl $0x2,-0x8(%rbp)

20: eb 03 jmp 25 <main+0x25>

22: d1 65 f8 shll -0x8(%rbp)

25: 83 45 fc 01 addl $0x1,-0x4(%rbp)

29: 83 7d fc 63 cmpl $0x63,-0x4(%rbp)

2d: 7e e7 jle 16 <main+0x16>

2f: 8b 55 f8 mov -0x8(%rbp),%edx

32: 8b 45 fc mov -0x4(%rbp),%eax

35: 41 89 d0 mov %edx,%r8d

38: 89 c2 mov %eax,%edx

3a: 48 8d 0d 00 00 00 00 lea 0x0(%rip),%rcx # 41 <main+0x41>

3d: R\_X86\_64\_PC32 .rdata

41: e8 00 00 00 00 callq 46 <main+0x46>

42: R\_X86\_64\_PC32 printf

46: b8 00 00 00 00 mov $0x0,%eax

4b: 48 83 c4 30 add $0x30,%rsp

4f: 5d pop %rbp

50: c3 retq

51: 90 nop

52: 90 nop

53: 90 nop

54: 90 nop

55: 90 nop

56: 90 nop

57: 90 nop

58: 90 nop

59: 90 nop

5a: 90 nop

5b: 90 nop

5c: 90 nop

5d: 90 nop

5e: 90 nop

5f: 90 nop

admin@DESKTOP-HC0QD4M MINGW64 ~/downloads/assignment2/assingment2

$ objdump -l -d -r B-4.o

B-4.o: file format pe-x86-64

Disassembly of section .text:

0000000000000000 <main>:

0: 55 push %rbp

1: 48 89 e5 mov %rsp,%rbp

4: 48 83 ec 30 sub $0x30,%rsp

8: e8 00 00 00 00 callq d <main+0xd>

9: R\_X86\_64\_PC32 \_\_main

d: 8b 55 fc mov -0x4(%rbp),%edx

10: 8b 45 f8 mov -0x8(%rbp),%eax

13: 01 c2 add %eax,%edx

15: 8b 45 f4 mov -0xc(%rbp),%eax

18: 01 c2 add %eax,%edx

1a: 8b 4d f8 mov -0x8(%rbp),%ecx

1d: 8b 45 fc mov -0x4(%rbp),%eax

20: 01 c8 add %ecx,%eax

22: 0f af c2 imul %edx,%eax

25: 89 45 f4 mov %eax,-0xc(%rbp)

28: 8b 45 f4 mov -0xc(%rbp),%eax

2b: 48 83 c4 30 add $0x30,%rsp

2f: 5d pop %rbp

30: c3 retq

31: 90 nop

32: 90 nop

33: 90 nop

34: 90 nop

35: 90 nop

36: 90 nop

37: 90 nop

38: 90 nop

39: 90 nop

3a: 90 nop

3b: 90 nop

3c: 90 nop

3d: 90 nop

3e: 90 nop

3f: 90 nop