EXEMPLOS DE PROGRAMAS FONTE / OBJETO

I - **exemplo 01**: programa fonte (**`teste_01.txt`**) x programa objeto (**`teste_01.il`**)

programa fonte

```
#1
main module [ #2
  : i_lado #9, i_area #9 #8;

  in (i_lado #9) #11;
  i_area #9 <- i_lado #9 #31 * i_lado #9 #31 #29 #10;
  out (#12 i_area #9 #31 #13);
] #3
```

programa objeto

```
#1  .assembly extern mscorlib {}
    .assembly teste_01{}
    .module teste_01.exe

    .class public teste_01{ #1

#2  .method static public void principal()
    { .entrypoint #2

#8 .locals (int64 i_lado, int64 i_area) #8

#11 call string [mscorlib]System.Console::ReadLine()
    call int64 [mscorlib]System.Int64::Parse(string)
    stloc i_lado #11

#31 ldloc i_lado #31
#31 ldloc i_lado #31
#29 mul #29
#10 stloc i_area #10

#31 ldloc i_area #31
#13 call void [mscorlib]System.Console::Write(int64) #13
#3  ret
    }
    } #3
```

II - **exemplo 02**: programa fonte (**`teste_02.txt`**) x programa objeto (**`teste_02.il`**)

programa fonte

```
#1
main module [ #2
  : i_lado #9, i_area #9 #8;

  in (i_lado #9) #11;
  if (i_lado #9 #31 > #25 1 #34 #26 #14) isTrueDo: [
     i_area #9 <- i_lado #9 #31 * i_lado #9 #31 #29 #10;
     out (#12 i_area #9 #31 #13);
  ] #16 isFalseDo: [
     out (#12 "valor inválido" #36 #13);
  ] #15
] #3
```

programa objeto

```
#1  .assembly extern mscorlib {}
    .assembly teste_02{}
    .module teste_02.exe

    .class public teste_02{ #1

#2  .method static public void principal()
    { .entrypoint #2

#8 .locals (int64 i_lado, int64 i_area) #8

#11 call string [mscorlib]System.Console::ReadLine()
    call int64 [mscorlib]System.Int64::Parse(string)
    stloc i_lado #11

#31 ldloc i_lado #31
#34 ldc.i8 1 #34
#26 cgt #26
#14 brfalse r1 #14

#31 ldloc i_lado #31
#31 ldloc i_lado #31
#29 mul #29
#10 stloc i_area #10

#31 ldloc i_area #31
#13 call void [mscorlib]System.Console::Write(int64) #13

#16 br r2
r1: #16

#36 ldstr "valor inválido" #36
#13 call void [mscorlib]System.Console::Write(string) #13

#15
r2: #15

#3  ret
    }
    } #3
```

III - **exemplo 03**: programa fonte (**`teste_03.txt`**) x programa objeto (**`teste_03.il`**)

programa fonte

```
#1
main module [ #2
  : i_lado #9, i_area #9 #8;

  in (i_lado #9) #11;
  while #17 (i_lado #9 #31 < #25 2 #34 #26) isTrueDo #18 : [
     out (#12 "valor inválido" #36 #13, "\n" #36 #13);
     in (i_lado #9) #11;
  ] #19
  i_area #9 <- i_lado #9 #31 * i_lado #9 #31 #29 #10;
  out (#12 i_area #9 #31 #13);
] #3
```

programa objeto

```
#1  .assembly extern mscorlib {}
    .assembly teste_03{}
    .module teste_03.exe

    .class public teste_03{ #1

#2  .method static public void principal()
    { .entrypoint #2

#8 .locals (int64 i_lado, int64 i_area) #8

#11 call string [mscorlib]System.Console::ReadLine()
    call int64 [mscorlib]System.Int64::Parse(string)
    stloc i_lado #11

#17
r1: #17

#31 ldloc i_lado #31
#34 ldc.i8 2 #34
#26 clt #26
#18 brfalse r2 #18

#36 ldstr "valor inválido" #36
#13 call void [mscorlib]System.Console::Write(string) #13

#36 ldstr "\n" #36
#13 call void [mscorlib]System.Console::Write(string) #13

#11 call string [mscorlib]System.Console::ReadLine()
    call int64 [mscorlib]System.Int64::Parse(string)
    stloc i_lado #11

#19 br r1
r2: #19

#31 ldloc i_lado #31
#31 ldloc i_lado #31
#29 mul #29
#10 stloc i_area #10

#31 ldloc i_area #31
#13 call void [mscorlib]System.Console::Write(int64) #13

#3  ret
    }
    } #3
```

IV - **exemplo 04**: programa fonte (**`teste_04.txt`**) x programa objeto (**`teste_04.il`**)

programa fonte

```
#1
main module [

   module i_ler #4 : i_limite #9 #7 #5 [
      : i_lado #9 #8;

      in (i_lado #9) #11;
      while #17 (i_lado #9 #31 > #25 i_limite #9 #31 #26) isFalseDo #18 : [
         out (#12 "valor inválido" #36 #13, "\n" #36 #13);
         in (i_lado #9) #11;
      ] #19
      return i_lado #9 #31;
   ] #6

#2
  : i_lado #9, i_area #9 #8;

  i_lado #9 <- i_ler #9 (#32 1 #34 #13) #33 #10;
  i_area #9 <- i_lado #9 #31 * i_lado #9 #31 #29 #10;
  out (#12 i_area #9 #31 #13);
] #3
```

programa objeto

```
#1  .assembly extern mscorlib {}
    .assembly teste_04{}
    .module teste_04.exe

    .class public teste_04{ #1

#4  .method public static int64 i_ler #4 (int64 i_limite) #7
#5  { #5
#8  .locals (int64 i_lado) #8

#11 call string [mscorlib]System.Console::ReadLine()
    call int64 [mscorlib]System.Int64::Parse(string)
    stloc i_lado #11

#17
r1: #17

#31 ldloc i_lado #31
#31 ldarg i_limite #31
#26 cgt #26
#18 brtrue r2 #18

#36 ldstr "valor inválido" #36
#13 call void [mscorlib]System.Console::Write(string) #13

#36 ldstr "\n" #36
#13 call void [mscorlib]System.Console::Write(string) #13

#11 call string [mscorlib]System.Console::ReadLine()
    call int64 [mscorlib]System.Int64::Parse(string)
    stloc i_lado #11

#19 br r1
r2: #19

#31 ldloc i_lado #31
#6  ret
    }
#6

#2  .method static public void principal()
    { .entrypoint #2

#8 .locals (int64 i_lado, int64 i_area) #8

#34 ldc.i8 1 #34
#13 #13
#33 call int64 teste_04::i_ler(int64) #33
```

```
#10 stloc i_lado #10

#31 ldloc i_lado #31
#31 ldloc i_lado #31
#29 mul #29
#10 stloc i_area #10


#31 ldloc i_area #31
#13 call void [mscorlib]System.Console::Write(int64) #13

#3  ret
    }
    } #3
```