
Subject: Lua decompiler?

Posted by [asmcint](#) on Sun, 15 Sep 2013 01:32:58 GMT

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So, I tried to tinker around with some of the .lua files... But then I remembered my freeware hex editor sucks ass, and I'm not any good with Hex in the first place. I have some small measure of competence with Lua, but I have no means of reading the files IN Lua. So... Is there any good decompiler or similar program that will allow me to view quest scripts and the like in plaintext?

Subject: Re: Lua decompiler?

Posted by [Artofeel](#) on Sun, 15 Sep 2013 05:24:00 GMT

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there is no working decompiler yet

but we have disassembler

you need lua 5

```
lua.exe ChunkSpy_kvm.lua "scripts\ai\aisetupscript.lua" -o "scripts\ai\aisetupscript.txt"
```

Subject: Re: Lua decompiler?

Posted by [Keshire](#) on Sun, 15 Sep 2013 12:58:16 GMT

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Ya a decompiler is problematic. This isn't vanilla LUA we're dealing with (Surprise surprise). It's primarily KoreVM with a bunch of other plugins added into it. Like LUA++ and Pluto.

We have a disassembler, but there's still a few quirks that need to be ironed out before someone can take that and turn it into a decompiler. Plus we need someone that's capable of that. And even if I had that skillset I'm really busy with work.

Subject: Re: Lua decompiler?

Posted by [asmcint](#) on Sun, 15 Sep 2013 14:59:21 GMT

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Welp, thanks anyway, then. I guess I'll just have to either wait, or figure out what the fuck I'm doing with a hex editor.

Subject: Re: Lua decompiler?

Posted by [Artofeel](#) on Sun, 15 Sep 2013 18:56:52 GMT

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Keshire

Can I post some of the decompiled scripts? Just for modding and for examples.

I'm not sure because of rule number 4

Quote:Posting of original game files is strictly prohibited.

they certainly original, but re-written by my hands, so...

basically I decompiled scripts without functions, they are quite simple (if not consider a lot of copy-paste operation)

functions just starts my brain to blow up

btw, can you help me with two of them?

first

ai\combatstyles\uniquecombatstyles.lua

```
0450 0000000C      [0268] getglobal    0 0      ; CombatStyles
0454 00500086      [0269] getfield_r1    0 0 80   ; Dog
0458 01000078      [0270] closure        1 0      ; 0 upvalues
045C 0001BE1E      [0271] setfield        0 95 1   ; TargetScoringFunction
```

6DA6 ** function [0] definition (level 2)

** start of function **

source name: (none)

6DAA E3000000 line defined (227)

6DAE FA000000 last line defined (250)

6DB2 00 nups (0)

6DB3 02 numparams (2)

6DB4 00 is_vararg (0)

6DB5 08 maxstacksize (8)

* code:

6DB6 25000000 sizecode (37)

6DBA 02000032 [01] loadk 2 0 ; 1

6DBE 0301000C [02] getglobal 3 1 ; Dog

6DC2 03020686 [03] getfield_r1 3 3 2 ; GetMaster

6DC6 04030000 [04] getfield 4 0 3 ; Combatant

6DCA 03020404 [05] call_i 3 2 2

6DCE 04040710 [06] self 4 3 260 ; "IsAlive"

6DD2 0402047E [07] call_i_r1 4 2 2

6DD6 04000002 [08] test 4 0 ; to [10] if true

6DDA 00120039 [09] jmp 19 ; to [29]

6DDE 0405000C [10] getglobal 4 5 ; Carrying

6DE2 04060886 [11] getfield_r1 4 4 6 ; IsCarryingRangedWeapon

6DE6 0500060E [12] move 5 3

6DEA 04020404 [13] call_i 4 2 2

6DEE 0500001A [14] loadbool 5 0 0 ; false

6DF2 0605000C [15] getglobal 6 5 ; Carrying

6DF6 06070C86 [16] getfield_r1 6 6 7 ; IsAvailable

6DFA 0700020E [17] move 7 1

6DFE 06020404 [18] call_i 6 2 2

6E02 06000002 [19] test 6 0 ; to [21] if true

```

6E06 00040039    [20] jmp      5      ; to [26]
6E0A 0605000C    [21] getglobal  6 5      ; Carrying
6E0E 06060C86    [22] getfield_r1 6 6 6    ; IsCarryingRangedWeapon
6E12 0700020E    [23] move      7 1
6E16 06020404    [24] call_i     6 2 2
6E1A 05000C0E    [25] move      5 6
6E1E 01050808    [26] eq        1 4 5      ; to [28] if false
6E22 00000039    [27] jmp      1          ; to [29]
6E26 0208054C    [28] mul      2 2 264    ; 5
6E2A 0409000C    [29] getglobal  4 9      ; GUI
6E2E 040A0886    [30] getfield_r1 4 4 10   ; IsEntityOnScreen
6E32 0500020E    [31] move      5 1
6E36 04020404    [32] call_i     4 2 2
6E3A 04000002    [33] test     4 0      ; to [35] if true
6E3E 00000039    [34] jmp      1          ; to [36]
6E42 020B054C    [35] mul      2 2 267    ; 3
6E46 02000412    [36] return   2 2
6E4A 00000212    [37] return   0 1

```

* constants:

```

6E4E 0C000000    sizek (12)
6E52 03          const type 3
6E53 0000803F    const [0]: (1)
6E57 04          const type 4
                    const [1]: "Dog"
6E60 04          const type 4
                    const [2]: "GetMaster"
6E6F 04          const type 4
                    const [3]: "Combatant"
6E7E 04          const type 4
                    const [4]: "IsAlive"
6E8B 04          const type 4
                    const [5]: "Carrying"
6E99 04          const type 4
                    const [6]: "IsCarryingRangedWeapon"
6EB5 04          const type 4
                    const [7]: "IsAvailable"
6EC6 03          const type 3
6EC7 0000A040    const [8]: (5)
6ECB 04          const type 4
                    const [9]: "GUI"
6ED4 04          const type 4
                    const [10]: "IsEntityOnScreen"
6EEA 03          const type 3
6EEB 00004040    const [11]: (3)

```

* functions:

```

6EEF 00000000    sizep (0)

```

* lines:

```

6EF3 00000000    sizelineinfo (0)

```

[pc] (line)

* locals:

6EF7 00000000 sizelocvars (0)

* upvalues:

6EFB 00000000 sizeupvalues (0)

** end of function **

and second (not sure if that script used at all)
ai\combatstyles\fable2legacycombatstyles.lua

```
368C 02040620        [3483] settable_s  2  3  4
3690 03790132        [3484] loadk       3  377 ; "MoveFunction"
3694 0400000C        [3485] getglobal   4  0   ; CombatStyles
3698 05680132        [3486] loadk       5  360 ; "LuciensSoldier"
369C 04050814        [3487] gettable_s  4  4  5
36A0 05790132        [3488] loadk       5  377 ; "MoveFunction"
36A4 04050814        [3489] gettable_s  4  4  5
...
3620 0000000C        [3456] getglobal   0  0   ; CombatStyles
3624 01680132        [3457] loadk       1  360 ; "LuciensSoldier"
3628 00010014        [3458] gettable_s  0  0  1
362C 01790132        [3459] loadk       1  377 ; "MoveFunction"
3630 02000078        [3460] closure     2  0   ; 0 upvalues
3634 00020220        [3461] settable_s  0  1  2
```

6393 ** function [0] definition (level 2)

 ** start of function **

 source name: (none)

6397 240B0000 line defined (2852)

639B 420B0000 last line defined (2882)

639F 00 nups (0)

63A0 03 numparams (3)

63A1 00 is_vararg (0)

63A2 08 maxstacksize (8)

 * code:

63A3 30000000 sizecode (48)

63A7 0302005C [01] newtable 3 0 2 ; array=0, hash=2

63AB 0401000C [02] getglobal 4 1 ; ENavigationSpeed

63AF 04020886 [03] getfield_r1 4 4 2 ; NAV_SPEED_SPRINT

63B3 0304001E [04] setfield 3 0 4 ; speed

63B7 0304071E [05] setfield 3 3 260 ; reset_constraints false

63BB 02000002 [06] test 2 0 ; to [8] if true

63BF 00050039 [07] jmp 6 ; to [14]

63C3 04050110 [08] self 4 0 261 ; "SetNavigationConstraints"

63C7 0601005C [09] newtable 6 0 1 ; array=0, hash=1

63CB 07070000 [10] getfield 7 0 7 ; Target

```

63CF 06070C1E      [11] setfield      6 6 7 ; destination_target_entity
63D3 04010604      [12] call_i         4 3 1
63D7 00000039      [13] jmp             1 ; to [15]
63DB 0308071E      [14] setfield        3 3 264 ; reset_constraints true
63DF 04090000      [15] getfield        4 0 9 ; CombatInfo
63E3 040A0886      [16] getfield_r1     4 4 10 ; Zone
63E7 04000082      [17] test_r1         4 0 0
63EB 00080039      [18] jmp             9 ; to [28]
63EF 04090000      [19] getfield        4 0 9 ; CombatInfo
63F3 040A0886      [20] getfield_r1     4 4 10 ; Zone
63F7 050B000C      [21] getglobal       5 11 ; CombatZones
63FB 050C0A86      [22] getfield_r1     5 5 12 ; None
63FF 01050808      [23] eq              1 4 5 ; to [25] if false
6403 00020039      [24] jmp             3 ; to [28]
6407 0401000C      [25] getglobal       4 1 ; ENavigationSpeed
640B 040D0886      [26] getfield_r1     4 4 13 ; NAV_SPEED_WALK
640F 0304001E      [27] setfield        3 0 4 ; speed
6413 040E0110      [28] self            4 0 270 ; "MoveToPositionNoWait"
6417 0600020E      [29] move            6 1
641B 0700060E      [30] move            7 3
641F 04020804      [31] call_i         4 4 2
6423 04000002      [32] test            4 0 ; to [34] if true
6427 000A0039      [33] jmp            11 ; to [45]
642B 040F000C      [34] getglobal       4 15 ; coroutine
642F 04100886      [35] getfield_r1     4 4 16 ; yield
6433 0401027E      [36] call_i_r1      4 1 1
6437 0411000C      [37] getglobal       4 17 ; Navigation
643B 04120886      [38] getfield_r1     4 4 18 ; HasFailed
643F 05130000      [39] getfield        5 0 19 ; Entity
6443 04020404      [40] call_i         4 2 2
6447 04010002      [41] test            4 1 ; to [43] if false
644B 00010039      [42] jmp             2 ; to [45]
644F 0400021A      [43] loadbool        4 1 0 ; true
6453 04000412      [44] return          4 2
6457 0001281E      [45] setfield        0 20 1 ; NavFailPos
645B 0400001A      [46] loadbool        4 0 0 ; false
645F 04000412      [47] return          4 2
6463 00000212      [48] return          0 1

* constants:
6467 15000000      sizek (21)
646B 04            const type 4
                    const [0]: "speed"
6476 04            const type 4
                    const [1]: "ENavigationSpeed"
648C 04            const type 4
                    const [2]: "NAV_SPEED_SPRINT"
64A2 04            const type 4
                    const [3]: "reset_constraints"

```

```

64B9 01      const type 1
64BA 00      const [4]: (false)
64BB 04      const type 4
              const [5]: "SetNavigationConstraints"
64D9 04      const type 4
              const [6]: "destination_target_entity"
64F8 04      const type 4
              const [7]: "Target"
6504 01      const type 1
6505 01      const [8]: (true)
6506 04      const type 4
              const [9]: "CombatInfo"
6516 04      const type 4
              const [10]: "Zone"
6520 04      const type 4
              const [11]: "CombatZones"
6531 04      const type 4
              const [12]: "None"
653B 04      const type 4
              const [13]: "NAV_SPEED_WALK"
654F 04      const type 4
              const [14]: "MoveToPositionNoWait"
6569 04      const type 4
              const [15]: "coroutine"
6578 04      const type 4
              const [16]: "yield"
6583 04      const type 4
              const [17]: "Navigation"
6593 04      const type 4
              const [18]: "HasFailed"
65A2 04      const type 4
              const [19]: "Entity"
65AE 04      const type 4
              const [20]: "NavFailPos"
              * functions:
65BE 00000000      sizep (0)
              * lines:
65C2 00000000      sizelineinfo (0)
                  [pc] (line)
              * locals:
65C6 00000000      sizelocvars (0)
              * upvalues:
65CA 00000000      sizeupvalues (0)
              ** end of function **

```

Subject: Re: Lua decompiler?

Posted by [asmcint](#) on Sun, 15 Sep 2013 20:09:11 GMT

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Quote:and second (not sure if that script used at all)
ai\combatstyles\fable2legacycombatstyles.lua

Pretty sure some of them are still used by Fable III enemies, but not all of them.

EDIT: Also, since there is no file labeled as being combat styles for the Hero, I think it's safe to assume that the Hero's combat style falls under uniquecombatstyles.lua, which makes sense when you consider that your finishing moves are unlocked as you increase in strength and stature, and as a result every set of finishing moves that you can have is unique to each combination of stats.

Subject: Re: Lua decompiler?

Posted by [Keshire](#) on Mon, 16 Sep 2013 13:21:51 GMT

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Artofeel wrote on Sun, 15 September 2013 11:56Keshire

Can I post some of the decompiled scripts? Just for modding and for examples.
I'm not sure because of rule number 4

Have at it. chunkspy outputs are not original files.

I wouldn't even consider rewritten or decompiled scripts original files.

And editing the compiled scripts via hex editor will only take you so far. The only thing I would use it for is to circumvent the DLC checks. Anything else I'd rather just attempt to rewrite it myself. Definitely not for the faint of heart though.

There IS a fable 2 decompiler. Because it doesn't use KoreVM. It's good to take a look at the Fable 2 scripts if you have them handy because a lot of the scripts are the same between the two games. Just compiled between normal lua and koreVM lua.

<http://fable2mod.com/forums/forum.php?req=thread&postid=249>

Thankfully, Fable 3 doesn't have a problem with plaintext uncompiled LUA. Otherwise we'd really be screwed.

Subject: Re: Lua decompiler?

Posted by [asmcint](#) on Mon, 16 Sep 2013 14:27:24 GMT

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Yep. We're also kinda lucky that they actually put plaintext, uncompiled lua in copies of certain files. Like scriptactivation.lua.

Subject: Re: Lua decompiler?

Posted by [Artofeel](#) on Mon, 16 Sep 2013 16:52:04 GMT

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Keshire wrote on Mon, 16 September 2013 19:21 I wouldn't even consider rewritten or decompiled scripts original files.

Then here they are

Subject: Re: Lua decompiler?

Posted by [Keshire](#) on Mon, 16 Sep 2013 21:41:42 GMT

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```
0450 0000000C    [0268] getglobal    0 0    ; CombatStyles
0454 00500086    [0269] getfield_r1   0 0 80 ; Dog
0458 01000078    [0270] closure        1 0    ; 0 upvalues
045C 0001BE1E    [0271] setfield          0 95 1 ; TargetScoringFunction
```

Should be CombatStyles.Dog:TargetScoringFunction() I think.

Which matches this that I know is right

```
000662 0016000C    [376] getglobal    0 22    ; Gameflow
000666 00230086    [377] getfield_r1   0 0 35 ; RoadToRule
00066A 01590078    [378] closure        1 89    ; 0 upvalues
00066E 0001D61E    [379] setfield          0 107 1 ; UNLOCK_ALL_GATES
```

Gameflow.RoadToRule:UNLOCK_ALL_GATES()

Subject: Re: Lua decompiler?

Posted by [Artofeel](#) on Tue, 17 Sep 2013 06:31:06 GMT

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Keshire wrote on Tue, 17 September 2013 03:41

```
0450 0000000C    [0268] getglobal    0 0    ; CombatStyles
0454 00500086    [0269] getfield_r1   0 0 80 ; Dog
0458 01000078    [0270] closure        1 0    ; 0 upvalues
045C 0001BE1E    [0271] setfield          0 95 1 ; TargetScoringFunction
```

Should be CombatStyles.Dog:TargetScoringFunction() I think.

not like this?

CombatStyles.Dog.TargetScoringFunction = function()

end

anyway, this is simple, function code is complicated

Subject: Re: Lua decompiler?

Posted by [Keshire](#) on Tue, 17 Sep 2013 12:20:53 GMT

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Artofeel wrote on Mon, 16 September 2013 23:31 Keshire wrote on Tue, 17 September 2013 03:41

```
0450 0000000C      [0268] getglobal    0 0      ; CombatStyles
0454 00500086      [0269] getfield_r1   0 0 80    ; Dog
0458 01000078      [0270] closure      1 0      ; 0 upvalues
045C 0001BE1E      [0271] setfield      0 95 1    ; TargetScoringFunction
```

Should be CombatStyles.Dog:TargetScoringFunction() I think.
not like this?

```
CombatStyles.Dog.TargetScoringFunction = function()
```

end

anyway, this is simple, function code is complicated

Nope there is only one function is that lua. The rest is just command after command, table after table.

```
5224      ** function [0] definition (level 2)
          ** start of function **
          source name:
d:\\Pulse\\work\\f3-daily-build-PC\\Deploy\\Fable2_win32\\data\\scripts\\AI\\CombatStyles\\Unique
CombatStyles.lua
524F E3000000      line defined (227)
5253 FA000000      last line defined (250)
5257 00           nups (0)
5258 02           numparams (2)
5259 00           is_vararg (0)
525A 08           maxstacksize (8)
          * code:
525B 25000000      sizecode (37)
525F 02000032      [01] loadk        2 0      ; 1
5263 0301000C      [02] getglobal     3 1      ; Dog
5267 03020686      [03] getfield_r1  3 3 2    ; GetMaster
526B 04030000      [04] getfield     4 0 3    ; Combatant
526F 03020404      [05] call_i       3 2 2
5273 04040710      [06] self        4 3 260  ; "IsAlive"
5277 0402047E      [07] call_i_r1    4 2 2
527B 04000002      [08] test         4 0      ; to [10] if true
527F 00120039      [09] jmp          19      ; to [29]
5283 0405000C      [10] getglobal     4 5      ; Carrying
5287 04060886      [11] getfield_r1  4 4 6    ; IsCarryingRangedWeapon
528B 0500060E      [12] move         5 3
528F 04020404      [13] call_i       4 2 2
5293 0500001A      [14] loadbool     5 0 0    ; false
5297 0605000C      [15] getglobal     6 5      ; Carrying
```

```

529B 06070C86      [16] getfield_r1  6 6 7 ; IsAvailable
529F 0700020E      [17] move          7 1
52A3 06020404      [18] call_i          6 2 2
52A7 06000002      [19] test           6 0 ; to [21] if true
52AB 00040039      [20] jmp            5 ; to [26]
52AF 0605000C      [21] getglobal       6 5 ; Carrying
52B3 06060C86      [22] getfield_r1    6 6 6 ; IsCarryingRangedWeapon
52B7 0700020E      [23] move          7 1
52BB 06020404      [24] call_i          6 2 2
52BF 05000C0E      [25] move           5 6
52C3 01050808      [26] eq             1 4 5 ; to [28] if false
52C7 00000039      [27] jmp            1 ; to [29]
52CB 0208054C      [28] mul            2 2 264 ; 5
52CF 0409000C      [29] getglobal       4 9 ; GUI
52D3 040A0886      [30] getfield_r1    4 4 10 ; IsEntityOnScreen
52D7 0500020E      [31] move           5 1
52DB 04020404      [32] call_i          4 2 2
52DF 04000002      [33] test           4 0 ; to [35] if true
52E3 00000039      [34] jmp            1 ; to [36]
52E7 020B054C      [35] mul            2 2 267 ; 3
52EB 02000412      [36] return         2 2
52EF 00000212      [37] return         0 1

```

* constants:

```

52F3 0C000000      sizek (12)
52F7 03            const type 3
52F8 0000803F      const [0]: (1)
52FC 04            const type 4
                    const [1]: "Dog"
5305 04            const type 4
                    const [2]: "GetMaster"
5314 04            const type 4
                    const [3]: "Combatant"
5323 04            const type 4
                    const [4]: "IsAlive"
5330 04            const type 4
                    const [5]: "Carrying"
533E 04            const type 4
                    const [6]: "IsCarryingRangedWeapon"
535A 04            const type 4
                    const [7]: "IsAvailable"
536B 03            const type 3
536C 0000A040      const [8]: (5)
5370 04            const type 4
                    const [9]: "GUI"
5379 04            const type 4
                    const [10]: "IsEntityOnScreen"
538F 03            const type 3
5390 00004040      const [11]: (3)

```

```

* functions:
5394 00000000      sizep (0)
* lines:
5398 25000000      sizelineinfo (37)
      [pc] (line)
539C E4000000      [01] (228)
53A0 E5000000      [02] (229)
53A4 E5000000      [03] (229)
53A8 E5000000      [04] (229)
53AC E5000000      [05] (229)
53B0 E8000000      [06] (232)
53B4 E8000000      [07] (232)
53B8 E8000000      [08] (232)
53BC E8000000      [09] (232)
53C0 E9000000      [10] (233)
53C4 E9000000      [11] (233)
53C8 E9000000      [12] (233)
53CC E9000000      [13] (233)
53D0 EA000000      [14] (234)
53D4 EB000000      [15] (235)
53D8 EB000000      [16] (235)
53DC EB000000      [17] (235)
53E0 EB000000      [18] (235)
53E4 EB000000      [19] (235)
53E8 EB000000      [20] (235)
53EC EC000000      [21] (236)
53F0 EC000000      [22] (236)
53F4 EC000000      [23] (236)
53F8 EC000000      [24] (236)
53FC EC000000      [25] (236)
5400 EF000000      [26] (239)
5404 EF000000      [27] (239)
5408 F0000000      [28] (240)
540C F5000000      [29] (245)
5410 F5000000      [30] (245)
5414 F5000000      [31] (245)
5418 F5000000      [32] (245)
541C F5000000      [33] (245)
5420 F5000000      [34] (245)
5424 F6000000      [35] (246)
5428 F9000000      [36] (249)
542C FA000000      [37] (250)
* locals:
5430 06000000      sizelocvars (6)
      local [0]: attacker_info
5446 00000000      startpc (0)
544A 24000000      endpc (36)
      local [1]: target

```

```

5459 00000000      startpc (0)
545D 24000000      endpc (36)
      local [2]: multiplier
5470 01000000      startpc (1)
5474 24000000      endpc (36)
      local [3]: master
5483 05000000      startpc (5)
5487 24000000      endpc (36)
      local [4]: master_ranged
549D 0D000000      startpc (13)
54A1 1C000000      endpc (28)
      local [5]: target_ranged
54B7 0E000000      startpc (14)
54BB 1C000000      endpc (28)
      * upvalues:
54BF 00000000      sizeupvalues (0)
      ** end of function **

```

Also, if you didn't know already. The scripts in the other gamescript bank contain debug data for locals, and start/stop lines.

Subject: Re: Lua decompiler?
 Posted by [Artofeel](#) on Wed, 18 Sep 2013 06:58:53 GMT
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Keshire wrote on Tue, 17 September 2013 18:20Nope there is only one function is that lua.
 and it should be in place
 CombatStyles.Dog.TargetScoringFunction = function()
 <<function code>>
 end
 or not?

Keshire wrote on Tue, 17 September 2013 18:20Also, if you didn't know already. The scripts in
 the other gamescript bank contain debug data for locals, and start/stop lines.
 didn't know
 was thinking what is different from gamescript_r and gamescript...
 and the use of them? only more confusing information

Subject: Re: Lua decompiler?
 Posted by [Keshire](#) on Wed, 18 Sep 2013 15:26:35 GMT
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Artofeel wrote on Tue, 17 September 2013 23:58Keshire wrote on Tue, 17 September 2013
 18:20Nope there is only one function is that lua.

and it should be in place
CombatStyles.Dog.TargetScoringFunction = function()
 <<function code>>
end
or not?

Keshire wrote on Tue, 17 September 2013 18:20: Also, if you didn't know already. The scripts in the other gamescript bank contain debug data for locals, and start/stop lines. I didn't know what is different from gamescript_r and gamescript... and the use of them? only more confusing information

You're right. My bad.
It should be this:

```
function CombatStyles.Dog:TargetScoringFunction(attacker_info, target)

end
```

There "shouldn't" be a difference between the script and script_r other than one contains compiler debug information. Which is REALLY helpful as it contains line information and local variables.

Subject: Re: Lua decompiler?
Posted by [Keshire](#) on Wed, 13 Nov 2013 04:54:19 GMT
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```
function CombatStyles.Dog:TargetScoringFunction(attacker_info, target)

local multiplier = 1.0
local master = Dog.GetMaster(attacker_info.Combatant)
if master:IsAlive() then
  local master_ranged = Carrying.IsCarryingRangedWeapon(master)
  local target_ranged = false
  if Carrying.IsAvailable(target) then
    target_ranged = Carrying.IsCarryingRangedWeapon(target)
  end
  if master_ranged ~= target_ranged then
    multiplier = multiplier * 5
  end
end
if GUI.IsEntityOnScreen(target) then
  multiplier = multiplier * 3
end
return multiplier
end
```

Subject: Re: Lua decompiler?

Posted by [Keshire](#) on Wed, 13 Nov 2013 05:11:00 GMT

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Artofeel wrote on Sun, 15 September 2013 11:56

and second (not sure if that script used at all)
ai\combatstyles\fable2legacycombatstyles.lua

```
368C 02040620      [3483] settable_s  2  3  4
3690 03790132      [3484] loadk       3 377  ; "MoveFunction"
3694 0400000C      [3485] getglobal   4  0  ; CombatStyles
3698 05680132      [3486] loadk       5 360  ; "LuciensSoldier"
369C 04050814      [3487] gettable_s  4  4  5
36A0 05790132      [3488] loadk       5 377  ; "MoveFunction"
36A4 04050814      [3489] gettable_s  4  4  5
...
3620 0000000C      [3456] getglobal   0  0  ; CombatStyles
3624 01680132      [3457] loadk       1 360  ; "LuciensSoldier"
3628 00010014      [3458] gettable_s  0  0  1
362C 01790132      [3459] loadk       1 377  ; "MoveFunction"
3630 02000078      [3460] closure     2  0  ; 0 upvalues
3634 00020220      [3461] settable_s  0  1  2

6393              ** function [0] definition (level 2)
                ** start of function **
                source name: (none)
6397 240B0000      line defined (2852)
639B 420B0000      last line defined (2882)
639F 00           nups (0)
63A0 03           numparams (3)
63A1 00           is_vararg (0)
63A2 08           maxstacksize (8)
                * code:
63A3 30000000      sizecode (48)
63A7 0302005C      [01] newtable     3  0  2  ; array=0, hash=2
63AB 0401000C      [02] getglobal   4  1  ; ENavigationSpeed
63AF 04020886      [03] getfield_r1  4  4  2  ; NAV_SPEED_SPRINT
63B3 0304001E      [04] setfield     3  0  4  ; speed
63B7 0304071E      [05] setfield     3  3  260 ; reset_constraints false
63BB 02000002      [06] test         2  0  ; to [8] if true
63BF 00050039      [07] jmp          6  ; to [14]
63C3 04050110      [08] self          4  0  261 ; "SetNavigationConstraints"
63C7 0601005C      [09] newtable     6  0  1  ; array=0, hash=1
63CB 07070000      [10] getfield     7  0  7  ; Target
63CF 06070C1E      [11] setfield     6  6  7  ; destination_target_entity
63D3 04010604      [12] call_i       4  3  1
63D7 00000039      [13] jmp          1  ; to [15]
```

```

63DB 0308071E    [14] setfield    3 3 264 ; reset_constraints true
63DF 04090000    [15] getfield     4 0 9 ; CombatInfo
63E3 040A0886    [16] getfield_r1   4 4 10 ; Zone
63E7 04000082    [17] test_r1        4 0 0
63EB 00080039    [18] jmp            9 ; to [28]
63EF 04090000    [19] getfield     4 0 9 ; CombatInfo
63F3 040A0886    [20] getfield_r1   4 4 10 ; Zone
63F7 050B000C    [21] getglobal     5 11 ; CombatZones
63FB 050C0A86    [22] getfield_r1   5 5 12 ; None
63FF 01050808    [23] eq            1 4 5 ; to [25] if false
6403 00020039    [24] jmp            3 ; to [28]
6407 0401000C    [25] getglobal     4 1 ; ENavigationSpeed
640B 040D0886    [26] getfield_r1   4 4 13 ; NAV_SPEED_WALK
640F 0304001E    [27] setfield     3 0 4 ; speed
6413 040E0110    [28] self          4 0 270 ; "MoveToPositionNoWait"
6417 0600020E    [29] move          6 1
641B 0700060E    [30] move          7 3
641F 04020804    [31] call_i        4 4 2
6423 04000002    [32] test          4 0 ; to [34] if true
6427 000A0039    [33] jmp           11 ; to [45]
642B 040F000C    [34] getglobal     4 15 ; coroutine
642F 04100886    [35] getfield_r1   4 4 16 ; yield
6433 0401027E    [36] call_i_r1     4 1 1
6437 0411000C    [37] getglobal     4 17 ; Navigation
643B 04120886    [38] getfield_r1   4 4 18 ; HasFailed
643F 05130000    [39] getfield     5 0 19 ; Entity
6443 04020404    [40] call_i        4 2 2
6447 04010002    [41] test          4 1 ; to [43] if false
644B 00010039    [42] jmp            2 ; to [45]
644F 0400021A    [43] loadbool     4 1 0 ; true
6453 04000412    [44] return        4 2
6457 0001281E    [45] setfield     0 20 1 ; NavFailPos
645B 0400001A    [46] loadbool     4 0 0 ; false
645F 04000412    [47] return        4 2
6463 00000212    [48] return        0 1

```

* constants:

```

6467 15000000    sizek (21)
646B 04          const type 4
                const [0]: "speed"
6476 04          const type 4
                const [1]: "ENavigationSpeed"
648C 04          const type 4
                const [2]: "NAV_SPEED_SPRINT"
64A2 04          const type 4
                const [3]: "reset_constraints"
64B9 01          const type 1
64BA 00          const [4]: (false)
64BB 04          const type 4

```

```

const [5]: "SetNavigationConstraints"
64D9 04      const type 4
const [6]: "destination_target_entity"
64F8 04      const type 4
const [7]: "Target"
6504 01      const type 1
6505 01      const [8]: (true)
6506 04      const type 4
const [9]: "CombatInfo"
6516 04      const type 4
const [10]: "Zone"
6520 04      const type 4
const [11]: "CombatZones"
6531 04      const type 4
const [12]: "None"
653B 04      const type 4
const [13]: "NAV_SPEED_WALK"
654F 04      const type 4
const [14]: "MoveToPositionNoWait"
6569 04      const type 4
const [15]: "coroutine"
6578 04      const type 4
const [16]: "yield"
6583 04      const type 4
const [17]: "Navigation"
6593 04      const type 4
const [18]: "HasFailed"
65A2 04      const type 4
const [19]: "Entity"
65AE 04      const type 4
const [20]: "NavFailPos"
* functions:
65BE 00000000      sizep (0)
* lines:
65C2 00000000      sizelineinfo (0)
[pc] (line)
* locals:
65C6 00000000      sizelocvars (0)
* upvalues:
65CA 00000000      sizeupvalues (0)
** end of function **

```

```

DecompiledFunction = function(self, dest_pos, face_target)
  local params = {speed = ENavigationSpeed.NAV_SPEED_SPRINT, reset_constraints = false}
  if face_target then
    self:SetNavigationConstraints({destination_target_entity = self.Target})
  end
end

```



```
else
  params.reset_constraints = true
end
if self.CombatInfo.Zone and self.CombatInfo.Zone ~= CombatZones.None then
  params.speed = ENavigationSpeed.NAV_SPEED_WALK
end
if self:MoveToPositionNoWait(dest_pos, params) then
  coroutine.yield()
  if not Navigation.HasFailed(self.Entity) then
    return true
  end
end
self.NavFailPos = dest_pos
return false
end
```

Subject: Re: Lua decompiler?
Posted by [Artofeel](#) on Wed, 13 Nov 2013 14:43:14 GMT
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OSSOME
thanks!
it's loaded, but it seems to be not used at all
I place some MessageBox'es and no one is appear...
strange function
btw, works (loaded) in both ways

```
function CombatStyles.Dog:TargetScoringFunction(attacker_info, target)
```

```
CombatStyles.Dog.TargetScoringFunction = function(attacker_info, target)
```

Subject: Re: Lua decompiler?
Posted by [Keshire](#) on Wed, 13 Nov 2013 15:31:44 GMT
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Artofeel wrote on Wed, 13 November 2013 06:43OSSOME
thanks!
it's loaded, but it seems to be not used at all
I place some MessageBox'es and no one is appear...
strange function

btw, works (loaded) in both ways

```
function CombatStyles.Dog:TargetScoringFunction(attacker_info, target)
```

```
CombatStyles.Dog.TargetScoringFunction = function(attacker_info, target)
```

Ya. Both syntax give the same thing. I just base it off how lionhead has done all their other stuff for consistency sake.

I'll take a look around and see if anything is loading it. You may be right though. Plus, I'm really not sure on the syntax of the rest. The assembly for it is pretty crazy with all the table stuff going on. I'll trust you have it right though because I don't want to figure it out.

Subject: Re: Lua decompiler?

Posted by [TheGeniusSavant](#) on Fri, 18 Sep 2015 13:40:57 GMT

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Okay, I'm looking at `\data\scripts\miscellaneous\carriedactionusescripts\oncarriedactionusedig.lua`

I'm trying to figure out how I would modify it to jump straight from selecting "dig" to showing your loot (skipping the friggin' stupid-long animation every time).

I ran it through KoreVM LUA decompiler (thanks to Keshire! and it spit out the table, but I'm not familiar enough (yet) with how to read it. Can someone point me to an LUA tutorial that would explain how to convert that table into functions, or at least how to read it?

I can guess at bits and pieces (such as, it's pretty easy to see when it's making a logic call and doing if-then actions... I can understand what JMP [246] means, etc.

I'll attach the decompiled code here, in case anyone has time to look at it.

File Attachments

1) [oncarriedactionusedig.txt](#), downloaded 1367 times

Subject: Re: Lua decompiler?

Posted by [TheGeniusSavant](#) on Fri, 18 Sep 2015 14:10:47 GMT

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I feel like I ought to be able to change

```
0677 08000002 [359] test      8  0  ; to [361] if true
067B 00030039 [360] jmp        4          ; to [365]
```

to

```
0677 08000002 [359] test      8  0  ; to [361] if true
067B 00030039 [360] jmp        4          ; to [383]
```

and delete

```
068F 0848000C [365] getglobal  8 72   ; CameraManager
0693 08491086 [366] getfield_r1 8 8 73 ; SetCannedActionCameraMode
0697 09000000 [367] getfield    9 0 0  ; EntityUsingItem
069B 0A4A000C [368] getglobal  10 74  ; CannedActionCamera
069F 0A4B1486 [369] getfield_r1 10 10 75 ; Types
06A3 0A561486 [370] getfield_r1 10 10 86 ; CANNEDACTION_NONE
06A7 08010604 [371] call_i      8 3 1
06AB 0817000C [372] getglobal  8 23   ; Player
06AF 08181086 [373] getfield_r1 8 8 24  ; IsAvailable
06B3 09000000 [374] getfield    9 0 0  ; EntityUsingItem
06B7 08020404 [375] call_i      8 2 2
06BB 08000002 [376] test        8  0  ; to [378] if true
06BF 00040039 [377] jmp        5          ; to [383]
```

to get it to skip the animation.

Or do I have to leave the first section alone and change subsequent line numbers to reflect their new positions? Or do I have to figure out how to turn this into plaintext LUA code that is more easily modified? (I know... so many questions, so few answers...

Subject: Re: Lua decompiler?
Posted by [TheGeniusSavant](#) on Fri, 18 Sep 2015 14:35:44 GMT
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Well... I dug a little deeper... I think this is the offending code... now to figure out how to disable it and either recompile it or rewrite it to work without...

```
039B 0606005C [176] newtable    6 0 6  ; array=0, hash=6
039F 0738000C [177] getglobal  7 56   ; EScribableAction
```

03A3	07390E86	[178]	getfield_r1	7	7	57	; LOOP
03A7	06076E1E	[179]	setfield	6	55	7	; Type
03AB	073B000C	[180]	getglobal	7	59		; EActionPriority
03AF	073C0E86	[181]	getfield_r1	7	7	60	; PRIORITY_INTERACTION
03B3	0607741E	[182]	setfield	6	58	7	; Priority
03B7	0703005C	[183]	newtable	7	0	3	; array=0, hash=3
03BB	0838000C	[184]	getglobal	8	56		; EScriptableAction
03BF	083E1086	[185]	getfield_r1	8	8	62	; DIG
03C3	07086E1E	[186]	setfield	7	55	8	; Type
03C7	07407F1E	[187]	setfield	7	63	320	; Anim "DigInto"
03CB	07033E1E	[188]	setfield	7	31	3	; Spade
03CF	06077A1E	[189]	setfield	6	61	7	; IntoAction
03D3	0703005C	[190]	newtable	7	0	3	; array=0, hash=3
03D7	0838000C	[191]	getglobal	8	56		; EScriptableAction
03DB	083E1086	[192]	getfield_r1	8	8	62	; DIG
03DF	07086E1E	[193]	setfield	7	55	8	; Type
03E3	07427F1E	[194]	setfield	7	63	322	; Anim "DigLoop"
03E7	07033E1E	[195]	setfield	7	31	3	; Spade
03EB	0607821E	[196]	setfield	6	65	7	; LoopAction
03EF	0702005C	[197]	newtable	7	0	2	; array=0, hash=2
03F3	0838000C	[198]	getglobal	8	56		; EScriptableAction
03F7	08441086	[199]	getfield_r1	8	8	68	; PLAY_ANIMATION
03FB	07086E1E	[200]	setfield	7	55	8	; Type
03FF	07057E1E	[201]	setfield	7	63	5	; Anim
0403	0607861E	[202]	setfield	6	67	7	; OutOfAction
0407	06468B1E	[203]	setfield	6	69	326	; NumLoops 1