```
1) before:
R7 [a3] = 0
R8 [t0] = 0
R9 [t1] = 0
R10 [t2] = 0
R11 [t3] = 0
R12 [t4] = 0
R13 [t5] = 0
R14 [t6] = 0
R15 [t7] = 0
R16 [s0] = 0
R17 [s1] = 0
R18 [s2] = 0
R19 [s3] = 0
R20 [s4] = 0
R21 [s5] = 0
R22 [s6] = 0
R23 [s7] = 0
R24 [t8] = 0
R25 [t9] = 0
R26 [k0] = 0
R27 [k1] = 0
R28 [gp] = 268468224
R29 [sp] = 2147482044
R30 [s8] = 0
R31 [ra] = 0
```

After:

```
R4 [a0] = 1
```

R5 [a1] =
$$214748204$$

$$R6 [a2] = 214748205$$

- R7 [a3] = 0
- R8 [t0] = 25
- R9 [t1] = 5
- R10 [t2] = 15
- R11 [t3] = 8
- R12 [t4] = 30
- R13 [t5] = 7
- R14 [t6] = 0
- R15 [t7] = 0
- R16 [s0] = 15
- R17 [s1] = 10
- R18 [s2] = 7R19 [s3] = 2
- R20 [s4] = 18
- R21 [s5] = -3
- R22 [s6] = 37
- R23 [s7] = 0
- R24 [t8] = 0
- R25 [t9] = 0
- R26 [k0] = 0
- **R27 [k11** = ∩

[10000000]..[1003ffff] 00000000

[7ffff9bc]	0000000001																	
[7ffff9c0]	2147482230	0000000000	2147483615	2147483604	v													
[7ffff9d0]	2147483579	2147483571	2147483554	2147483531														
[7ffff9e0]	2147483466	2147483438	2147483406	2147483390	J													
[7ffff9f0]	2147483336	2147483299	2147483281	2147483255											. 1	W .		
[7ffffa00]	2147483241	2147483216	2147483193	2147483170	i				Ρ.			9				" .		
[7ffffa10]	2147483155	2147483111	2147482997	2147482887								u						
[7ffffa20]	2147482840	2147482809	2147482786	2147482763														
[7ffffa30]	2147482752	2147482735	2147482702	2147482675					ο.			N				3		
[7ffffa40]	2147482655	2147482601	2147482568	2147482527														
[7ffffa50]	2147482511	2147482492	2147482474	2147482450					.			j			. 1	R .		
[7ffffa60]	2147482432	2147482416	2147482331	2147482286	6				0.									
[7ffffa70]	0000000000	1747910656	0795176303	1937072740						/	h	0	m	е	1	d l	o u	S
[7ffffa80]	1768042356	1668637300	0796157291	0825372722	t	/	b	i	t k	u	С	k	е	t	1	2 (0 2	1
[7ffffa90]	1818322527	1667587948	0925984112	1634479920	_	f	a	1	1 _	е	C	p	е	1	7	0 /	/ 1	a
[7ffffaa0]	0791687522	1953653104	1935748657	1146617965	b	1	0	/	ра	r	t	1		a	S	m .	. X	D
[7ffffab0]	1329815367	1195984462	1380533343	1697594707	G	_	С	0	N F	' I	G	_	D	Ι	R	S =	= /	е
[7ffffac0]	2016371572	2016372580	1965909860	1953396066	t	С	/	х	d g	/	х	d	g	-	u !	bι	a n	t
[7ffffad0]	1697593973	2016371572	1476421476	1147094852	u	:	/	е	t c	: /	х	d	g		X !	D (G _	D
[7ffffae0]	1598116929	1397901636	1937059645	1752379250	A	T	Α	_	D I	R	S	=	/	u	S	r	/ s	h
[7ffffaf0]	0795177569	1853186677	0792360308	0796029813	a	r	е	/	u k	u	n	t	u	:	/	u s	s r	/
[7ffffb00]	1633906540	1752379244	0795177569	1937059642	1	0	C	a	1 /	S	h	a	r	е	/	: /	/ u	S
[7ffffb10]	1752379250	0795177569	1635135290	1768697714	r	/	S	h	a r	е	/	:	/	v	a	r	/ 1	i
[7ffffb20]	1853042530	0795111521	1802724708	0007368564	b	/	S	n	a p	d	/	d	е	S	k '	t o	о р	
[7ffffb30]	1027888976	1836017711	1650732901	0007631733	P	W	D	=	/ h	0	m	е	/	d	b '	u s	s t	
[7ffffb40]	1230984273	1330470733	1162630468	1969383741	Q	T	_	Ι	Μ_	Μ	0	D	U	L	Ε :	= ;	i b	u
[7ffffb50]	1246167155	1162108755	1598510402	1347704143	S		G	J	S _	D	E	В	U	G	_ (0 [J T	P
[7ffffb60]	1933399125	1919247476	1145503858	1397052237	U	T	=	S	t d	l e	r	r		G	D !	M S	S E	S
[7ffffb70]	1313818963	1969386813	0007697518	1096766545	S	Ι	0	N	= 1	b	u	n	t	u	. (Q I	Γ_	Α
[7ffffb80]	1397048131	1229080915	1498696012	1392521533					S I									
[7ffffhqn]	1280066888	17680/2301	163383/633	1302535667	н	F	Τ.	Τ.	- /	h	÷	n	1	h	=	o 1	h	9

	egment [100000		00]															
[10000000].	.[1000ffff] 0	0000000																
[10010000]	0000000037	0000000000	0000000000	000000000	96													
[10010010].	.[1009££££] 0	000000																
User Stack	[7ffff9bc][8	30000000]																
[7ffff9bc]	0000000001																	
[7ffff9c0]	2147482230	0000000000	2147483615	2147483604	v													
[7ffff9d0]	2147483579	2147483571	2147483554	2147483531														
[7ffff9e0]	2147483466	2147483438	2147483406	2147483390	J													
[7ffff9f0]	2147483336	2147483299	2147483281	2147483255											. 1	w.		
[7ffffa00]	2147483241	2147483216	2147483193	2147483170	i			. I	٠.			9				۳.		
[7ffffa10]	2147483155	2147483111	2147482997	2147482887								u						
[7ffffa20]	2147482840	2147482809	2147482786	2147482763														
[7ffffa30]	2147482752	2147482735	2147482702	2147482675				. (N			. :	3.		
[7ffffa40]	2147482655	2147482601	2147482568	2147482527														
[7ffffa50]	2147482511	2147482492	2147482474	2147482450								j			. 1	R.		
[7ffffa60]	2147482432	2147482416	2147482331	2147482286	6			. (
[7ffffa70]	0000000000	1747910656	0795176303	1937072740						/	h	0	m	е	/	d b	u	S
[7ffffa80]	1768042356	1668637300	0796157291	0825372722	t	/	b	i t	b	u	C	k	е	t	/ :	2 0	2	1
[7ffffa90]	1818322527	1667587948	0925984112	1634479920	_	f	a	1 1	_	е	С	р	е	1	7	0 /	1	a
[7ffffaa0]	0791687522	1953653104	1935748657	1146617965	b	1	0	/ I	a	r	t	1		a	S I	m.	. X	D
[7ffffab0]	1329815367	1195984462	1380533343	1697594707	G	_	С	0 1	IF	Ι	G	_	D	Ι	R	S =	- /	е
[7ffffac0]	2016371572	2016372580	1965909860	1953396066	t	С	/	x c	l g	1	х	d	g	_	u l	bυ	ı n	t
[7ffffad0]	1697593973	2016371572	1476421476	1147094852	u	:	/	e t	c	1	х	d	g		X I	D G	3 _	D
[7ffffae0]	1598116929	1397901636	1937059645	1752379250	Α	Т	Α	_ I	I	R	S	=	1	u	s :	r /	s	h
	0795177569	1853186677	0792360308	0796029813														/

```
\begin{array}{lll} \mathbf{PC} & = & 0 \\ \mathbf{EPC} & = & 0 \\ \mathbf{Cause} & = & 0 \\ \mathbf{BadVAddr} & = & 0 \end{array}
```

Status = 805371664

$$\mathbf{HI} = 0$$

$$\mathbf{LO} = 0$$

R6 [a2] =
$$2147482056$$

R7 [a3] = 0

$$\mathbf{R12} \ [\mathbf{t4}] = 0$$

$$R13 [t5] = 0$$

$$R14 [t6] = 0$$

$$\mathbf{R15} \ [\mathbf{t7}] = 0$$

$$R17 [s1] = 0$$

$$\mathbf{R18} \ [\mathbf{s2}] = 0$$

$$R19 [s3] = 0$$

 $R20 [s4] = 0$

$$R20 [s4] = 0$$

 $R21 [s5] = 0$

$$R22 [s6] = 0$$

$$R23 [s7] = 0$$

```
Cause
      = 0
BadVAddr = 0
Status = 805371664
ΗI
       = 0
LO
       = 0
R0
   [r0] = 0
   [at] = 268500992
R1
   [v0] = 10
R2
   [v1] = 0
R3
R4 [a0] = 1
   [a1] = 2147482048
R5
R6 [a2] = 2147482056
R7 [a3] = 0
R8 [t0] = 0
R9 [t1] = 0
R10 [t2] = 0
R11 [t3] = 0
R12 [t4] = 0
R13 [t5] = 0
R14 [t6] = 0
R15 [t7] = 0
R16 [s0] = 10
R17 [s1] = 15
R18 [s2] = 6
R19 [s3] = 0
R20 [s4] = 0
R21 [s5] = 0
R22 [s6] = 0
R23 [s7] = 0
R24 [t8] = 0
R25 [t9] = 0
R26 [k01 = 0
```

[10000000]..[1003ffff] 00000000

[7ffff9bc] 000000001																	
[7ffff9c0] 2147482230	0000000000	2147483615	2147483604	v													
[7ffff9d0] 2147483579	2147483571	2147483554	2147483531														
[7ffff9e0	2147483466	2147483438	2147483406	2147483390	J													
[7ffff9f0] 2147483336	2147483299	2147483281	2147483255											. 1	Ι.		
[7ffffa00] 2147483241	2147483216	2147483193	2147483170	i				Ρ.			9			. "	٠.		
[7ffffa10] 2147483155	2147483111	2147482997	2147482887								u						
[7ffffa20] 2147482840	2147482809	2147482786	2147482763														
[7ffffa30] 2147482752	2147482735	2147482702	2147482675					ο.			N			. 3	3 .		
[7ffffa40] 2147482655	2147482601	2147482568	2147482527														
[7ffffa50] 2147482511	2147482492	2147482474	2147482450					.			j			. F	₹.		
[7ffffa60] 2147482432	2147482416	2147482331	2147482286	@				0.									
[7ffffa70] 0000000000	1747910656	0795176303	1937072740						/	h	0	m	e	/ 0	l b	u	S
[7ffffa80] 1768042356	1668637300	0796157291	0825372722	t	/	b	i	t b	u	C	k	е	t,	/ 2	2 0	2	1
[7ffffa90] 1818322527	1667587948	0925984112	1634479920	_	f	a	1	1 _	е	C	Р	е	1	7 () /	1	a
[7ffffaa0] 0791687522	1953653104	1935748658	1146617965	b	1	0	/	ра	r	t	2		a	s n	n.	Х	D
[7ffffab0] 1329815367	1195984462	1380533343	1697594707	G	_	C	0	N F	I	G	_	D	I	R S	=	/	е
[7ffffac0	2016371572	2016372580	1965909860	1953396066	t	С	/	х	d g	/	х	d	g	- 1	u k	u	n	t
[7ffffad0] 1697593973	2016371572	1476421476	1147094852	u	:	/	е	t c	: /	х	d	g	. :	ΧI) G	_	D
[7ffffae0] 1598116929	1397901636	1937059645	1752379250	A	T	Α	_	D I	R	S	=	/	u :	s I	: /	S	h
[7ffffaf0] 0795177569	1853186677	0792360308	0796029813	a	r	е	/	u k	u	n	t	u	:	/ τ	S	r	/
[7ffffb00] 1633906540	1752379244	0795177569	1937059642	1	0	C	a	1 /	s	h	a	r	e	/ :	/	u	S
[7ffffb10] 1752379250	0795177569	1635135290	1768697714	r	/	s	h	a r	е	/	:	1	v	a 1	: /	1	i
[7ffffb20] 1853042530	0795111521	1802724708	0007368564	b	/	S	n	a p	d	/	d	е	S	k t	. 0	p	
[7ffffb30] 1027888976	1836017711	1650732901	0007631733	P	W	D	=	/ h	0	m	е	/	d I	bι	l S	t	
[7ffffb40] 1230984273	1330470733	1162630468	1969383741					Μ_									
[7ffffb50] 1246167155	1162108755	1598510402	1347704143	S		G	J	S _	D	E	В	U	G.	_ (U	T	P
[7ffffb60] 1933399125	1919247476	1145503858	1397052237	U	T	=	S	t d	l e	r	r		G I	D M	1 S	E	S
[7ffffb70] 1313818963	1969386813	0007697518	1096766545	S	I	0	N	= 1	b	u	n	t	u	. (T	_	A

[10000000]..[1003ffff] 00000000

User Stack [7ffff9bc]..[80000000]

[7ffff9bc]	0000000001				
[7ffff9c0]	2147482230	0000000000	2147483615	2147483604	v
[7ffff9d0]	2147483579	2147483571	2147483554	2147483531	
[7ffff9e0]	2147483466	2147483438	2147483406	2147483390	J
[7ffff9f0]	2147483336	2147483299	2147483281	2147483255	
[7ffffa00]	2147483241	2147483216	2147483193	2147483170	i P 9 "
[7ffffa10]	2147483155	2147483111	2147482997	2147482887	u
[7ffffa20]	2147482840	2147482809	2147482786	2147482763	
[7ffffa30]	2147482752	2147482735	2147482702	2147482675	o N 3
[7ffffa40]	2147482655	2147482601	2147482568	2147482527	
[7ffffa50]	2147482511	2147482492	2147482474	2147482450	j R
[7ffffa60]	2147482432	2147482416	2147482331	2147482286	@ 0
[7ffffa70]	0000000000	1747910656	0795176303	1937072740	/home/dbus
[7ffffa80]	1768042356	1668637300	0796157291	0825372722	t / b i t b u c k e t / 2 0 2 1
[7ffffa90]	1818322527	1667587948	0925984112	1634479920	_fall_ecpe170/la
[7ffffaa0]	0791687522	1953653104	1935748658	1146617965	b10/part2.asm.XD
[7ffffab0]	1329815367	1195984462	1380533343	1697594707	G CONFIGDIRS = /e
[7ffffac0]	2016371572	2016372580	1965909860	1953396066	tc/xdg/xdg-ubunt
[7ffffad0]	1697593973	2016371572	1476421476	1147094852	u:/etc/xdg.XDG_D
[7ffffae0]	1598116929	1397901636	1937059645	1752379250	$ATA_DIRS=/usr/sh$
[7ffffaf0]	0795177569	1853186677	0792360308	0796029813	are/ubuntu:/usr/
[7ffffb00]	1633906540	1752379244	0795177569	1937059642	local/share/:/us
[7ffffb10]	1752379250	0795177569	1635135290	1768697714	r/share/:/var/li
[7ffffb20]	1853042530	0795111521	1802724708	0007368564	b/snapd/desktop.
[7ffffb30]	1027888976	1836017711	1650732901	0007631733	PWD=/home/dbust.
[7ffffb40]	1230984273	1330470733	1162630468	1969383741	QT_IM_MODULE=ibu
[7ffffb50]	1246167155	1162108755	1598510402	1347704143	s.GJS_DEBUG_OUTP
[7ffffb60]	1933399125	1919247476	1145503858	1397052237	UT = stderr.GDMSES
[7ffffb70]	1313818963	1969386813	0007697518	1096766545	SION = ubuntu.QT_A
[7ffffb80]	1397048131	1229080915	1498696012	1392521533	C C E S S I B I L I T Y = 1 . S
[7ffffh90]	1280066888	1768042301	1633824622	1392535667	HET.T. = / hin/hash S

```
PC
     = 0
EPC
      = 0
Cause
     = 0
BadVAddr = 0
```

Status = 805371664

$$\mathbf{HI} = 0$$

$$\mathbf{LO} = 0$$

$$\mathbf{R0} \quad [\mathbf{r0}] = 0$$

$$\mathbf{R1} \quad [\mathbf{at}] = 0$$

$$R2 [v0] = 0$$

 $R3 [v1] = 0$

$$R4 [a0] = 1$$

R6 [a2] =
$$2147482056$$

$$R7 [a3] = 0$$

$$R8 [t0] = 0$$

$$R9 [t1] = 0$$

$$R10 [t2] = 0$$

$$R11 [t3] = 0$$

$$R12 [t4] = 0$$

$$R13 [t5] = 0$$

$$R14 [t6] = 0$$

$$\textbf{R15} \quad \textbf{[t7]} = 0$$

$$R16 [s0] = 0$$

$$R17 [s1] = 0$$

R18 [s2] =
$$0$$

$$\mathbf{R19} \ [\mathbf{s3}] = 0$$

$$R20 [s4] = 0$$

$$\mathbf{R21} \quad [\mathbf{s5}] = 0$$

$$R22 [s6] = 0$$

$$R23 [s7] = 0$$

```
R0 [r0] = 0
R1 [at] = 268500992
R2 [v0] = 10
R3 \quad [v1] = 0
R4 [a0] = 1
R5 [a1] = 2147482048
R6 [a2] = 2147482056
R7 [a3] = 0
R8 [t0] = -1
R9 [t1] = 0
R10 [t2] = 0
R11 [t3] = 0
R12 [t4] = 0
R13 [t5] = 0
R14 [t6] = 0
R15 [t7] = 0
R16 [s0] = 78
R17 [s1] = 0
R18 [s2] = 0
R19 [s3] = 0
R20 [s4] = 0
R21 [s5] = 0
R22 [s6] = 0
R23 [s7] = 0
```

[10000000]..[1003ffff] 00000000

TOCK COUCH [
[7ffff9bc]	0000000001				
[7ffff9c0]	2147482230	000000000	2147483615	2147483604	v
[7ffff9d0]	2147483579	2147483571	2147483554	2147483531	
[7ffff9e0]	2147483466	2147483438	2147483406	2147483390	J
[7ffff9f0]	2147483336	2147483299	2147483281	2147483255	
[7ffffa00]	2147483241	2147483216	2147483193	2147483170	i P 9 "
[7ffffa10]	2147483155	2147483111	2147482997	2147482887	u
[7ffffa20]	2147482840	2147482809	2147482786	2147482763	
[7ffffa30]	2147482752	2147482735	2147482702	2147482675	o N 3
[7ffffa40]	2147482655	2147482601	2147482568	2147482527	
[7ffffa50]	2147482511	2147482492	2147482474	2147482450	j R
[7ffffa60]	2147482432	2147482416	2147482331	2147482286	@ 0
[7ffffa70]	0000000000	1747910656	0795176303	1937072740	/home/dbus
[7ffffa80]	1768042356	1668637300	0796157291	0825372722	t / b i t b u c k e t / 2 0 2 1
[7ffffa90]	1818322527	1667587948	0925984112	1634479920	_fall_ecpe170/la
[7ffffaa0]	0791687522	1953653104	1935748659	1146617965	b10/part3.asm.XD
[7ffffab0]	1329815367	1195984462	1380533343	1697594707	$G _C O N F I G _D I R S = / e$
[7ffffac0]	2016371572	2016372580	1965909860	1953396066	tc/xdg/xdg-ubunt
[7ffffad0]	1697593973	2016371572	1476421476	1147094852	u:/etc/xdg.XDG_D
[7ffffae0]	1598116929	1397901636	1937059645	1752379250	$ATA_DIRS=/usr/sh$
[7ffffaf0]	0795177569	1853186677	0792360308	0796029813	are/ubuntu:/usr/
[7ffffb00]	1633906540	1752379244	0795177569	1937059642	local/share/:/us
[7ffffb10]	1752379250	0795177569	1635135290	1768697714	r / s h a r e / : / v a r / l i
[7ffffb20]	1853042530	0795111521	1802724708	0007368564	b/snapd/desktop.
[7ffffb30]	1027888976	1836017711	1650732901	0007631733	PWD = /home/dbust.
[7ffffb40]	1230984273	1330470733	1162630468	1969383741	Q T _ I M _ M O D U L E = i b u
[7ffffb50]	1246167155	1162108755	1598510402	1347704143	s.GJS_DEBUG_OUTP
[7ffffb60]	1933399125	1919247476	1145503858	1397052237	UT = stderr.GDMSES
[7ffffb70]	1313818963	1969386813	0007697518	1096766545	$SION = ubuntu.QT_A$
[7ffffb80]	1397048131	1229080915	1498696012	1392521533	C C E S S I B I L I T Y = 1 . S
[7ffffb90]	1280066888	1768042301	1633824622	1392535667	H E L L = / b i n / b a s h . S

```
User data segment [10000000]..[10040000]
[10000000]..[1000fffff 00000000
           00000000078
                                   0000000000 0000000000
[10010000]
                                                         N . . . . . . . . . . . . . . . . . .
[10010010]..[
            10035551
                     00000000
User Stack [7ffff9bc]..[80000000]
            0000000001
[7ffff9bc1
[7ffff9c0]
            2147482230 0000000000 2147483615 2147483604
                                                          v . . . . . . . . . . . . . . . . .
[7ffff9d0]
            2147483579 2147483571
                                  2147483554 2147483531
            2147483466 2147483438 2147483406 2147483390
[7ffff9e01
                                                          J . .
[7ffff9f0]
            2147483336 2147483299 2147483281 2147483255
            2147483241 2147483216 2147483193 2147483170
                                                          i...P...9...
[7ffffa00]
[7ffffa10]
            2147483155 2147483111 2147482997 2147482887
                                                          . . . . . . . . u . . . . .
[7ffffa20]
            2147482840 2147482809
                                  2147482786 2147482763
            2147482752
                       2147482735
                                  2147482702
                                             2147482675
[7ffffa30]
                                                          . . . . o . . . N . . . 3 . .
            2147482655 2147482601 2147482568 2147482527
[7ffffa40]
            2147482511 2147482492 2147482474 2147482450
                                                          .... | . . . j . . . R . .
[7ffffa501
            2147482432 2147482416 2147482331 2147482286
[7ffffa60]
                                                          @ . . . 0 . . . . . . . . . . .
[7ffffa70]
            0000000000 1747910656 0795176303 1937072740
                                                          ..../home/dbus
                                                          t / b i t b u c k e t / 2 0 2 1
            1768042356 1668637300 0796157291 0825372722
[7ffffa80]
[7ffffa90]
            1818322527
                       1667587948
                                  0925984112
                                             1634479920
                                                          _fall_ecpe170/la
[7ffffaa0]
            0791687522 1953653104
                                  1935748659
                                             1146617965
                                                          b10/part3.asm.XD
                                                          G _ C O N F I G _ D I R S = / e
            1329815367 1195984462 1380533343 1697594707
[7fffffab0]
[7ffffac0]
            2016371572 2016372580 1965909860 1953396066
                                                          tc/xdq/xdq-ubunt
[7ffffad0]
            1697593973 2016371572 1476421476 1147094852
                                                          u:/etc/xdg.XDG_D
            1598116929 1397901636 1937059645 1752379250
[7ffffae0]
                                                          ATA_DIRS = /usr/sh
[7ffffaf0]
            0795177569 1853186677
                                  0792360308 0796029813
                                                          are/ubuntu:/usr/
            1633906540 1752379244 0795177569 1937059642
                                                          local/share/:/us
[7ffffb00]
[7ffffb10]
            1752379250 0795177569 1635135290 1768697714
                                                          r / s h a r e / : / v a r / l i
            1853042530 0795111521 1802724708 0007368564
                                                          b/snapd/desktop.
[7ffffb201
                                                          PWD = /home/dbust.
[7ffffb30]
           1027888976 1836017711 1650732901 0007631733
[7ffffb40]
            1230984273 1330470733 1162630468 1969383741
                                                          QT_IM_MODULE = ibu
                                                          s . G J S \_ D E B U G \_ O U T P
            1246167155 1162108755 1598510402 1347704143
[7ffffb50]
```

```
ΗI
       = 0
LO
        = 0
R0 [r0] = 0
R1 [at] = 0
R2 \quad [v0] = 0
R3 \quad [v1] = 0
R4 [a0] = 1
R5 [a1] = 2147482048
R6 [a2] = 2147482056
R7 [a3] = 0
R8 [t0] = 0
R9 [t1] = 0
R10 [t2] = 0
R11 [t3] = 0
R12 [t4] = 0
R13 [t5] = 0
R14 [t6] = 0
R15 [t7] = 0
R16 [s0] = 0
R17 [s1] = 0
R18 [s2] = 0
R19 [s3] = 0
R20 [s4] = 0
R21 [s5] = 0
R22 [s6] = 0
R23 [s7] = 0
R24 [t8] = 0
R25 [t9] = 0
R26 [k0] = 0
R27 [k1] = 0
```

R28 [gp] = 268468224**R29 [sp]** = 2147482044

```
R1 [at] = 1
R2 [v0] = 10
R3 \quad [v1] = 0
R4 [a0] = 1
R5 [a1] = 2147482048
R6 [a2] = 2147482056
R7 [a3] = 0
R8 [t0] = -1
R9 [t1] = 0
R10 [t2] = 268500992
R11 [t3] = 26
R12 [t4] = 0
R13 [t5] = 0
R14 [t6] = 0
R15 [t7] = 0
R16 [s0] = 268500992
R17 [s1] = 0
R18 [s2] = 12
R19 [s3] = 0
R20 [s4] = 0
R21 [s5] = 0
R22 [s6] = 268501012
R23 [s7] = 17
R24 [t8] = 0
R25 [t9] = 0
R26 [k0] = 0
R27 [k1] = 0
R28 [gp] = 268468224
R29 [sp] = 2147482044
R30 [s8] = 0
R31 [ra] = 4194328
```

[10000000]..[1003ffff] 00000000

[7ffff9bc]	0000000001				
[7ffff9c0]	2147482230	0000000000	2147483615	2147483604	v
[7ffff9d0]	2147483579	2147483571	2147483554	2147483531	
[7ffff9e0]	2147483466	2147483438	2147483406	2147483390	J
[7ffff9f0]	2147483336	2147483299	2147483281	2147483255	
[7ffffa00]	2147483241	2147483216	2147483193	2147483170	i P 9 "
[7ffffa10]	2147483155	2147483111	2147482997	2147482887	u
[7ffffa20]	2147482840	2147482809	2147482786	2147482763	
[7ffffa30]	2147482752	2147482735	2147482702	2147482675	o N 3
[7ffffa40]	2147482655	2147482601	2147482568	2147482527	
[7ffffa50]	2147482511	2147482492	2147482474	2147482450	j R
[7ffffa60]	2147482432	2147482416	2147482331	2147482286	@ 0
[7ffffa70]	0000000000	1747910656	0795176303	1937072740	/home/dbus
[7ffffa80]	1768042356	1668637300	0796157291	0825372722	t / b i t b u c k e t / 2 0 2 1
[7ffffa90]	1818322527	1667587948	0925984112	1634479920	_fall_ecpe170/la
[7ffffaa0]	0791687522	1953653104	1935748660	1146617965	b 1 0 / part 4 . asm . X D
[7ffffab0]	1329815367	1195984462	1380533343	1697594707	$G _ C O N F I G _ D I R S = / e$
[7ffffac0]	2016371572	2016372580	1965909860	1953396066	tc/xdg/xdg-ubunt
[7ffffad0]	1697593973	2016371572	1476421476	1147094852	u:/etc/xdg.XDG_D
[7ffffae0]	1598116929	1397901636	1937059645	1752379250	$ATA_DIRS=/usr/sh$
[7ffffaf0]	0795177569	1853186677	0792360308	0796029813	are/ubuntu:/usr/
[7ffffb00]	1633906540	1752379244	0795177569	1937059642	local/share/:/us
[7ffffb10]	1752379250	0795177569	1635135290	1768697714	r/share/:/var/li
[7ffffb20]	1853042530	0795111521	1802724708	0007368564	b/snapd/desktop.
[7ffffb30]	1027888976	1836017711	1650732901	0007631733	PWD = /home/dbust.
[7ffffb40]	1230984273	1330470733	1162630468	1969383741	Q T _ I M _ M O D U L E = i b u
[7ffffb50]	1246167155	1162108755	1598510402	1347704143	s.GJS_DEBUG_OUTP
[7ffffb60]	1933399125	1919247476	1145503858	1397052237	UT = stderr.GDMSES
[7ffffb70]	1313818963	1969386813	0007697518	1096766545	$SION = ubuntu.QT_A$
[7ffffb80]	1397048131	1229080915	1498696012	1392521533	C C E S S I B I L I T Y = 1 . S
[7ffffb90]	1280066888	1768042301	1633824622	1392535667	HELL=/bin/bash.S

FP Regs	nt Regs [10]	Data Text	
nt Regs [10]	ØX	Data	
C =	4194496	User data segment [10000000] [10040000]	
-	0	[10000000][1000811f] 00000000	
	0	[10010000] 000000026 00000000 000000032	
	-	[10010010] 0000000028 000000028 0000000032 0000000032	
adVAddr =		[100100201] 0000000000 0000000000 0000000000	
tatus =	805371664	[10010030][1003ffff] 00000000	
		[10010030][1003111] 0000000	
I =	0		
.0 =	0		
		User Stack [7ffff9bc][80000000]	
0 [r0] =	0	[7ffff9bc] 0000000001	
1 [at] =	1	[7fffff9c0] 2147482230 0000000000 2147483615 2147483604 v	
2 [v0] =	10	[7fffff9d0] 2147483579 2147483571 2147483554 2147483531	
3 [v1] =		[7fffff9e0] 2147483466 2147483438 2147483406 2147483390 J	
4 [a0] =		[7ffff9f0] 2147483336 2147483299 2147483281 2147483255w	
		[7ffffa00] 2147483241 2147483216 2147483193 2147483170 i P 9 "	
	2147482048	[7ffffa10] 2147483155 2147483111 2147482997 2147482887uu	
	2147482056	[7ffffa20] 2147482840 2147482809 2147482786 2147482763	
7 [a3] =	0	[7ffffa30] 2147482752 2147482735 2147482702 2147482675oN	
8 [t0] =	-1	[7ffffa40] 2147482655 2147482601 2147482568 2147482527	
9 [t1] =	0	[7ffffa50] 2147482511 2147482492 2147482474 2147482450 j R	
10 [t2] =	268500992	[7ffffa60] 2147482432 2147482416 2147482331 2147482286 @ 0	
11 [t3] =		[7ffffa70] 0000000000 1747910656 0795176303 1937072740/home/dbus	
L2 [t4] =		[7ffffa80] 1768042356 1668637300 0796157291 0825372722 t/bitbucket/2021	
		[7ffffa90] 1818322527 1667587948 0925984112 1634479920 _ fall_ecpe170/la	
l3 [t5] =		[7ffffaa0] 0791687522 1953653104 1935748660 1146617965 b10/part4.asm.XD	
L4 [t6] =		[7ffffab0] 1329815367 1195984462 1380533343 1697594707 G_CONFIG_DIRS=/e	
15 [t7] =	0	[7ffffac0] 2016371572 2016372580 1965909860 1953396066 tc/xdg/xdg-ubunt	
16 [s0] =	268500992	[7ffffad0] 1697593973 2016371572 1476421476 1147094852 u:/etc/xdg.XDG_D	
17 [s1] =	0	[7ffffae0] 1598116929 1397901636 1937059645 1752379250 ATA_DIRS=/usr/sh	
18 [s2] =	12	[7ffffaf0] 0795177569 1853186677 0792360308 0796029813 are/ubuntu:/usr/	
L9 [s3] =		[7ffffb00] 1633906540 1752379244 0795177569 1937059642 local/share/:/us	
20 [s4] =		[7ffffb10] 1752379250 0795177569 1635135290 1768697714 r/share/:/var/li	
20 [S4] = 21 [S5] =		[7ffffb20] 1853042530 0795111521 1802724708 0007368564 b/snapd/desktop.	
		[7ffffb30] 1027888976 1836017711 1650732901 0007631733 PWD = / home/dbust.	
	268501012	[7ffffb40] 1230984273 1330470733 1162630468 1969383741 Q T _ I M _ M O D U L E = i b u	
23 [s7] =	17	[7ffffb50] 1246167155 1162108755 1598510402 1347704143 s.G.J.S.D.E.B.U.GO.U.T.P.	

[7ffffb001

| [7ffffb10]

R24 [t8] = 0

User Stack [7ffff9bc]..[80000000] 0000000001 [7fffff9bc] 2147482230 0000000000 2147483615 2147483604 [7ffff9c01 v 2147483579 2147483571 2147483554 2147483531 [7ffff9d0] 2147483466 2147483438 2147483406 2147483390 2147483336 2147483299 2147483281 2147483255 [7ffff9f01 2147483241 2147483216 2147483193 2147483170 i . . . P . . . 9 [7ffffa001 [7ffffa10] 2147483155 2147483111 2147482997 2147482887 u 2147482786 [7ffffa201 2147482840 2147482809 2147482763 [7ffffa301 2147482752 2147482735 2147482702 2147482675 . . o . . . N . . . 3 2147482655 2147482601 2147482568 2147482527 [7ffffa401 [7ffffa501 2147482511 2147482492 2147482474 2147482450 . . j . . . R . [7ffffa60] 2147482432 2147482416 2147482331 2147482286 @ . . . 0 0000000000 1747910656 0795176303 1937072740 [7ffffa70] / home/dbus t / b i t b u c k e t / 2 0 2 1 [7ffffa80] 1768042356 1668637300 0796157291 0825372722 1818322527 1667587948 0925984112 1634479920 _fall_ecpe170/la [7ffffa90] 0791687522 1953653104 1935748661 1146617965 b10/part5.asm.XD [7ffffaa0] $G _ C O N F I G _ D I R S = / e$ [7ffffab0] 1329815367 1195984462 1380533343 1697594707 2016371572 2016372580 1965909860 1953396066 tc/xdg/xdg-ubunt [7ffffac0] [7ffffad0] 1697593973 2016371572 1476421476 1147094852 u:/etc/xdg.XDG_D $ATA_DIRS = /usr/sh$ [7ffffae0] 1598116929 1397901636 1937059645 1752379250 [7ffffaf0] 0795177569 1853186677 0792360308 0796029813 are/ubuntu:/usr/ 1633906540 1752379244 0795177569 1937059642 [7ffffb001 local/share/:/us [7ffffb101 1752379250 0795177569 1635135290 1768697714 r/share/:/var/li 1853042530 0795111521 1802724708 0007368564 [7ffffb20] b/snapd/desktop. 1027888976 1836017711 0007631733 PWD = / home/dbust. [7ffffb30] 1650732901 [7ffffb40] 1230984273 1330470733 1162630468 1969383741 $QT_IM_MODULE = ibu$ [7ffffb50] 1246167155 1162108755 1598510402 1347704143 s.GJS_DEBUG_OUTP 1933399125 1919247476 1145503858 1397052237 UT = stderr.GDMSES [7ffffb60] [7ffffb701 S I O N = u b u n t u . Q T $_$ A 1313818963 1969386813 0007697518 1096766545 [7ffffb001 1207040121 1220000015 1400606012 1202521522 CCECCTPTTTV_1 EPC = 0 User data segment [10000000]..[10040000] = 0 Cause the e in question [10000000]..[1000ffff] BadVAddr = a 65 6d 00000000 00000000 [100100001 76666c6d mlfvsme...... 3000ff10 [10010010]..[100100ff] 0000 [100101001 65746e45 **value**0**of e**69727453 203a676e Enter a String: 0 [10010110] 4e002020 6e756f46 20650064 . N o Found.e 2065206f e 6e756f66 74612064 2079726f found at 0 [100101201 6d656d20 memorv LO [100101301 72646441 3a737365 00002020 10010006 Address: [10010140] 0000000a 00000000 00000000 00000000 R0 [r0] = [10010150]..[1003ffff] 00000000 R1 [at] = 0010000 R2 [v0] = R3 [v1] = 0User Stack [7ffff9bc]..[80000000] R4 [a0] = 1000140 [7ffff9bc] 00000001 [a1] = ffR5 7fffffd4 [7ffff9c0] 7ffffa76 00000000 7fffffdf [a2] = 7ffff9 R6 [7ffff9d01 7fffffbb 7fffffb3 7fffffa2 7ffffff8b R7 [a3] = 0[7ffff9e0] 7fffff0e 7ffffff4a 7ffffff2e 7ffffefe [t0] = 65R8 [7ffff9f0] 7ffffec8 7ffffea3 7ffffe91 7ffffe77 R 9 [t1] = 07ffffe69 7ffffe50 7ffffe39 7ffffe22 [7ffffa00] R10 [t2] = 0[7ffffa10] 7ffffe13 7ffffde7 7ffffd75 7ffffd07 u . . [7ffffa20] 7ffffcd8 7ffffcb9 7ffffca2 7ffffc8b R11 [t3] = 0[7ffffa30] 7ffffc80 7ffffc6f 7ffffc4e 7ffffc33 o . . . N . . . 3 . . R12 [t4] = 07ffffa401 7ffffc1f 7ffffbe9 7ffffbc8 7ffffb9f R13 [t5] = 0[7ffffa50] 7ffffb8f 7ffffb7c 7ffffb6a 7ffffb52 R14 [t6] = 07ffffa601 7ffffb40 7ffffb30 7ffffadb 7ffffaae R15 [t7] =682f0000 [7ffffa70] 00000000 2f656d6f 73756264 /home/dbus R16 [s0] = (10010006 [7ffffa80] 69622f74 63756274 2f74656b 31323032 t / b i t b u c k e t / 2 0 2 1 R17 [s1] = f[7ffffa90] 6c61665f 63655f6c 37316570 616c2f30 _fall_ecpe170/1a R18 [s2] = 02f303162 74726170 73612e35 4458006d b10/part5.asm.XD 7ffffaa0 Addressiot e4f435f47 4749464e 5249445f 652f3d53 $G \subseteq C \cap N \cap F \cap G \subseteq D \cap R \cap S = / e$ R19 [s3] = 0R20 [s4] = 07ffffac01 782f6374 782f6764 752d6764 746e7562 tc/xdg/xdg-ubunt [7ffffad0] 652f3a75 782f6374 58006764 445f4744 $u:/etc/xdg.XDG_D$ R21 [s5] = 0[7ffffae0] 5f415441 53524944 73752f3d 68732f72 A T A $_$ D I R S = / u s r / s h R22 [s6] = 0[7ffffaf0] 2f657261 6e756275 2f3a7574 2f727375 are/ubuntu:/usr/ R23 [s7] = 0

61636f6c 68732f6c 2f657261

68732f72 2f657261 61762f3a

73752f3a

696c2f72

local/share/:/us

r / s h a r e / : / v a r / l i