

Lab 10 Report

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1 Part 1

Register panel before:

FP Regs

nt Regs [10]

nt Regs [10]



PC = 0

EPC = 0

Cause = 0

BadVAddr = 0

Status = 805371664

HI = 0

LO = 0

R0 [r0] = 0

R1 [at] = 0

R2 [v0] = 0

R3 [v1] = 0

R4 [a0] = 1

R5 [a1] = 2147480464

R6 [a2] = 2147480472

R7 [a3] = 0²

R8 [t0] = 0

R9 [t1] = 0

R10 [t2] = 0

register panel after:

PC = 4194400

EPC = 0

Cause = 0

BadVAddr = 0

Status = 805371664

HI = 0

LO = 0

R0 [r0] = 0

R1 [at] = 0

R2 [v0] = 10

R3 [v1] = 0

R4 [a0] = 1

R5 [a1] = 2147480464

R6 [a2] = 2147480472

R7 [a3] = 0

R8 [t0] = 25

R9 [t1] = 5⁴

R10 [t2] = 15

R11 [t3] = 8

R12 [t4] = 0

memory panel before:

User data segment [10000000]..[10040000]									
[10000000]..[1000ffff]	00000000								
[10010000]	0000000001	0000000000	0000000000	0000000000	0000000000				
[10010010]..[1003ffff]	00000000								
User Stack [7ffff38c]..[80000000]									
[7ffff38c]	0000000001								
[7ffff390]	2147480666	0000000000	2147483632	2147483532					
[7ffff3a0]	2147483513	2147483493	2147483448	2147483415					
[7ffff3b0]	2147483392	2147483348	2147483316	2147483275					
[7ffff3c0]	2147483255	2147483232	2147483204	2147483188					
[7ffff3d0]	2147483174	2147483147	2147483122	2147483101					
[7ffff3e0]	2147483047	2147483014	2147482997	2147482982					
[7ffff3f0]	2147482964	2147482947	2147481428	2147481395					
[7ffff400]	2147481378	2147481352	2147481266	2147481242					
[7ffff410]	2147481219	2147481185	2147481162	2147481142					
[7ffff420]	2147481110	2147481099	2147481069	2147481058					
[7ffff430]	2147481050	2147481032	2147481001	2147480916					
[7ffff440]	2147480802	2147480784	2147480730	2147480712					
[7ffff450]	0000000000	0000000000	1747910656	0795176303					
[7ffff460]	1634235493	0808595310	1717514546	1600941153					
[7ffff470]	1701864293	0791689009	0828531052	1634742064					
[7ffff480]	0774993010	0007172961	1966030175	1647276659					
[7ffff490]	1898933865	1768977268	1111752813	1398756181					
[7ffff4a0]	1230197573	1113542223	1096766293	1163019332					
[7ffff4b0]	1966953299	0980969838	1752457584	1970417469					

memory panel after:

User data segment [10000000]..[10040000]									
[10000000]..[1000ffff]	00000000								
[10010000]	0000000037	0000000000	0000000000	0000000000	%				
[10010010]..[1003ffff]	00000000								
User Stack [7ffff38c]..[80000000]									
[7ffff38c]	0000000001								
[7ffff390]	2147480666	0000000000	2147483632	2147483532					
[7ffff3a0]	2147483513	2147483493	2147483448	2147483415					
[7ffff3b0]	2147483392	2147483348	2147483316	2147483275					
[7ffff3c0]	2147483255	2147483232	2147483204	2147483188					
[7ffff3d0]	2147483174	2147483147	2147483122	2147483101					
[7ffff3e0]	2147483047	2147483014	2147482997	2147482982					
[7ffff3f0]	2147482964	2147482947	2147481428	2147481395					
[7ffff400]	2147481378	2147481352	2147481266	2147481242					
[7ffff410]	2147481219	2147481185	2147481162	2147481142					
[7ffff420]	2147481110	2147481099	2147481069	2147481058					
[7ffff430]	2147481050	2147481032	2147481001	2147480916					
[7ffff440]	2147480802	2147480784	2147480730	2147480712					
[7ffff450]	0000000000	0000000000	1747910656	0795176303					
[7ffff460]	1634235493	0808595310	1717514546	1600941153					
[7ffff470]	1701864293	0791689009	0828531052	1634742064					
[7ffff480]	0774993010	0007172961	1966030175	1647276659					
[7ffff490]	1898933865	1768977268	1111752813	1398756181					
[7ffff4a0]	1230197573	1113542223	1096766293	1163019332					
[7ffff4b0]	1966953299	0980969838	1752457584	1970417469					

2 Part 2

Register panel before

Int Regs [10]



PC = 0
EPC = 0
Cause = 0
BadVAddr = 0
Status = 805371664

HI = 0
LO = 0

R0 [r0] = 0
R1 [at] = 0
R2 [v0] = 0
R3 [v1] = 0
R4 [a0] = 1
R5 [a1] = 2147482044
R6 [a2] = 2147482052
R7 [a3] = 0
R8 [t0] = 0
R9 [t1] = 0
R10 [t2] = 0
R11 [t3] = 0
R12 [t4] = 0
R13 [t5] = 0

register panel after

FP Regs		Int Regs [10]	
Int Regs [10]			
PC	=	4194476	
EPC	=	0	
Cause	=	0	
BadVAddr	=	0	
Status	=	805371664	
HI	=	0	
LO	=	0	
R0 [r0]	=	0	
R1 [at]	=	268500992	
R2 [v0]	=	10	
R3 [v1]	=	0	
R4 [a0]	=	1	
R5 [a1]	=	2147482044	
R6 [a2]	=	2147482052	
R7 [a3]	=	0	
R8 [t0]	=	5	
R9 [t1]	=	0	
R10 [t2]	=	0	8
R11 [t3]	=	0	
R12 [t4]	=	0	
R13 [t5]	=	0	

memory panel before:

Data									
User data segment [10000000]..[10040000]									
[10000000]..[1000ffff]	00000000								
[10010000]	0000000001	0000000000	0000000000	0000000000					
[10010010]..[1003ffff]	00000000								
User Stack [7ffff9b8]..[80000000]									
[7ffff9b8]	0000000001	2147482232							. . . . x . . .
[7ffff9c0]	0000000000	2147483615	2147483604	2147483579					. . . . . . . . . . . . . . . .
[7ffff9d0]	2147483571	2147483554	2147483531	2147483466					. . . . . . . . . . . . . . . . J . . .
[7ffff9e0]	2147483438	2147483406	2147483391	2147483370					. . . . . . . . . . . . . . . .
[7ffff9f0]	2147483316	2147483281	2147483263	2147483237					. . . . . . . . . . . . . . . . e . . .
[7ffffa00]	2147483223	2147483198	2147483175	2147483152					W > '
[7ffffa10]	2147483137	2147483093	2147482979	2147482879					. . . . . . . . . . . . . . . . c
[7ffffa20]	2147482832	2147482801	2147482778	2147482755					. . . . . . . . . . . . . . . .
[7ffffa30]	2147482744	2147482727	2147482694	2147482667					x g F +
[7ffffa40]	2147482647	2147482593	2147482560	2147482519					. . . . . . . . . . . . . . . .
[7ffffa50]	2147482503	2147482484	2147482466	2147482442					. . . . t b J
[7ffffa60]	2147482424	2147482408	2147482323	2147482278					8 (.
[7ffffa70]	0000000000	0000000000	1836017711	1952788325					. . . . . . . . . / home / et
[7ffffa80]	0795763048	0825372722	1818322527	1667587948					han / 2 0 2 1 _ fa l l _ ec
[7ffffa90]	0925984112	1634479920	0791687522	1953653104					pe 1 7 0 / la b 1 0 / pa rt
[7ffffaa0]	1935748658	1146617965	1329815367	1195984462					2 . a s m . X D G _ C O N F I G
[7ffffab0]	1380533343	1697594707	2016371572	2016372580					_ D I R S = / e t c / x d g / x
[7ffffac0]	1965909860	1953396066	1697593973	2016371572					d g - u b u n t u : / e t c / x
[7ffffad0]	1476421476	1147094852	1598116929	1397901636					d g . X D G _ D A T A _ D I R S
[7ffffae0]	1937059645	1752379250	0795177569	1853186677					= / u s r / s h a r e / u b u n
[7ffffaf0]	0792360308	0796029813	1633906540	1752379244					t u : / u s r / l o c a l / s h
[7ffffb00]	0795177569	1937059642	1752379250	0795177569					a r e / : / u s r / s h a r e /
[7ffffb10]	1635135290	1768697714	1853042530	0795111521					: / v a r / l i b / s n a p d /
[7ffffb20]	1802724708	0007368564	1027888976	1836017711					d e s k t o p . P W D = / h o m
[7ffffb30]	1952788325	0007233896	1230984273	1330470733					e / e t h a n . Q T _ I M _ M O
[7ffffb40]	1162630468	1969383741	1246167155	1162108755					D U L E = i b u s . G J S _ D E
[7ffffb50]	1598510402	1347704143	1933399125	1919247476					B U G _ O U T P U T = s t d e r
[7ffffb60]	1145503858	1397052237	1313818963	1969386813					r . G D M S E S S I O N = u b u
[7ffffb70]	0007697518	1096766545	1397048131	1229080915					n t u . Q T _ A C C E S S I B I
[7ffffb80]	1406666512	1308666533	1308666508	1350040303					t . T . X

memory panel after:

Data									
User data segment [10000000]..[10040000]									
[10000000]..[1003ffff]	00000000								
User Stack [7ffff9b8]..[80000000]									
[7ffff9b8]	0000000001	2147482232							. . . . x
[7ffff9c0]	0000000000	2147483615	2147483604	2147483579					. . . . .
[7ffff9d0]	2147483571	2147483554	2147483531	2147483466					. . . . . J
[7ffff9e0]	2147483438	2147483406	2147483391	2147483370					. . . . .
[7ffff9f0]	2147483316	2147483281	2147483263	2147483237					. . . . . e
[7ffffa00]	2147483223	2147483198	2147483175	2147483152					W > !
[7ffffa10]	2147483137	2147483093	2147482979	2147482879					. . . . . c
[7ffffa20]	2147482832	2147482801	2147482778	2147482755					. . . . .
[7ffffa30]	2147482744	2147482727	2147482694	2147482667					x g F +
[7ffffa40]	2147482647	2147482593	2147482560	2147482519					. . . . .
[7ffffa50]	2147482503	2147482484	2147482466	2147482442					. . . . . t b J
[7ffffa60]	2147482424	2147482408	2147482323	2147482278					8 (.
[7ffffa70]	0000000000	0000000000	1836017711	1952788325					. . . . . / home / et
[7ffffa80]	0795763048	0825372722	1818322527	1667587948					han / 2 0 2 1 _ fa l l _ ec
[7ffffa90]	0925984112	1634479920	0791687522	1953653104					pe l 7 0 / la b 1 0 / part
[7ffffaa0]	1935748658	1146617965	1329815367	1195984462					2 . asm . X D G _ C O N F I G
[7ffffab0]	1380533343	1697594707	2016371572	2016372580					_ D I R S = / et c / x d g / x
[7ffffac0]	1965909860	1953396066	1697593973	2016371572					dg - ub unt u : / et c / x
[7ffffad0]	1476421476	1147094852	1598116929	1397901636					dg . X D G _ D A T A _ D I R S
[7ffffae0]	1937059645	1752379250	0795177569	1853186677					= / us r / sh are / ub un
[7ffffaf0]	0792360308	0796029813	1633906540	1752379244					tu : / us r / lo ca l / sh
[7ffffb00]	0795177569	1937059642	1752379250	0795177569					are / : / us r / sh are /
[7ffffb10]	1635135290	1768697714	1853042530	0795111521					: / va r / li b / sn ap d /
[7ffffb20]	1802724708	0007368564	1027888976	1836017711					de sk to p . P W D = / ho m
[7ffffb30]	1952788325	0007233896	1230984273	1330470733					e / et han . Q T _ I M _ M O
[7ffffb40]	1162630468	1969383741	1246167155	1162108755					D U L E = i bu s . G J S _ D E
[7ffffb50]	1598510402	1347704143	1933399125	1919247476					B U G _ O U T P U T = st der
[7ffffb60]	1145503858	1397052237	1313818963	1969386813					r . G D M S E S S I O N = ub u
[7ffffb70]	0007697518	1096766545	1397048131	1229080915					nt u . Q T _ A C C E S S I B I
[7ffffb80]	1498696012	1392521533	1280066888	1768042301					L I T Y = l . S H E L L = / bi
[7ffffb90]	1633824622	1392535667	1096763475	1598575701					n / ba sh . S S H _ A U T H _
[7ffffba0]	1633824622	1392535667	1096763475	1598575701					n / ba sh . S S H _ A U T H _

3 Part 3

register panel:

PC = 4194424
EPC = 0
Cause = 0
BadVAddr = 0
Status = 805371664

HI = 0
LO = 0

R0 [**r0**] = 0
R1 [**at**] = 268500992
R2 [**v0**] = 10
R3 [**v1**] = 0
R4 [**a0**] = 1
R5 [**a1**] = 2147482044
R6 [**a2**] = 2147482052
R7 [**a3**] = 0
R8 [**t0**] = 0
R9 [**t1**] = 0¹¹
R10 [**t2**] = 0
R11 [**t3**] = 0

memory panel

User data segment [10000000]..[10040000]					
[10000000]..[10010003]	00000000				
[10010004]	0000000078	0000000000	0000000000	N	.....
[10010010]..[1003ffff]	00000000				
User Stack [7ffff9b8]..[80000000]					
[7ffff9b8]	0000000001	2147482232			....x....
[7ffff9c0]	0000000000	2147483615	2147483604	2147483579	.....
[7ffff9d0]	2147483571	2147483554	2147483531	2147483466	.....J....
[7ffff9e0]	2147483438	2147483406	2147483391	2147483370	.....
[7ffff9f0]	2147483316	2147483281	2147483263	2147483237	.....e....
[7ffffa00]	2147483223	2147483198	2147483175	2147483152	W...>...!
[7ffffa10]	2147483137	2147483093	2147482979	2147482879	.....c....
[7ffffa20]	2147482832	2147482801	2147482778	2147482755	.....
[7ffffa30]	2147482744	2147482727	2147482694	2147482667	x...g...F...+
[7ffffa40]	2147482647	2147482593	2147482560	2147482519	.....
[7ffffa50]	2147482503	2147482484	2147482466	2147482442	....t...b...J...
[7ffffa60]	2147482424	2147482408	2147482323	2147482278	8...(.
[7ffffa70]	0000000000	0000000000	1836017711	1952788325	...../home/et
[7ffffa80]	0795763048	0825372722	1818322527	1667587948	han/2021_fa11_ec
[7ffffa90]	0925984112	1634479920	0791687522	1953653104	pe170/lab10/part
[7ffffaa0]	1935748659	1146617965	1329815367	1195984462	3.asm.XDG_CONF IG
[7ffffab0]	1380533343	1697594707	2016371572	2016372580	_DIRS=/etc/xdg/x
[7ffffac0]	1965909860	1953396066	1697593973	2016371572	dg-ubuntu:/etc/x
[7ffffad0]	1476421476	1147094852	1598116929	1397901636	dg.XDG_DATA_DIRS
[7ffffae0]	1937059645	1752379250	0795177569	1853186677	=/usr/share/ubuntu
[7ffffaf0]	0792360308	0796029813	1633906540	1752379244	tu:/usr/local/sh
[7ffffb00]	0795177569	1937059642	1752379250	0795177569	are/:usr/share/
[7ffffb10]	1635135290	1768697714	1853042530	0795111521	:var/lib/snapd/
[7ffffb20]	1802724708	0007368564	1027888976	1836017711	desktop.PWD=/hom
[7ffffb30]	1952788325	0007233896	1230984273	1330470733	e/ethan.QT_IM_MO
[7ffffb40]	1162630468	1969383741	1246167155	1162108755	DULE=ibus.GJS_DE
[7ffffb50]	1598510402	1347704143	1933399125	1919247476	BUG_OUTPUT=stder
[7ffffb60]	1145503858	1397052237	1313818963	1969386813	r.GDMSESSION=ubu
[7ffffb70]	0007697518	1096766545	1397048131	1229080915	ntu.QT_ACCESSIBI

4 Part 4

register panel:

Int Regs [10]			
PC	=	4194460	U
EPC	=	0	[
Cause	=	0	[
BadVAddr	=	0	[
Status	=	805371664	[
HI	=	0	
LO	=	0	U
R0 [r0]	=	0	[
R1 [at]	=	-1	[
R2 [v0]	=	10	[
R3 [v1]	=	0	[
R4 [a0]	=	1	[
R5 [a1]	=	2147482044	[
R6 [a2]	=	2147482052	[
R7 [a3]	=	0	[
R8 [t0]	=	0	[
R9 [t1]	=	268500992	[
R10 [t2]	=	26	[
R11 [t3]	=	268501008	[
R12 [t4]	=	0	[
R13 [t5]	=	0	[
R14 [t6]	=	0	[
R15 [t7]	=	0	[
R16 [s0]	=	268500992	[

memory panel:

Data				
User data segment [10000000]..[10040000]				
[10000000]..[1000ffff]	00000000			
[10010000]	0000000026	0000000028	0000000030	0000000032
[10010010]	0000000034	0000000001	0000000002	0000000003
[10010020]	0000000004	0000000005	0000000000	0000000000
[10010030]..[1003ffff]	00000000			
User Stack [7ffff9b8]..[80000000]				
[7ffff9b8]	0000000001	2147482232		. . . . . x
[7ffff9c0]	0000000000	2147483615	2147483604	2147483579
[7ffff9d0]	2147483571	2147483554	2147483531	2147483466
[7ffff9e0]	2147483438	2147483406	2147483391	2147483370
[7ffff9f0]	2147483316	2147483281	2147483263	2147483237
[7ffffa00]	2147483223	2147483198	2147483175	2147483152
[7ffffa10]	2147483137	2147483093	2147482979	2147482879
[7ffffa20]	2147482832	2147482801	2147482778	2147482755
[7ffffa30]	2147482744	2147482727	2147482694	2147482667
[7ffffa40]	2147482647	2147482593	2147482560	2147482519
[7ffffa50]	2147482503	2147482484	2147482466	2147482442
[7ffffa60]	2147482424	2147482408	2147482323	2147482278
[7ffffa70]	0000000000	0000000000	1836017711	1952788325
[7ffffa80]	0795763048	0825372722	1818322527	1667587948
[7ffffa90]	0925984112	1634479920	0791687522	1953653104
[7ffffaa0]	1935748660	1146617965	1329815367	1195984462
[7ffffab0]	1380533343	1697594707	2016371572	2016372580
[7ffffac0]	1965909860	1953396066	1697593973	2016371572
[7ffffad0]	1476421476	1147094852	1598116929	1397901636
[7ffffae0]	1937059645	1752379250	0795177569	1853186677
[7ffffaf0]	0792360308	0796029813	1633906540	1752379244
[7ffffb00]	0795177569	1937059642	1752379250	0795177569
[7ffffb10]	1635135290	1768697714	1853042530	0795111521
[7ffffb20]	1802724708	0007368564	1027888976	1836017711
[7ffffb30]	1952788325	0007233896	1230984273	1330470733
[7ffffb40]	1162630468	1969383741	1246167155	1162108755
[7ffffb50]	1598510402	1347704143	1933399125	1919247476
[7ffffb60]	1145503050	1337053333	1333818063	1860386013

5 Part5

memory panel

Data									
User data segment [10000000]..[10040000]									
[10000000]..[1000ffff]	00000000								
[10010000]	65746e45	20612072	69727473	203a676e	Enter a string:				
[10010010]	72694600	6d207473	68637461	20746120	. First match at				
[10010020]	72646461	20737365	68540a00	616d2065	address .. The ma				
[10010030]	69686374	6320676e	61726168	72657463	tching character				
[10010040]	20736920	6e206500	6620746f	646e756f	is .e not found				
[10010050]	68746500	000a6e61	00000000	00000000	ethan.....				
[10010060]..[10010153]	00000000								
[10010154]	10010051	00000000	00000000		Q.....				
[10010160]..[1002ffff]	00000000								
User Stack [7ffff9b8]..[80000000]									
[7ffff9b8]	00000001	7ffffa78			....x....				
[7ffff9c0]	00000000	7fffffd5	7fffffd4	7fffffbb	.....			
[7ffff9d0]	7fffffb3	7fffffa2	7fffff8b	7fffff4a	.....J....				
[7ffff9e0]	7fffff2e	7fffff0e	7ffffeff	7ffffeea	.....e....				
[7ffff9f0]	7ffffeb4	7ffffe91	7ffffe7f	7ffffe65	.....			
[7ffffa00]	7ffffe57	7ffffe3e	7ffffe27	7ffffe10	W...>....				
[7ffffa10]	7ffffe01	7ffffdd5	7ffffd63	7ffffc5f	.....c....				
[7ffffa20]	7ffffcd0	7ffffcb1	7ffffc9a	7ffffc83	.....			
[7ffffa30]	7ffffc78	7ffffc67	7ffffc46	7ffffc2b	x...g...F...+				
[7ffffa40]	7ffffc17	7ffffbe1	7ffffbc0	7ffffb97	.....			
[7ffffa50]	7ffffb87	7ffffb74	7ffffb62	7ffffb4a	.....t...b...J...				
[7ffffa60]	7ffffb38	7ffffb28	7ffffad3	7ffffaa6	8... (.....				
[7ffffa70]	00000000	00000000	6d6f682f	74652f65	...../home/et				
[7ffffa80]	2f6e6168	31323032	6c61665f	63655f6c	han/2021_fall_ec				
[7ffffa90]	37316570	616c2f30	2f303162	74726170	pe170/lab10/part				
[7ffffaa0]	73612e35	4458006d	4f435f47	4749464e	5.asm.XDG_CONFIG				
[7ffffab0]	5249445f	652f3d53	782f6374	782f6764	_DIRS=/etc/xdg/x				
[7ffffac0]	752d6764	746e7562	652f3a75	782f6374	dg-ubuntu:/etc/x				
[7ffffad0]	58006764	445f4744	5f415441	53524944	dg.XDG_DATA_DIRS				
[7ffffae0]	73752f3d	68732f72	2f657261	6e756275	=/usr/share/ubun				
[7ffffaf0]	2f3a7574	2f727375	61636f6c	68732f6c	tu:/usr/local/sh				
[7ffffb00]	2f657261	73752f3a	68732f72	2f657261	are/:/usr/share/				
[7ffffb10]	61636f6c	68732f6c	68732f6c	68732f6c	.....			