

NOTE:

- Check the calculations (rounded off values) at the end of this document. Newly visited branch pairs and branch pairs with significant number of visits compared to the visits of previously retained inputs is shown in compact tabular format there.
- Regarding content: some characters were not shown in the WSL using the command “cat filename”, but they were shown in the text editor (like in second input, the first character of **ár** was not printed in WSL, but it was getting showed in text editor (note that, the first letter is not **a**)). In those scenario, content of the file were copy pasted to this document from the text editor.

1.**Name:** id:000000,orig:seed**Content:** ar**Parent Test Input File(s):** None**Content of Table.txt:**

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	1
11	13	B	D	2
11	19	H	J	1
12	13	C	D	1
13	15	D	F	3
15	16	F	G	3
16	11	G	B	3
16	11	G	H	1

Branch pair(s) that are visited for the first time: All (i.e. AG, BC, BD, HJ, CD, DF, FG, GB, GH)**Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:**

None

2.**Name:** id:000001,src:000000,op:flip1,pos:0**Content:** ár**Parent Test Input File(s):** id:000000,orig:seed**Content of Table.txt:**

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	13	B	D	3
11	19	H	J	1
13	15	D	F	3
15	16	F	G	3
16	11	G	B	3
16	11	G	H	1

Branch pair(s) that are visited for the first time: None**Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:**

BD

3.

Name: id:000002,src:000000,op:flip1,pos:1,+cov

Content: ab

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	1
11	13	B	D	2
11	19	H	J	1
12	13	C	D	1
13	14	D	E	1
13	15	D	F	2
14	15	E	F	1
15	16	F	G	3
16	11	G	B	3
16	11	G	H	1

Branch pair(s) that are visited for the first time: DE, EF

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

DF

4.

Name: id:000003,src:000000,op:flip4,pos:1

Content: a?

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	1
11	13	B	D	1
11	19	H	J	1
12	13	C	D	1
13	15	D	F	2
15	16	F	G	2
16	11	G	B	2
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

BD, FG, GB

5.

Name: id:000004,src:000000,op:arith8,pos:1,val:-17

Content: aa

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	2
11	13	B	D	1
11	19	H	J	1
12	13	C	D	2
13	15	D	F	3
15	16	F	G	3
16	11	G	B	3
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

BC, CD

6.

Name: id:000005,src:000000,op:int8,pos:1,val:+0

Content: ?a

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	1
11	19	H	J	1
12	13	C	D	1
13	15	D	F	1
15	16	F	G	1
16	11	G	B	1
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

DF, FG, GB

7.

Name: id:000006,src:000000,op:havoc,rep:8

Content: Li?

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	13	B	D	4
11	19	H	J	1
13	15	D	F	4
15	16	F	G	4
16	11	G	B	4
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

BD, DF, FG, GB

8.

Name: id:000007,src:000000,op:havoc,rep:128

Content: ? ? ?!

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	13	B	D	8
11	19	H	J	1
13	15	D	F	8
15	16	F	G	8
16	11	G	B	8
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

BD, DF, FG, GB

9.

Name: id:000008,src:000000,op:havoc,rep:8

Content: aaaa

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	4
11	19	H	J	1
12	13	C	D	4
13	15	D	F	4
15	16	F	G	4
16	11	G	B	4
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:
BC, CD

10.

Name: id:000009,src:000000,op:havoc,rep:8

Content: mamaha?

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	3
11	13	B	D	4
11	19	H	J	1
12	13	C	D	3
13	15	D	F	7
15	16	F	G	7
16	11	G	B	7
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:
BC, CD

11.

Name: id:000010,src:000000,op:havoc,rep:64

Content: |GG#?##

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	13	B	D	16
11	19	H	J	1
13	15	D	F	16
15	16	F	G	16
16	11	G	B	16
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

BD, DF, FG, GB

12.

Name: id:000011,src:000000,op:havoc,rep:32

Content: bb)

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	13	B	D	4
11	19	H	J	1
13	14	D	E	2
13	15	D	F	2
14	15	E	F	2
15	16	F	G	4
16	11	G	B	4
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

DE, EF

13.

Name: id:000012,src:000000,op:havoc,rep:128

Content: ?bbb

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	13	B	D	6
11	19	H	J	1
13	14	D	E	3
13	15	D	F	3
14	15	E	F	3
15	16	F	G	6
16	11	G	B	6
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:
DE, EF

14.

Name: id:000013,src:000000,op:havoc,rep:8

Content: a5abb?bb?

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	2
11	13	B	D	10
11	19	H	J	1
12	13	C	D	2
13	14	D	E	4
13	15	D	F	8
14	15	E	F	4
15	16	F	G	12
16	11	G	B	12
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:
DE, EF

15.

Name: id:000014,src:000000,op:havoc,rep:8

Content: aaaaaa?????au

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	8
11	13	B	D	6
11	19	H	J	1
12	13	C	D	8
13	15	D	F	14
15	16	F	G	14
16	11	G	B	14
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

BC, CD

16.

Name: id:000015,src:000000,op:havoc,rep:128

Content: &o&qq&

Parent Test Input File(s): id:000000,orig:seed

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	13	B	D	32
11	19	H	J	1
13	15	D	F	32
15	16	F	G	32
16	11	G	B	32
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

BD, DF, FG, GB

17.

Name: id:000016,src:000001+000013,op:splice,rep:2

Content: 5a5vbb?bb?bb?bb?

Parent Test Input File(s):

id:000001,src:000000,op:flip1,pos:0

id:000013,src:000000,op:havoc,rep:8

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	1
11	13	B	D	23
11	19	H	J	1
12	13	C	D	1
13	14	D	E	8
13	15	D	F	16
14	15	E	F	8
15	16	F	G	24
16	11	G	B	24
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

DE, EF

18.

Name: id:000017,src:000008+000016,op:splice,rep:8

Content: aaa5vbb?bbb?bb???bb?gbaa5vbb?bb?bb???gB;

Parent Test Input File(s):

id:000008,src:000000,op:havoc,rep:8

id:000016,src:000001+000013,op:splice,rep:2

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	5
11	13	B	D	47
11	19	H	J	1
12	13	C	D	5
13	14	D	E	16
13	15	D	F	36
14	15	E	F	16
15	16	F	G	52
16	11	G	B	52
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

DE, EF

19.

Name: id:000018,src:000003+000014,op:splice,rep:16

Content: aaaaaaaaaaab?aaaaaqaiaaaaaaaaaab?aaaaaaq???

Parent Test Input File(s):

id:000003,src:000000,op:flip4,pos:1

id:000014,src:000000,op:havoc,rep:8

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	32
11	13	B	D	16
11	19	H	J	1
12	13	C	D	32
13	14	D	E	2
13	15	D	F	46
14	15	E	F	2
15	16	F	G	48
16	11	G	B	48
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

BC, CD

20.

Name: id:000019,src:000003+000014,op:splice,rep:2

Content: aaaaaaaaaaaaaaaaaaaaaa???

Parent Test Input File(s):

id:000003,src:000000,op:flip4,pos:1

id:000014,src:000000,op:havoc,rep:8

Content of Table.txt:

Loc of Previous	Loc of Current	Prev Random	Curr Random	No of times visited
5	16	A	G	1
11	12	B	C	19
11	13	B	D	3
11	19	H	J	1
12	13	C	D	19
13	15	D	F	22
15	16	F	G	22
16	11	G	B	22
16	11	G	H	1

Branch pair(s) that are visited for the first time: None

Branch pair(s) that are not visited for the first time and have different visit counts from previously retained inputs:

BC, CD

Overall Table (Rounded off values of shm[bp] shown in bracket):

Denotes newly discovered branch

Denotes the branch visited significantly different time compared to previously retained inputs

file	AG	BC	BD	HJ	CD	DF	FG	GB	GH	DE	EF
1	1(1)	1(1)	2(2)	1(1)	1(1)	3(4)	3(4)	3(4)	1(1)		
2	1(1)		3(4)	1(1)		3(4)	3(4)	3(4)	1(1)		
3	1(1)	1(1)	2(2)	1(1)	1(1)	2(2)	3(4)	3(4)	1(1)	1(1)	1(1)
4	1(1)	1(1)	1(1)	1(1)	1(1)	2(2)	2(2)	2(2)	1(1)		
5	1(1)	2(2)	1(1)	1(1)	2(2)	3(4)	3(4)	3(4)	1(1)		
6	1(1)	1(1)		1(1)	1(1)	1(1)	1(1)	1(1)	1(1)		
7	1(1)		4(8)	1(1)		4(8)	4(8)	4(8)	1(1)		
8	1(1)		8(16)	1(1)		8(16)	8(16)	8(16)	1(1)		
9	1(1)	4(8)		1(1)	4(8)	4(8)	4(8)	4(8)	1(1)		
10	1(1)	3(4)	4(8)	1(1)	3(4)	7(8)	7(8)	7(8)	1(1)		
11	1(1)		16(32)	1(1)		16(32)	16(32)	16(32)	1(1)		
12	1(1)		4(8)	1(1)		2(2)	4(8)	4(8)	1(1)	2(2)	2(2)
13	1(1)		6(8)	1(1)		3(4)	6(8)	6(8)	1(1)	3(4)	3(4)
14	1(1)	2(2)	10(16)	1(1)	2(2)	8(16)	12(16)	12(16)	1(1)	4(8)	4(8)
15	1(1)	8(16)	6(8)	1(1)	8(16)	14(16)	14(16)	14(16)	1(1)		
16	1(1)		32(64)	1(1)		32(64)	32(64)	32(64)	1(1)		
17	1(1)	1(1)	23(32)	1(1)	1(1)	16(32)	24(32)	24(32)	1(1)	8(16)	8(16)
18	1(1)	5(8)	47(64)	1(1)	5(8)	36(64)	52(64)	52(64)	1(1)	16(32)	16(32)
19	1(1)	32(64)	16(32)	1(1)	32(64)	46(64)	48(64)	48(64)	1(1)	2(2)	2(2)
20	1(1)	19(32)	3(4)	1(1)	19(32)	22(32)	22(32)	22(32)	1(1)		