

CHATGPT ANALYSIS RESULTS BASED ON THE BENCHMARK “arepair”

SL	Spec	(1) With fix comment [Asked to satisfy assertion]	(2) With bug location but w/o fix comments [No mention of passing assertion]	(3) No fault location (No Bug / Fix comment and Loc) [Asked to fix assertion]	(4) No indication of bug location nor asking to pass the assertions	(5) With bug location but w/o fix comments [Mention of passing assertion]
1	addr1	<u>No counterexample found</u>	(Counterexample) Instance found.	Type Error Message Observed	(Counterexample) Instance found.	<u>No counterexample found</u>
2	arr1	(Counterexample) Instance found. <small>(Manual verification and ChatGPT Results)</small>	(Counterexample) No instance found.	Type Error Message Observed	Type Error Message Observed	<u>No counterexample found</u> <small>(Compilation Warning Given)</small>
3	arr2	<u>No counterexample found</u>	<u>No counterexample found</u>	Type Error Message Observed	Type Error Message Observed	(Counterexample) No instance found.
4	balancedBST1	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	Type Error Message Observed
5	balancedBST2_1	<u>No counterexample found</u>	<u>No counterexample found</u>	Type Error Message Observed	(Counterexample) Instance found.	(Counterexample) Instance found.
6	balancedBST2_2	<u>No counterexample found</u>	<u>No counterexample found</u>	Type Error Message Observed	(Counterexample) Instance found.	(Counterexample) Instance found.
7	balancedBST2_3	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	Syntax Error The name "abs" cannot be found.
8	balancedBST3_1	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.

9	balancedBST3_2	(Counterexample) Instance found. <small>(Manual verification and ChatGPT Results)</small>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>
10	bempl1	(Counterexample) Instance found. <small>(Manual verification and ChatGPT Results)</small>	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	Syntax error at line 17 column 8: There are 1 possible tokens that can appear here:[]
11	cd1_1	(Counterexample) Instance found. <small>(Manual verification and ChatGPT Results)</small>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>
12	cd1_2	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	Type Error Message Observed
13	cd2	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>
14	ctree1	Syntax Error in the result provided by ChatGPT (In first result) <u>No counterexample found</u> <small>(By Manual verification)</small>	Type Error Message Observed	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>
15	dll1_1	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>
16	dll1_2	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.	(Counterexample) Instance found.	Syntax error The name "null" cannot be found.
17	dll2_1	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.	(Counterexample) Instance found.
18	dll2_2	<u>No counterexample found</u> <small>(ChatGPT provided wrong result)</small>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	Syntax error at line 33 column 32:
19	dll3_1	<u>No counterexample found</u>	<u>(No counterexample found)</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.

20	dll3_2	(Counterexample) Instance found. <small>(Manual verification and ChatGPT Results)</small>	<u>(No counterexample found)</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
21	dll3_3	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>
22	dll4	<u>(No counterexample found)</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
23	farmer1	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.	(Counterexample)	Syntax Error The name "item" cannot be found.
24	fsm1_1	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) No instance found.	(Counterexample)	(Counterexample) Instance found.
25	fsm1_2	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) No instance found.	(Counterexample) No instance found.	Syntax error at line 46 column 1:
26	fsm2	<u>No counterexample found</u>	(Counterexample) No instance found.	(Counterexample) No instance found.	(Counterexample) Instance found.	(Counterexample) No instance found.
27	grade1	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
28	other1	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.
29	student1	<u>No counterexample found</u> <small>(ChatGPT provided wrong result)</small>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>
30	student2_1	(Counterexample) Instance found. <small>(Manual verification and ChatGPT Results)</small>	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>
31	student2_2	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	Type Error Message Observed

32	student3_1	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
33	student3_2	(Counterexample) Instance found. <small>(Manual verification and ChatGPT Results)</small>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
34	student4	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	Type Error Message Observed
35	student5	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
36	student6_1	<u>No counterexample found</u> <small>(ChatGPT provided wrong result)</small>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	Type Error Message Observed
37	student6_2	(Counterexample) Instance found. <small>(Manual verification and ChatGPT Results)</small>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
38	student7_1	<u>No counterexample found</u> <small>(ChatGPT provided wrong result)</small>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
39	student7_2	<u>No counterexample found</u>	(Counterexample) Instance found.	Type Error Message Observed	(Counterexample) Instance found.	Type Error Message Observed
40	student8	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	Type Error Message Observed
41	student9	<u>No counterexample found</u>	<u>No counterexample found</u>	Type Error Message Observed	(Counterexample) Instance found.	(Counterexample) Instance found.

42	student10	<u>No counterexample found</u> (ChatGPT provided wrong result)	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u> <u>No counterexample found</u>
43	student11	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
44	student12_1	<u>No counterexample found</u>	Type Error Message Observed	<u>No counterexample found</u>	(Counterexample) Instance found.	Type Error Message Observed
45	student12_2	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
46	student13	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
47	student14_1	<u>No counterexample found</u>	<u>No counterexample found</u>	(Warning displayed)	(Counterexample) Instance found.	Type Error Message Observed
48	student14_2	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
49	student15	<u>No counterexample found</u>	<u>No counterexample found</u>	(Warning displayed)	(Counterexample) Instance found.	(Counterexample) Instance found.
50	student16	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	Syntax error at line 45 column 18: There are 1 possible tokens that can appear here:)
51	student17_1	<u>No counterexample found</u>	<u>No counterexample found</u>	<u>No counterexample found</u>	(Counterexample) Instance found.	Syntax error at line 20 column 15: There are 1 possible tokens that can appear here: /

52	student17_2	<u>No counterexample found</u>	(Counterexample) Instance found.	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.
53	student18_1	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.	(Counterexample) Instance found.	(Counterexample) Instance found.
54	student18_2	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.	(Counterexample) Instance found.	(Counterexample) Instance found.
55	student18_3	<u>No counterexample found</u>	Type Error Message Observed	(Counterexample) Instance found.	<u>No counterexample found</u>	<u>No counterexample found</u>
56	student19_1	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.	(Counterexample) Instance found.	<u>No counterexample found</u>
57	student19_2	<u>No counterexample found</u>	(Counterexample) Instance found.	(Counterexample) Instance found.	(Counterexample) Instance found.	Type Error Message Observed