

Analysis

Error types:

- CM: correct and matches the gold DF
- CB: correct and even better than the gold DF; for example, the DF might contain gratuitous or wrong information
- CL: correct but less complete than the gold DF
- MP: missing parameters
- SP: superfluous parameters
- MC: missing precondition
- WC: wrong precondition
- SC: superfluous precondition
- ME: missing effect
- WE: wrong effect

Error analysis - whole text

115004877			
Gold	gpt4_basic_instructions	Error Type	Comment
get ('shell', 'npc', 'garage') go ('in', 'npc', 'garage', 'work_station') flatten_sheet ('npc', 'work_station', 'sheet') polish_sheet ('npc', 'work_station', 'sheet', 'shell') cut_sheet ('npc', 'garage', 'sheet', 'scissors', 'papyrus')	get ('npc', 'shell', 'garage') flatten_sheet ('npc', 'sheet') polish_sheet ('npc', 'sheet', 'shell') cut_sheet ('npc', 'sheet', 'papyrus', 'scissors')	CB	Pred misses action "go", which is made permissible because pred "flatten_sheet" also misses that precondition of being in the workshop.
get ('scissors', 'npc', 'garage') go ('west', 'npc', 'garage', 'nursery') get ('plant', 'npc', 'nursery') cut_plant ('npc', 'scissors', 'plant', 'stalk') peel_stalk ('npc', 'stalk') cut_stalk_into_strips ('npc', 'scissors', 'stalk', 'strip')	No solution	ME	Pred "cut_plant" does not have the effect of (inventory ?p ?stalk), whereas pred "peel_stalk" has a precondition of (inventory ?player ?stalk) which cannot be satisfied.
get ('wooden_board', 'npc', 'garage') go ('in', 'npc', 'garage', 'work_station') soak_strips ('npc', 'work_station', 'strip') dry_out_strips ('npc', 'strip') weave_strips_into_sheet ('npc', 'work_station', 'strip', 'sheet') press_sheet ('npc', 'work_station', 'wooden_board', 'sheet')	get ('npc', 'wooden_board', 'garage') go ('npc', 'in', 'garage', 'work_station') dry_out_strips ('npc', 'strip') weave_strips_into_sheet ('npc', 'strip', 'sheet') press_sheet ('npc', 'sheet', 'wooden_board', 'work_station')	CL	Pred misses action "dry_out_strips", which is made permissible by pred "dry_out_strips" missing the precondition of the sheet being clean. This might not be a reasonable assumption.

115030714			
Gold	gpt4_basic_instructions	Error Type	Comment

go ('west', 'npc', 'bedroom', 'livingroom') go ('west', 'npc', 'livingroom', 'kitchen') cook ('npc', 'kitchen', 'stirfry') cook ('npc', 'kitchen', 'sushi') cook ('npc', 'kitchen', 'soup') cook ('npc', 'kitchen', 'clams') cook ('npc', 'kitchen', 'teriyaki') go ('east', 'npc', 'kitchen', 'livingroom') drop ('stirfry', 'npc', 'livingroom') drop ('sushi', 'npc', 'livingroom') drop ('soup', 'npc', 'livingroom') drop ('clams', 'npc', 'livingroom') drop ('teriyaki', 'npc', 'livingroom')	Timeout	SC	<p>Gold action “go” uses predicate “blocked” which does not exist, but this is fine.</p> <p>For the first two problems, gold plan using “drop” is questionable, as it should be “serve”. “Drop” is used because the PF does not specify where the food is at init, and the goal does not specify that the food must be cooked.</p> <p>The issue is at pred action “get_beer” which requires (prepared ?beer), which is not required in gold.</p>
get ('phone', 'npc', 'bedroom') buy_sake ('npc') get_beer ('npc', 'bedroom') go ('west', 'npc', 'bedroom', 'livingroom') go ('west', 'npc', 'livingroom', 'kitchen') go ('north', 'npc', 'kitchen', 'cupboard') get ('teabag', 'npc', 'cupboard') get ('soda', 'npc', 'cupboard') go ('south', 'npc', 'cupboard', 'kitchen') get ('soymilk', 'npc', 'kitchen') brew ('npc', 'kitchen') go ('east', 'npc', 'kitchen', 'livingroom') drop ('soymilk', 'npc', 'livingroom') drop ('soda', 'npc', 'livingroom') drop ('sake', 'npc', 'livingroom') drop ('beer', 'npc', 'livingroom') drop ('tea', 'npc', 'livingroom')	Timeout		
go ('south', 'npc', 'bedroom', 'closet') get ('balloon', 'npc', 'closet') get ('lantern', 'npc', 'closet') go ('north', 'npc', 'closet', 'bedroom') go ('west', 'npc', 'bedroom', 'livingroom') hang_lantern ('npc') blow_balloon ('npc') turn_on_tv ('npc', 'livingroom')	Timeout		

115168608			
Gold	gpt4_basic_instructions	Error Type	Comment
get ('knife', 'npc', 'home') get ('rolling_pin', 'npc', 'home') get ('wooden_boards', 'npc', 'home')	No solution	MP	Pred action “get” misses “location” as a parameter, but uses it in the precondition.

get ('linen_sheets', 'npc', 'home') get ('water', 'npc', 'home')			
travel ('npc', 'home', 'river') search_location ('npc', 'river') pluck_river_reeds ('npc', 'papyrus_plant', 'river') travel ('npc', 'river', 'home')	No solution	MP	Pred action "pluck_river_reeds" misses "location" as a parameter, but uses it in the precondition.
cut_stalks ('npc', 'knife', 'papyrus_plant', 'papyrus_stalks') cut_strips ('npc', 'papyrus_strips', 'papyrus_stalks', 'knife') soak_strips ('npc', 'water', 'papyrus_strips') roll_strips ('npc', 'rolling_pin', 'papyrus_strips') weave_strips ('npc', 'papyrus_strips') bundle_strips ('npc', 'papyrus_strips', 'wooden_boards', 'linen_sheets') cut_sheet ('npc', 'papyrus_strips', 'knife', 'papyrus')	No solution	WC, SP	Pred action "soak_strips" has a superfluous precondition (at ?player ?location), whereas "location" is not a parameter.

115237120			
Gold	gpt4_basic_instructions	Error Type	Comment
go ('south', 'npc', 'parkinglot', 'pond') get_water ('npc', 'pond', 'water') go ('north', 'npc', 'pond', 'parkinglot') go ('north', 'npc', 'parkinglot', 'park') go ('east', 'npc', 'park', 'store') get ('npc', 'store', 'bandage') go ('west', 'npc', 'store', 'park') go ('west', 'npc', 'park', 'car') go ('west', 'npc', 'car', 'brickhouse') loot_shelter ('npc', 'brickhouse', 'food')	go ('npc', 'south', 'parkinglot', 'pond') get_water ('npc', 'pond') go ('npc', 'north', 'pond', 'parkinglot') go ('npc', 'north', 'parkinglot', 'park') go ('npc', 'east', 'park', 'store') get ('npc', 'bandage', 'store') loot_shelter ('old_man', 'brickhouse') barter_food_for_healing ('npc', 'old_man')	WE	"Barter_food_for_healing" is an ambiguous action, where in gold it means <i>you heal the other and you get food</i> , whereas in pred it means <i>you are healed and you get food</i> . Pred is not very reasonable.
go ('north', 'npc', 'parkinglot', 'park') go ('west', 'npc', 'park', 'car') go ('north', 'npc', 'car', 'stonehouse') find_shelter ('npc', 'stonehouse')	go ('npc', 'north', 'parkinglot', 'park') go ('npc', 'west', 'park', 'car') go ('npc', 'north', 'car', 'stonehouse') find_shelter ('npc', 'stonehouse')	CM	Correct.
go ('north', 'npc', 'parkinglot', 'park') go ('south', 'npc', 'park', 'church') get ('npc', 'church', 'pot') go ('north', 'npc', 'church', 'park') collect_rain_water ('npc', 'park', 'pot', 'water') go ('east', 'npc', 'park', 'store') get ('npc', 'store', 'bandage')	loot_shelter ('old_man', 'brickhouse') barter_food_for_healing ('old_man', 'old_man')	??	Apparently the old man can heal himself!! Pred violates the common-sense that you cannot "barter" with yourself.

boil_water('npc', 'brickhouse', 'water', 'pot') clean_others_wound('npc', 'old_man', 'water', 'bandage')			
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115230790			
Gold	gpt4_basic_instructions	Error Type	Comment
listen_to_astronomers_predictions('npc', 'home') move_away('npc', 'philly', 'salt_lake', 'home') go('west', 'npc', 'home', 'market') buy_supplies('heat', 'npc', 'market') buy_supplies('medicine', 'npc', 'market') buy_supplies('water', 'npc', 'market') buy_supplies('food', 'npc', 'market') go('west', 'npc', 'market', 'weapon_market') check_supplies('food', 'water', 'medicine') buy_weapons('ammunition', 'npc', 'weapon_market') buy_weapons('pistol', 'npc', 'weapon_market') go('east', 'npc', 'weapon_market', 'market') go('east', 'npc', 'market', 'home') go('north', 'npc', 'home', 'bunker1') go('north', 'npc', 'bunker1', 'bunker2') check_weapons('pistol', 'ammunition') check_bunker('bunker2', 'npc') outfit_bunker_with_energy_source('bunker2', 'npc', 'heat') enjoylife('bunker2', 'npc') connect_through_social_media_with_family('bunker2', 'npc', 'family', 'salt_lake')	No solution	MP, MC,WE, WC	“move_away” missing precondition about listening to broadcast “buy_supplies” missing parameter that the location has to be a market, precondition missing that the person also need to be at the location “check_supplies” has no parameters and preconditions “buy_weapons” missing parameter on location but used in precondition, missing precondition that the person has to be at the location and enough_supplies “check_weapons” no parameters, missing precondition, wrong effect of having enough_supplies rather than enough_weapons “check_bunker” missing preconditions on enough_supplies, enough_weapons, air filtration and strong material, wrong effect of having air filtration and strong material “outfit_bunker_with_energy_source” missing find_good_bunker precondition and wrong effect of has_energy_source “enjoylife” wrong precondition of has_energy_source should be outfit_bunker_with_heat “connect_through_social_media_with_family” missing parameters and preconditions, according to the pred, you only need to be at a location and has_pc to do so, missing out on enjoying life and location of bunker etc.
listen_to_astronomers_predictions('npc', 'home') move_away('npc', 'philly', 'salt_lake', 'home')	No solution	MC, WE	“move_away” missing precondition about listening to broadcast and different effects from the intended (predicts “at” a city, but there is the subtle difference in the given predicates

			"at" is for location whereas "in" is for a city)
go('west', 'npc', 'home', 'market') buy_supplies('heat', 'npc', 'market') buy_supplies('medicine', 'npc', 'market') buy_supplies('water', 'npc', 'market') buy_supplies('food', 'npc', 'market') go('west', 'npc', 'market', 'weapon_market') check_supplies('food', 'water', 'medicine') buy_weapons('ammunition', 'npc', 'weapon_market') buy_weapons('pistol', 'npc', 'weapon_market') go('east', 'npc', 'weapon_market', 'market') go('east', 'npc', 'market', 'home') go('north', 'npc', 'home', 'bunker1') go('north', 'npc', 'bunker1', 'bunker2') check_weapons('pistol', 'ammunition') check_bunker('bunker2', 'npc') outfit_bunker_with_energy_source('bunker2', 'npc', 'heat')	No solution	MC, MP, WE	"go" missing precondition about not being blocked "buy_supplies" missing parameter that the location has to be a market, precondition missing that the person also need to be at the location "check_supplies" has no parameters and preconditions "buy_weapons" missing parameter on location but used in precondition, missing precondition that the person has to be at the location and enough_supplies "check_weapons" no parameters, missing precondition, wrong effect of having enough_supplies rather than enough_weapons "check_bunker" missing preconditions on enough_supplies, enough_weapons, air filtration and strong material, wrong effect of having air filtration and strong material "outfit_bunker_with_energy_source" missing find_good_bunker precondition and wrong effect of has_energy_source

Error analysis - no_text

115004877			
Gold	basic_no_text	Error Type	Comment
get('wooden_board', 'npc', 'garage') go('in', 'npc', 'garage', 'work_station') soak_strips('npc', 'work_station', 'strip') dry_out_strips('npc', 'strip') weave_strips_into_sheet('npc', 'work_station', 'strip', 'sheet') press_sheet('npc', 'work_station', 'wooden_board', 'sheet')	Parsing Error PF Error: unhashable type: 'list'	WE, WC	"soak_strips" effects has syntax error i.e. (inventory ?player (clean ?strips)) is not atomic. Further, the effects seems to be contradictory semantically as well that player should not have strips in inventory but should have strips with clean property. "press_sheet" action has precondition (not ?flat_sheet - sheet) which is of incorrect syntax. Preconditions should be conjunctions of logical sentences which are atomic. Correct version would

			be (not (?flat_sheet - sheet))
get ('scissors', 'npc', 'garage') go ('west', 'npc', 'garage', 'nursery') get ('plant', 'npc', 'nursery') cut_plant ('npc', 'scissors', 'plant', 'stalk') peel_stalk ('npc', 'stalk') cut_stalk_into_strips ('npc', 'scissors', 'stalk', 'strip')	Parsing Error PF Error: unhashable type: 'list'	WC	"cut_plant" precondition has syntax error i.e. (at ?player (at ?plant_location)) is not atomic.
get ('shell', 'npc', 'garage') go ('in', 'npc', 'garage', 'work_station') flatten_sheet ('npc', 'work_station', 'sheet') polish_sheet ('npc', 'work_station', 'sheet', 'shell') cut_sheet ('npc', 'garage', 'sheet', 'scissors', 'papyrus')	Parsing Error PF Error: unhashable type: 'list'	SP, MC, WE	Pred preconditions and effects indicate that the sheet before and after flattening are two distinct sheets, but it actually just is a change of property to the very same sheet. Also missing precondition that you need to be at a location with hard surface to flatten the sheet.

115030714			
Gold	basic_no_text	Error Type	Comment
go ('west', 'npc', 'bedroom', 'livingroom') go ('west', 'npc', 'livingroom', 'kitchen') cook ('npc', 'kitchen', 'stirfry') cook ('npc', 'kitchen', 'sushi') cook ('npc', 'kitchen', 'soup') cook ('npc', 'kitchen', 'clams') cook ('npc', 'kitchen', 'teriyaki') go ('east', 'npc', 'kitchen', 'livingroom') drop ('stirfry', 'npc', 'livingroom') drop ('sushi', 'npc', 'livingroom') drop ('soup', 'npc', 'livingroom') drop ('clams', 'npc', 'livingroom') drop ('teriyaki', 'npc', 'livingroom')	Timeout	MP, ME	"cook" missing parameter and effect about food! Predicted action for "cook" does not involved food at all.
Timeout	Timeout	?? MP, MC, ME	Predicted "order_sushi", "buy_sake", "brew", "get_beer" has no parameters and preconditions indicating one could just do these without satisfying any preconditions! "serve" has missing parameter, precondition, and effect about the drink.
go ('south', 'npc', 'bedroom', 'closet') get ('balloon', 'npc', 'closet') get ('lantern', 'npc', 'closet') go ('north', 'npc', 'closet', 'bedroom') go ('west', 'npc', 'bedroom', 'livingroom')	go ('npc', 'south', 'bedroom', 'closet') get ('npc', 'balloon', 'closet') get ('npc', 'lantern', 'closet') go ('npc', 'north', 'closet', 'bedroom') go ('npc', 'west', 'bedroom', 'livingroom')	CM	Correct. Only slight difference from the gold is that hang_lantern and blow_balloon as predicted both take the object involved (lantern, balloon) as parameters, which is reasonable.

hang_lantern ('npc') blow_balloon ('npc') turn_on_tv ('npc', 'livingroom')	hang_lantern ('npc', 'lantern') blow_balloon ('npc', 'balloon') turn_on_tv ('npc', 'tv', 'livingroom')		
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115033247			
Gold	basic_no_text	Error Type	Comment
go ('north', 'npc', 'kitchen', 'cabinet') get ('roller', 'npc', 'cabinet') go ('south', 'npc', 'cabinet', 'kitchen') get ('scissors', 'npc', 'kitchen') get ('papyrus', 'npc', 'kitchen') go ('south', 'npc', 'kitchen', 'living_room') get ('smooth_stone', 'npc', 'living_room') polish_papyrus ('npc', 'papyrus') flatten_papyrus ('npc', 'papyrus', 'roller') cut_paprus ('npc', 'papyrus', 'scissors')	No solution	WC, MC	"polish papyrus" has wrong precondition strips_woven which is irrelevant and missing precondition that you need to have the papyrus in inventory in order to polish it. (note gold "cut_paprus" has a small typo)
get ('scissors', 'npc', 'kitchen') cut_stalks ('npc', 'papyrus_tree', 'kitchen', 'papyrus_stalks') papyrus_strips ('npc', 'papyrus_tree', 'kitchen', 'papyrus_stalks', 'papyrus_strips')	No solution	WC	"cut_stalks" predicted has the precondition of player being at the papyrus_tree, but according to the domain header, 'at' can only be used to mean something is at a location, not at an object (tree). Correct way to represent this would be for the precondition to say that both the player and papyrus tree at the same location like (at ?p ?l1) (at ?tree ?l1)
go ('north', 'npc', 'kitchen', 'cabinet') get ('wooden_boards', 'npc', 'cabinet') place_strips_between_boards ('npc')	go ('npc', 'north', 'kitchen', 'cabinet') get ('npc', 'wooden_boards', 'cabinet') place_strips_between_boards ('npc', 'papyrus_strips', 'wooden_boards')	CB	Correct. "place_strips_between_boards" action slightly better than gold because of more comprehensive parameters.

115168608			
Gold	basic_no_text	Error Type	Comment
get ('knife', 'npc', 'home') get ('rolling_pin', 'npc', 'home') get ('wooden_boards', 'npc', 'home') get ('linen_sheets', 'npc', 'home') get ('water', 'npc', 'home')	get ('npc', 'knife', 'home') get ('npc', 'rolling_pin', 'home') get ('npc', 'wooden_boards', 'home') get ('npc', 'linen_sheets', 'home') get ('npc', 'water', 'home')	CM	Correct.

travel ('npc', 'home', 'river') search_location ('npc', 'river') pluck_river_reeds ('npc', 'papyrus_plant', 'river') travel ('npc', 'river', 'home')	No solution	WC	"pluck_river_reeds" has wrong precondition (not (not_gettable ?papyrus_plant)), indicating that you can get a papyrus plant with the normal get which is not the case!
cut_stalks ('npc', 'knife', 'papyrus_plant', 'papyrus_stalks') cut_strips ('npc', 'papyrus_strips', 'papyrus_stalks', 'knife') soak_strips ('npc', 'water', 'papyrus_strips') roll_strips ('npc', 'rolling_pin', 'papyrus_strips') weave_strips ('npc', 'papyrus_strips') bundle_strips ('npc', 'papyrus_strips', 'wooden_boards', 'linen_sheets') cut_sheet ('npc', 'papyrus_strips', 'knife', 'papyrus')	No solution	WE	"soak_strips" has wrong effect of (not (inventory ?player ?papyrus_strips)). The strips just got soaked (change to have 'soaked' property) but the player still has them!

115230790			
Gold	basic_no_text	Error Type	Comment
listen_to_astronomers_predictions ('npc', 'home') move_away ('npc', 'philly', 'salt_lake', 'home') go ('west', 'npc', 'home', 'market') buy_supplies ('heat', 'npc', 'market') buy_supplies ('medicine', 'npc', 'market') buy_supplies ('water', 'npc', 'market') buy_supplies ('food', 'npc', 'market') go ('west', 'npc', 'market', 'weapon_market') check_supplies ('food', 'water', 'medicine') buy_weapons ('ammunition', 'npc', 'weapon_market') buy_weapons ('pistol', 'npc', 'weapon_market') go ('east', 'npc', 'weapon_market', 'market') go ('east', 'npc', 'market', 'home') go ('north', 'npc', 'home', 'bunker1') go ('north', 'npc', 'bunker1', 'bunker2') check_weapons ('pistol', 'ammunition') check_bunker ('bunker2', 'npc') outfit_bunker_with_energy_source ('bunker2', 'npc', 'heat') enjoylife ('bunker2', 'npc') connect_through_social_media_with_family ('bunker2', 'npc', 'family', 'salt_lake')	No solution	MC, WE	"move_away" missing precondition about listening to broadcast and different effects from the intended (predicts "at" a city, but there is the subtle difference in the given predicates - "at" is for location whereas "in" is for a city according to the domain header)
listen_to_astronomers_predictions ('npc', 'home') move_away ('npc', 'philly', 'salt_lake', 'home')	No solution	MC, WE	"move_away" missing precondition about listening to broadcast and different effects from the intended (predicts "at" a city, but there is the subtle difference in the given predicates

			- “at” is for location whereas “in” is for a city according to the domain header)
go ('west', 'npc', 'home', 'market') buy_supplies ('heat', 'npc', 'market') buy_supplies ('medicine', 'npc', 'market') buy_supplies ('water', 'npc', 'market') buy_supplies ('food', 'npc', 'market') go ('west', 'npc', 'market', 'weapon_market') check_supplies ('food', 'water', 'medicine') buy_weapons ('ammunition', 'npc', 'weapon_market') buy_weapons ('pistol', 'npc', 'weapon_market') go ('east', 'npc', 'weapon_market', 'market') go ('east', 'npc', 'market', 'home') go ('north', 'npc', 'home', 'bunker1') go ('north', 'npc', 'bunker1', 'bunker2') check_weapons ('pistol', 'ammunition') check_bunker ('bunker2', 'npc') outfit_bunker_with_energy_source ('bunker2', 'npc', 'heat')	No solution	(SP), WE, MP, WC	parameter ‘obj’ for “go” action is more general than intended. Ideally, “go” should only apply to the player which has the ability to move not any object. “buy_supplies” unintended effect of the supplies no longer being in the market – when you buy something you often don’t buy in such big quantities that there is no longer any left in the market! Similarly, “buy_weapons” has the unintended effect of there’s no more weapon left in the weapon market. (Understandably, such nuances in quantities can be challenging to model!) “check_supplies” predicted has no parameters at all and seems to be merging the parameters information into the preconditions part. Similarly, “check_weapons” predicted has no parameters at all and seems to be merging the parameters information into the preconditions part.