**Actors Prompt:**

An engineer is working on a set of user stories enclosed between triple back ticks.

``` As a user, I want to contact the administrators, so that I can give feedback or ask for help.

As an admin, I want to add recycling center information, so that I can keep the database up-to-date over time.

As an admin, I want to view user error logs, so that I can fix or review any issues that are being faced by users of the system.

As an admin, I want to onboard recycling centers on the platform, so that I can increase information accuracy.

As a superuser, I want to update the recycling center information, so that I can provide the latest information about the recycling center.

As a superuser, I want to view users' stats, so that I can view in real-time how many users have visited my recycling center information and their recyclable waste.

He created an initial goal model with the intentional elements enclosed between triple quotes:

'''

- 'Actors':

-admin

-superuser

-user

-recycling facility representative

- recycling facility

- 'Goals':

-onboard operations conducted

-onboard recycling centers

-add operations conducted

-recycling center information conducted

-view operations conducted

-view user error logs

-have operations conducted

-have a dashboard

-view operations conducted

-view users’ stats

-update operations conducted

-update the recycling center information

-reply operations conducted

-user questions replied

-contact operations conducted

-contact the administrators

-update operations conducted

-update my information

-communicate operations conducted

-the site admin communicated

'''

The created model is missing many intentional elements. Let us refine the goal model step by step. First, can you list all 'Actors' for the user stories enclosed between triple back ticks. An initial set of actors are added in the enclosed between triple quotes. You must also identify any missing and implicit actors. It is critical that you answer only as a bulleted list and do not include any explanation.

admin

* superuser
* user
* recycling facility representative
* recycling facility
* system administrator

**Goals**

The initial goal model does not contain all the stakeholder’s objectives or goals that are conveyed in the user stories enclosed between triple back ticks. Identify any goals explicitly mentioned in the user stories enclosed between triple back ticks as well as any implicit goals. It is critical that you answer only as a bulleted list and do not include any explanation.

1. onboard recycling centers

* update recycling center information
* view user error logs
* contact administrators
* provide latest information about recycling center
* view users' stats
* give feedback or ask for help
* keep database up-to-date over time
* fix or review any user issues
* increase information accuracy
* view in real-time user visits and recyclable waste information

**Tasks for Goals**

Please provide a detailed breakdown of tasks for each of the goals, created in the previous response. It is critical that you answer only as a bulleted list that adheres to the following format.

<a goal>: <a hyphenated list of tasks to achieve the goal>

Do not include any explanation.

onboard recycling centers:

* + verify recycling center information
  + input recycling center details into the system

update recycling center information:

* + gather latest information about recycling centers
  + update database with new information

view user error logs:

* + access error log database
  + review reported errors

contact administrators:

* + access contact information for administrators
  + send feedback or support requests

provide latest information about recycling center:

* + ensure information is up-to-date
  + communicate changes to users

view users' stats:

* + access user statistics database
  + generate real-time reports

give feedback or ask for help:

* + submit feedback form
  + contact administrators for assistance

keep database up-to-date over time:

* + regularly check for outdated information
  + schedule routine updates

fix or review any user issues:

* + analyze reported issues
  + implement solutions or escalate problems

increase information accuracy:

* + conduct data validation checks
  + verify information with reliable sources

view in real-time user visits and recyclable waste information:

* + monitor user activity in real-time
  + track recyclable waste metrics

**Soft Goals**

Next, there are no soft goals in the initial goal model. Please suggest soft goals. Note you must identify any soft goals explicitly mentioned in the user stories enclosed between triple back ticks as well as any implicit soft goals. It is critical that you answer only as a bulleted list and do not include any explanation.

1. Improve user satisfaction through feedback and support channels

* Enhance database reliability and integrity for accurate information maintenance
* Increase system responsiveness to user-reported errors
* Ensure effective communication between administrators and users
* Optimize information accuracy and timeliness for recycling center details
* Enhance user engagement through statistical data visibility and analysis

**Tasks for Soft Goals**

Next, the initial goal model misses different tasks that can be undertaken to achieve goals and soft goals.

Please provide a detailed breakdown of tasks for each soft goal created in the previous response. You can generate a variable number of tasks for soft goals. It is critical that you answer only as a bulleted list that adheres to the following format.

<a soft goal>: <list of tasks to achieve the soft goal>

Do not include any explanation.

Improve user satisfaction through feedback and support channels:

* + Implement user-friendly feedback submission form
  + Establish prompt response mechanism for user queries
  + Conduct user satisfaction surveys for feedback analysis

Enhance database reliability and integrity for accurate information maintenance:

* + Implement data validation checks for incoming recycling center information
  + Conduct regular database audits for data accuracy
  + Ensure data encryption and security protocols for information integrity

Increase system responsiveness to user-reported errors:

* + Develop a systematic error tracking system
  + Prioritize and categorize reported errors for efficient resolution
  + Implement automated error notifications for immediate action

Ensure effective communication between administrators and users:

* + Establish clear communication channels for user inquiries
  + Provide regular system updates and announcements to users
  + Conduct training sessions for administrators on effective user communication

Optimize information accuracy and timeliness for recycling center details:

* + Regularly update recycling center information based on verified sources
  + Implement version control for tracking information changes
  + Provide real-time updates for any changes in recycling center details

Enhance user engagement through statistical data visibility and analysis:

* + Develop user-friendly statistics dashboard for easy access
  + Analyze user behavior patterns for engagement improvement
  + Generate insightful reports on user visits and recyclable waste metrics

**Contribution Links**

The Contributionrelationship statement describes how softgoals, task, believes, or links contribute to the satisficing of another intentional element. The five categories of Contribution Links are enclosed between triple back-ticks symbols.

``` MAKE : The contribution of the contributing element is positive and sufficient. BREAK : The contribution of the contributing element is negative and sufficient. HELP : The contribution of the contributing element is positive but not sufficient. HURT : The contribution of the contributing element is negative but not sufficient. EQUAL : There is equal contribution in both directions. ```

Please suggest different contribution links to link all the intentional elements such as, goals, soft goals, Tasks, and Resources that you identified. Note you must identify any contributions links that explicitly mentioned in the user stories enclosed between triple back ticks as well as any hidden contribution links. It is critical that you answer only as a bulleted list that adheres to the following format.

<Contribution Link Category>::<Source intentional elements> : <Destination intentional elements>

*HELP: user satisfaction soft goal : feedback submission form task*

* MAKE: database reliability and integrity soft goal : data encryption task
* HELP: system responsiveness soft goal : error tracking system task
* MAKE: effective communication soft goal : clear communication channels task
* HELP: information accuracy soft goal : version control task
* MAKE: user engagement soft goal : statistics dashboard task

**Dependencies Links**

The Dependency statement of GRL describes an intentional relationship between two actors, i.e., one actor (the Depender) depends on another actor (the Dependee) on something (the Dependum). Noite that the dependum is optional.

Please suggest different Dependency links to link all the intentional elements such as, goals, soft goals, Tasks, and Resources that you identified. Note you must identify any Dependency links that explicitly mentioned in the user stories enclosed between triple back ticks as well as any hidden Dependency links. It is critical that you answer only as a bulleted list that adheres to the following format.

<Depender> DEPENDES-ON <Dependee> FOR <Dependum>

* user satisfaction soft goal DEPENDS-ON effective communication soft goal FOR user inquiries task
* view user error logs goal DEPENDS-ON system responsiveness soft goal FOR error resolution task
* update recycling center information goal DEPENDS-ON information accuracy soft goal FOR data validation task
* view users' stats goal DEPENDS-ON user engagement soft goal FOR statistical analysis task
* contact administrators goal DEPENDS-ON effective communication soft goal FOR user support requests task

**Resources**

**Not used because Dependum identified in the previous prompt are the resources.**

A resource is an (physical or informational) entity, with which the main concern is whether it is available. The initial goal model with the intentional elements enclosed between triple quotes does not have resources. Identify resources that are explicitly mentioned in the user stories enclosed between triple back ticks as well as any implicit resources. It is critical that you answer only as a bulleted list and do not include any explanation.



**Decomposition Links**

DECOMPOSITON statement provides the ability to define what other elements need to be achieved or available in order for a task to perform. Note that only Task and Goal can be decomposed into goal, task, resource, and softgoal. A Task Decomposition Structure shows the essential components of a task, which include subtasks that must be performed, subgoals that must be achieved, resources that must be accessible, and softgoals that must be satisfied. Similarly, a Goal Decomposition Structure connects a goal with its sub-goals directly, which is a short hand form of one Goal Means\_Ends Structure and the related Task Decomposition Structure.  The three categories of Decomposition Links are enclosed between triple back-ticks symbols.

``` AND DECOMPOSITON: The relations between the dependent elements are “AND”. Each of the sub-components are necessary. OR DECOMPOSITON : The relations between the contributing elements are “OR”. Any of the sub-components is sufficient. XOR DECOMPOSITON: The relations between the contributing elements are “XOR”. Either of the sub-components are necessary, but not both. ```

Please suggest different Decomposition links to link all the intentional elements such as, goals, soft goals, Tasks, and Resources that you identified. Note you must identify any Decomposition links that explicitly mentioned in the user stories enclosed between triple back ticks as well as any hidden Decomposition links. It is critical that you answer only as a bulleted list that adheres to the following format.

< Decomposition Type>::<Source intentional elements> : <Destination intentional elements>

* AND DECOMPOSITION: update recycling center information task : gather latest information about recycling centers sub-task
* OR DECOMPOSITION: view users' stats goal : view user visits sub-goal, view recyclable waste sub-goal
* XOR DECOMPOSITION: provide latest information about recycling center task : ensure information is up-to-date sub-task XOR communicate changes to users sub-task

**Generate XML using Fewshot examples:**

Please create an XML that includes all the outputs that you generated so far. An example of the right output is shown between triple back ticks.

```

<?xml version='1.0' encoding='ISO-8859-1'?>

<grl-catalog catalog-name="URNspec" description="" author="vaish">

<element-def>

<intentional-element id="72" name="Car objects" description="" type="Ressource" decompositiontype="And"/>

<intentional-element id="80" name="Easy to use" description="" type="Softgoal" decompositiontype="And"/>

<intentional-element id="82" name="Realistic simulation" description="" type="Softgoal" decompositiontype="And"/>

<intentional-element id="84" name="Simple design" description="" type="Softgoal" decompositiontype="And"/>

<intentional-element id="88" name="Generate cars" description="" type="Goal" decompositiontype="And"/>

<intentional-element id="96" name="Create new cars" description="" type="Task" decompositiontype="And"/>

<intentional-element id="98" name="Keep same cars" description="" type="Task" decompositiontype="And"/>

</element-def>

<link-def>

<contribution name="Contribution105" description="" srcid="96" destid="82" contributiontype="Unknown" quantitativeContribution="0" correlation="false"/>

<contribution name="Contribution106" description="" srcid="96" destid="84" contributiontype="Unknown" quantitativeContribution="0" correlation="false"/>

<decomposition name="Decomposition111" description="" srcid="96" destid="88"/>

<decomposition name="Decomposition114" description="" srcid="98" destid="88"/>

<dependency name="Dependency116" description="" dependerid="88" dependeeid="72"/>

</link-def>

<actor-def>

<actor id="11" name="Traffic Simulator" description=""/>

</actor-def>

<actor-IE-link-def>

<actorContIE actor="11" ie="72"/>

<actorContIE actor="11" ie="80"/>

<actorContIE actor="11" ie="82"/>

<actorContIE actor="11" ie="84"/>

<actorContIE actor="11" ie="88"/>

<actorContIE actor="11" ie="96"/>

<actorContIE actor="11" ie="98"/>

</actor-IE-link-def>

</grl-catalog>

```

The generated XML must adhere to the below list of criteria.

1. No duplicate values for 'name' attribute in XML
2. No duplicate values for 'id' attribute? in XML
3. No empty string as a value for 'name' attribute
4. If you include Date attributes 'modified' and 'created', the values of 'modified' attribute must be greater than the value of 'created' attribute
5. The XML must not have an empty grl-catalog element
6. Do not add elements outside the section named 'grl-catalog'
7. In the XML, element named 'intentional-element' must have non-empty values for following attributes- name, id, type
8. XML must have section 'actor-def' consisting of actors
9. In the XML, each actor element has an 'id' attribute. Do not use the value of 'id' attribute of an actor element as the value for 'srcid' or 'destid' attributes within the section named 'link-def'
10. XML must have a section with title 'actor-IE-link-def'
11. Within the section with name 'actor-IE-link-def', no two elements with different value for 'actor' attribute, have same value for 'ie' attribute"
12. For an element named 'intentional-element', the value for the attribute 'type' of the tag must be one of the following values - Task, Goal, Softgoal, Resource, Belief?"
13. For an element named 'intentional-element', the value for the attribute 'decompositiontype' of the tag must be one of the following values - AND, OR, XOR
14. For an element with name 'contribution', the value for the attribute 'contributiontype' of the tag must be one of the following values- Make, Help, Break, Hurt
15. For an element with name 'contribution', the values for attributes- srcid and destid, in each tag must be different
16. Each element with name 'contribution', must have attribute 'srcid' and its value must not be empty string
17. Each element with name 'contribution' must have attribute 'destid' and its value must not be empty string
18. Each element with name 'decomposition' must have attribute 'srcid' and its value must not be empty string
19. Each element with name 'decomposition' must have attribute 'destid' and its value must not be empty string
20. Each element with name 'decomposition', must have different the values for attributes- 'srcid' and destid'