**Actors Prompt:**

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

``` As a user, I want to search and discover music using content identification or fingerprinting.

As a user, I want to search and discover music based on my profile.

As a user, I want to search and discover music based on other users similar to myself.

As a user, I want to search and discover music or ringback tones similar to a given music video based on content similarity.

As a user, I want to search and discover music by exploiting enriched metadata and image tags, so that I find related artists, new genre, or other relevant listening path.

As a user, I want to upload tagged videos and have tags available for all further processing steps.```

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

‘’’

- 'Actors':

-user

- 'Goals':

-search operations conducted

-upload operations conducted

-view operations conducted

-receive operations conducted

-a given music video searched

-upload tagged videos

-view thumbnail sequences

-content recommendations received

'''

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.

* user
* content identification or fingerprinting system
* profile system
* recommendation system
* metadata and image tagging system

**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.

* search and discover music using content identification or fingerprinting
* search and discover music based on user profile
* search and discover music based on similarity to other users
* search and discover music or ringback tones based on content similarity to a given music video
* search and discover music by exploiting enriched metadata and image tags
* upload tagged videos and have tags available for further processing steps

**IE Links for Goals**

Connect the goals from the previous step to the actors. It is critical that you answer only as a bulleted list that adheres to the following format.

<a actor>: <a hyphenated list of associated goals>

Do not include any explanation.

**Tasks for Goals**

Please provide a detailed breakdown of tasks for each of the following 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.

* search and discover music using content identification or fingerprinting:
  + Implement content identification system
  + Implement fingerprinting system
  + Integrate content identification and fingerprinting with search functionality
* search and discover music based on user profile:
  + Develop user profile system
  + Personalize music recommendations based on user profile
* search and discover music based on similarity to other users:
  + Implement user similarity algorithm
  + Recommend music based on similar users' preferences
* search and discover music or ringback tones based on content similarity to a given music video:
  + Develop content similarity algorithm
  + Provide recommendations based on content similarity to a given music video
* search and discover music by exploiting enriched metadata and image tags:
  + Implement metadata and image tagging system
  + Use metadata and image tags for music search and recommendations
* upload tagged videos and have tags available for further processing steps:
  + Develop video tagging feature
  + Ensure tagged videos are stored and accessible for processing steps

**IE Links for Tasks of Goals**

Connect the tasks of goals from the previous step to the actors. It is critical that you answer only as a bulleted list that adheres to the following format.

<a actor>: <a hyphenated list of associated tasks of goals>

Do not include any explanation.

**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.

* Improve user satisfaction with music search and discovery experience
* Enhance personalized music recommendations accuracy
* Increase user engagement with the platform through music discovery
* Ensure efficient processing of uploaded tagged videos
* Enhance music content relevance in search results

**IE Links for Soft Goals**

Connect the soft goals created in the previous step to the actors. It is critical that you answer only as a bulleted list that adheres to the following format.

<a actor>: <a hyphenated list of associated soft goals>

Do not include any explanation.

**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 with music search and discovery experience:
  + Conduct user satisfaction surveys and feedback analysis
  + Implement user-friendly interface enhancements based on feedback
  + Monitor user engagement metrics and adjust search algorithms accordingly
* Enhance personalized music recommendations accuracy:
  + Implement machine learning algorithms for personalized recommendations
  + Continuously update user profiles based on user interactions
  + Analyze user feedback on recommendations and adjust algorithms
* Increase user engagement with the platform through music discovery:
  + Implement gamification elements to encourage music exploration
  + Create personalized playlists based on user preferences
  + Integrate social sharing features for music discoveries
* Ensure efficient processing of uploaded tagged videos:
  + Develop automated tagging algorithms for videos
  + Optimize video storage and retrieval processes
  + Implement real-time tagging updates for further processing steps
* Enhance music content relevance in search results:
  + Improve metadata tagging accuracy for music content
  + Implement content-based recommendation algorithms for music search
  + Enhance search result filtering options for users

**IE Links for Tasks of Soft Goals**

Connect the tasks of soft goals from the previous step to the actors. It is critical that you answer only as a bulleted list that adheres to the following format.

<a actor>: <a hyphenated list of associated tasks of soft goals>

Do not include any explanation.

**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>

* MAKE::user satisfaction with music search and discovery experience : Improve user satisfaction with music search and discovery experience
* HELP::personalized music recommendations accuracy : Enhance personalized music recommendations accuracy
* HELP::user engagement with the platform through music discovery : Increase user engagement with the platform through music discovery
* MAKE::efficient processing of uploaded tagged videos : Ensure efficient processing of uploaded tagged videos
* HELP::music content relevance in search results : Enhance music content relevance in search results

**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>

* search and discover music using content identification or fingerprinting DEPENDS-ON content identification or fingerprinting system FOR music search and discovery using content identification or fingerprinting
* search and discover music based on user profile DEPENDS-ON profile system FOR music search and discovery based on user profile
* search and discover music based on similarity to other users DEPENDS-ON recommendation system FOR music search and discovery based on similarity to other users
* search and discover music or ringback tones based on content similarity to a given music video DEPENDS-ON content similarity algorithm FOR music search and discovery based on content similarity to a given music video
* search and discover music by exploiting enriched metadata and image tags DEPENDS-ON metadata and image tagging system FOR music search and discovery by exploiting enriched metadata and image tags
* upload tagged videos and have tags available for further processing steps DEPENDS-ON video tagging feature FOR upload of tagged videos and availability of tags for further processing steps

**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-tick 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::search and discover music using content identification or fingerprinting : content identification or fingerprinting system, music search and discovery using content identification or fingerprinting
* AND DECOMPOSITION::search and discover music based on user profile : profile system, music search and discovery based on user profile
* AND DECOMPOSITION::search and discover music based on similarity to other users : recommendation system, music search and discovery based on similarity to other users
* AND DECOMPOSITION::search and discover music or ringback tones based on content similarity to a given music video : content similarity algorithm, music search and discovery based on content similarity to a given music video
* AND DECOMPOSITION::search and discover music by exploiting enriched metadata and image tags : metadata and image tagging system, music search and discovery by exploiting enriched metadata and image tags
* AND DECOMPOSITION::upload tagged videos and have tags available for further processing steps : video tagging feature, upload of tagged videos and availability of tags for further processing steps

**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.

• No duplicate values for 'name' attribute in XML

• No duplicate values for 'id' attribute? in XML

• No empty string as a value for 'name' attribute

• If you include Date attributes 'modified' and 'created', the values of 'modified' attribute must be greater than the value of 'created' attribute

• The XML must not have an empty grl-catalog element

• Do not add elements outside the section named 'grl-catalog'

• In the XML, element named 'intentional-element' must have non-empty values for following attributes- name, id, type

• XML must have section 'actor-def' consisting of actors

• 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'

• XML must have a section with title 'actor-IE-link-def'

• Within the section with name 'actor-IE-link-def', no two elements with different value for 'actor' attribute, have same value for 'ie' attribute"

• 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?"

• 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

• 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

• For an element with name 'contribution', the values for attributes- srcid and destid, in each tag must be different

• Each element with name 'contribution', must have attribute 'srcid' and its value must not be empty string

• Each element with name 'contribution' must have attribute 'destid' and its value must not be empty string

• Each element with name 'decomposition' must have attribute 'srcid' and its value must not be empty string

• Each element with name 'decomposition' must have attribute 'destid' and its value must not be empty string

• Each element with name 'decomposition', must have different the values for attributes- 'srcid' and destid'