# All generated explanations from the knowledge base

**12 results:**

* **4 Permissions**
* **0 Prohibition**
* **8 Conflicts**

## Permissions

**1 - Access(researcher1,read,dataset8) = Permitted**

Permission(Institute1,Staff\_Member,Consult,Public\_Data,default) $\wedge$

Employ(Institute1,researcher1,Staff\_Member) $\wedge$

Use(Institute1,dataset8,Public\_Data) $\wedge$

Consider(Institute1,read,Consult) $\wedge$

Define(Institute1,researcher1,read,Public\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher1,read,dataset8)

**NL:** Researcher1, a staff member at Institute1, part of the Consortium, can read the dataset8. This is because Researcher1 is permitted to consult a public data in a default context, where dataset8 is considered as a public data, and reading it is classified as a consulting activity.

1. Is the natural language (NL) explanation coherent with the logic-based explanation?
2. Are the generated explanations useful in helping understand the decisions made by the system?

**2 - Access(researcher1,select,dataset8) = Permitted**

Permission(Institute1,Staff\_Member,Consult,Public\_Data,default) $\wedge$

Employ(Institute1,researcher1,Staff\_Member) $\wedge$

Use(Institute1,dataset8,Public\_Data) $\wedge$

Consider(Institute1,select,Consult) $\wedge$

Define(Institute1,researcher1,select,Public\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher1,select,dataset8)

**NL**: Researcher1, a staff member at Institute1, part of the Consortium, can select the dataset8. This is because Researcher1 is permitted

to consult a public data in a default context, where dataset8 is considered as a public data, and selecting it is classified as a consulting activity.

1. Is the natural language (NL) explanation coherent with the logic-based explanation?
2. Are the generated explanations useful in helping understand the decisions made by the system?

**3 - Access(researcher4,read,dataset8) = Permitted**

Permission(Institute1,Staff\_Member,Consult,Public\_Data,default) $\wedge$

Employ(Institute1,researcher4,Staff\_Member) $\wedge$

Use(Institute1,dataset8,Public\_Data) $\wedge$

Consider(Institute1,read,Consult) $\wedge$

Define(Institute1,researcher4,read,Public\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher4,read,dataset8)

**NL**: Researcher4, a staff member at Institute1, part of the Consortium, can read the dataset8. This is because Researcher4 is permitted to consult a public data in a default context, where dataset8 is considered as a public data, and reading it is classified as a consulting activity.

1. Is the natural language (NL) explanation coherent with the logic-based explanation?
2. Are the generated explanations useful in helping understand the decisions made by the system?

**4 - Access(researcher4,select,dataset8) = Permitted**

Permission(Institute1,Staff\_Member,Consult,Public\_Data,default) $\wedge$

Employ(Institute1,researcher4,Staff\_Member) $\wedge$

Use(Institute1,dataset8,Public\_Data) $\wedge$

Consider(Institute1,select,Consult) $\wedge$

Define(Institute1,researcher4,select,Public\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher4,select,dataset8)

**NL**: Researcher4, a staff member at Institute1, part of the Consortium, can select the dataset8. This is because Researcher4 is permitted

to consult a public data in a default context, where dataset8 is considered as a public data, and selecting it is classified as a consulting activity.

1. Is the natural language (NL) explanation coherent with the logic-based explanation?
2. Are the generated explanations useful in helping understand the decisions made by the system?

## Conflict of access

**1 - Access(researcher1,read,dataset1) = Permitted**

**Access(researcher1,read,dataset1) = Prohibited**

Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher1,Employee) $\wedge$

Use(Institute1,dataset1,Confidential\_Data) $\wedge$

Consider(Institute1,read,Consult) $\wedge$

Define(Institute1,researcher1,read,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher1,read,dataset1)

Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher1,Staff\_Member) $\wedge$

Use(Institute1,dataset1,Confidential\_Data) $\wedge$

Consider(Institute1,read,Consult) $\wedge$

Define(Institute1,researcher1,read,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-prohibited(researcher1,read,dataset1)

Contrast(X, Y, Z) represents the change in the truth value of X when the variable Y is changed to Z, where:

X = Use(Institute1,dataset1,Confidential\_Data) $\wedge$ Consider(Institute1,read,Consult) $\wedge$ Define(Institute1,researcher1,read,Confidential\_Data,default) $\wedge$ SubOrganisationOf(Institute1,Consortium)

Y = Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher1,Employee)

Z = Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher1,Staff\_Member)

**NL**: There is a conflict in the access of dataset1 for Researcher1. Researcher1, an employee at Institute1, part of the Consortium, can read the dataset1. Researcher1 is permitted to consult a confidential data in a default context, where dataset1 is considered as a confidential data, and reading it is classified as a consulting activity. In contrast, Researcher1 cannot read it when/because they are considered a staff member.

1. Is the natural language (NL) explanation coherent with the logic-based explanation?
2. Are the generated explanations useful in helping understand the decisions made by the system?

**2 - Access(researcher1,read,dataset5) = Permitted**

**Access(researcher1,read,dataset5) = Prohibited**

Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher1,Employee) $\wedge$

Use(Institute1,dataset5,Confidential\_Data) $\wedge$

Consider(Institute1,read,Consult) $\wedge$

Define(Institute1,researcher1,read,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher1,read,dataset5)

Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher1,Staff\_Member) $\wedge$

Use(Institute1,dataset5,Confidential\_Data) $\wedge$

Consider(Institute1,read,Consult) $\wedge$

Define(Institute1,researcher1,read,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-prohibited(researcher1,read,dataset5)

Contrast(X, Y, Z) represents the change in the truth value of X when the variable Y is changed to Z, where:

X = Use(Institute1,dataset5,Confidential\_Data) $\wedge$ Consider(Institute1,read,Consult) $\wedge$ Define(Institute1,researcher1,read,Confidential\_Data,default) $\wedge$ SubOrganisationOf(Institute1,Consortium)

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Z = Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher1,Staff\_Member)

**NL:** There is a conflict in the access of dataset5 for Researcher1. Researcher1, an employee at Institute1, part of the Consortium, can read the dataset5. Researcher1 is permitted to consult a confidential data in a default context, where dataset5 is considered as a confidential data, and reading it is classified as a consulting activity. In contrast, Researcher1 cannot read it when/because they are considered a staff member.

1. Is the natural language (NL) explanation coherent with the logic-based explanation?
2. Are the generated explanations useful in helping understand the decisions made by the system?

**3 - Access(researcher1,select,dataset1) = Permitted**

**Access(researcher1,select,dataset1) = Prohibited**

Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher1,Employee) $\wedge$

Use(Institute1,dataset1,Confidential\_Data) $\wedge$

Consider(Institute1,select,Consult) $\wedge$

Define(Institute1,researcher1,select,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher1,select,dataset1)

Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher1,Staff\_Member) $\wedge$

Use(Institute1,dataset1,Confidential\_Data) $\wedge$

Consider(Institute1,select,Consult) $\wedge$

Define(Institute1,researcher1,select,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-prohibited(researcher1,select,dataset1)

Contrast(X, Y, Z) represents the change in the truth value of X when the variable Y is changed to Z, where:

X = Use(Institute1,dataset1,Confidential\_Data) $\wedge$ Consider(Institute1,select,Consult) $\wedge$ Define(Institute1,researcher1,select,Confidential\_Data,default) $\wedge$ SubOrganisationOf(Institute1,Consortium)

Y = Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher1,Employee)

Z = Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher1,Staff\_Member)

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**4 - Access(researcher1,select,dataset5) = Permitted**

**Access(researcher1,select,dataset5) = Prohibited**

Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher1,Employee) $\wedge$

Use(Institute1,dataset5,Confidential\_Data) $\wedge$

Consider(Institute1,select,Consult) $\wedge$

Define(Institute1,researcher1,select,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher1,select,dataset5)

Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher1,Staff\_Member) $\wedge$

Use(Institute1,dataset5,Confidential\_Data) $\wedge$

Consider(Institute1,select,Consult) $\wedge$

Define(Institute1,researcher1,select,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-prohibited(researcher1,select,dataset5)

Contrast(X, Y, Z) represents the change in the truth value of X when the variable Y is changed to Z, where:

X = Use(Institute1,dataset5,Confidential\_Data) $\wedge$ Consider(Institute1,select,Consult) $\wedge$ Define(Institute1,researcher1,select,Confidential\_Data,default) $\wedge$ SubOrganisationOf(Institute1,Consortium)

Y = Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher1,Employee)

Z = Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher1,Staff\_Member)

**NL:** There is a conflict in the access of dataset5 for Researcher1. Researcher1, an employee at Institute1, part of the Consortium, can select the dataset5. Researcher1 is permitted to consult a confidential data in a default context, where dataset5 is considered as a confidential data, and selecting it is classified as a consulting activity. In contrast, Researcher1 cannot select it when/because they are considered a staff member.

1. Is the natural language (NL) explanation coherent with the logic-based explanation?
2. Are the generated explanations useful in helping understand the decisions made by the system?

**5 - Access(researcher4,read,dataset1) = Permitted**

**Access(researcher4,read,dataset1) = Prohibited**

Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher4,Employee) $\wedge$

Use(Institute1,dataset1,Confidential\_Data) $\wedge$

Consider(Institute1,read,Consult) $\wedge$

Define(Institute1,researcher4,read,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher4,read,dataset1)

Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher4,Staff\_Member) $\wedge$

Use(Institute1,dataset1,Confidential\_Data) $\wedge$

Consider(Institute1,read,Consult) $\wedge$

Define(Institute1,researcher4,read,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-prohibited(researcher4,read,dataset1)

Contrast(X, Y, Z) represents the change in the truth value of X when the variable Y is changed to Z, where:

X = Use(Institute1,dataset1,Confidential\_Data) $\wedge$ Consider(Institute1,read,Consult) $\wedge$ Define(Institute1,researcher4,read,Confidential\_Data,default) $\wedge$ SubOrganisationOf(Institute1,Consortium)

Y = Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher4,Employee)

Z = Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher4,Staff\_Member)

**NL:** There is a conflict in the access of dataset1 for Researcher4. Researcher4, an employee at Institute1, part of the Consortium, can read the dataset1. Researcher4 is permitted to consult a confidential data in a default context, where dataset1 is considered as a confidential data, and reading it is classified as a consulting activity. In contrast, Researcher4 cannot read it when/because they are considered a staff member.

1. Is the natural language (NL) explanation coherent with the logic-based explanation?
2. Are the generated explanations useful in helping understand the decisions made by the system?

**6 - Access(researcher4,read,dataset5) = Permitted**

**Access(researcher4,read,dataset5) = Prohibited**

Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher4,Employee) $\wedge$

Use(Institute1,dataset5,Confidential\_Data) $\wedge$

Consider(Institute1,read,Consult) $\wedge$

Define(Institute1,researcher4,read,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher4,read,dataset5)

Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher4,Staff\_Member) $\wedge$

Use(Institute1,dataset5,Confidential\_Data) $\wedge$

Consider(Institute1,read,Consult) $\wedge$

Define(Institute1,researcher4,read,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-prohibited(researcher4,read,dataset5)

Contrast(X, Y, Z) represents the change in the truth value of X when the variable Y is changed to Z, where:

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**NL:** There is a conflict in the access of dataset5 for Researcher4. Researcher4, an employee at Institute1, part of the Consortium, can read the dataset5. Researcher4 is permitted to consult a confidential data in a default context, where dataset5 is considered as a confidential data, and reading it is classified as a consulting activity. In contrast, Researcher4 cannot read it when/because they are considered a staff member.

1. Is the natural language (NL) explanation coherent with the logic-based explanation?
2. Are the generated explanations useful in helping understand the decisions made by the system?

**7 - Access(researcher4,select,dataset1) = Permitted**

**Access(researcher4,select,dataset1) = Prohibited**

Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher4,Employee) $\wedge$

Use(Institute1,dataset1,Confidential\_Data) $\wedge$

Consider(Institute1,select,Consult) $\wedge$

Define(Institute1,researcher4,select,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher4,select,dataset1)

Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher4,Staff\_Member) $\wedge$

Use(Institute1,dataset1,Confidential\_Data) $\wedge$

Consider(Institute1,select,Consult) $\wedge$

Define(Institute1,researcher4,select,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-prohibited(researcher4,select,dataset1)

Contrast(X, Y, Z) represents the change in the truth value of X when the variable Y is changed to Z, where:

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Z = Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher4,Staff\_Member)

**NL:** There is a conflict in the access of dataset1 for Researcher4. Researcher4, an employee at Institute1, part of the Consortium, can select the dataset1. Researcher4 is permitted to consult a confidential data in a default context, where dataset1 is considered as a confidential data, and selecting it is classified as a consulting activity. In contrast, Researcher4 cannot select it when/because they are considered a staff member.

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**8 - Access(researcher4,select,dataset5) = Permitted**

**Access(researcher4,select,dataset5) = Prohibited**

Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher4,Employee) $\wedge$

Use(Institute1,dataset5,Confidential\_Data) $\wedge$

Consider(Institute1,select,Consult) $\wedge$

Define(Institute1,researcher4,select,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-permitted(researcher4,select,dataset5)

Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$

Employ(Institute1,researcher4,Staff\_Member) $\wedge$

Use(Institute1,dataset5,Confidential\_Data) $\wedge$

Consider(Institute1,select,Consult) $\wedge$

Define(Institute1,researcher4,select,Confidential\_Data,default) $\wedge$

SubOrganisationOf(Institute1,Consortium) $\models$

Is-prohibited(researcher4,select,dataset5)

Contrast(X, Y, Z) represents the change in the truth value of X when the variable Y is changed to Z, where:

X = Use(Institute1,dataset5,Confidential\_Data) $\wedge$ Consider(Institute1,select,Consult) $\wedge$ Define(Institute1,researcher4,select,Confidential\_Data,default) $\wedge$ SubOrganisationOf(Institute1,Consortium)

Y = Permission(Institute1,Employee,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher4,Employee)

Z = Prohibition(Institute1,Staff\_Member,Consult,Confidential\_Data,default) $\wedge$ Employ(Institute1,researcher4,Staff\_Member)

**NL:** There is a conflict in the access of dataset5 for Researcher4. Researcher4, an employee at Institute1, part of the Consortium, can select the dataset5. Researcher4 is permitted to consult a confidential data in a default context, where dataset5 is considered as a confidential data, and selecting it is classified as a consulting activity. In contrast, Researcher4 cannot select it when/because they are considered a staff member.

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