

**1. Fill in the gap.**

For security reasons many systems and applications are getting to apply an authentication based on \_\_\_\_\_ data.

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**2. The speaker identification task involves 3 research areas:**

1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_
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**3. Speech features for identification are divided into more levels:**

- Acoustic
  - Lower level features
  - Prosodic
  - Higher level features
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**4. Which of the following categories does not belong to classification methods that are used to take decision about the speaker identity based on speech features:**

- Parametric methods
  - Approximation methods
  - Nonparametric methods
  - Discriminative methods
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**5. The main purpose of the speech signal is to convey lexical information. However, it contains additional information e.g. speaker specific that include:**

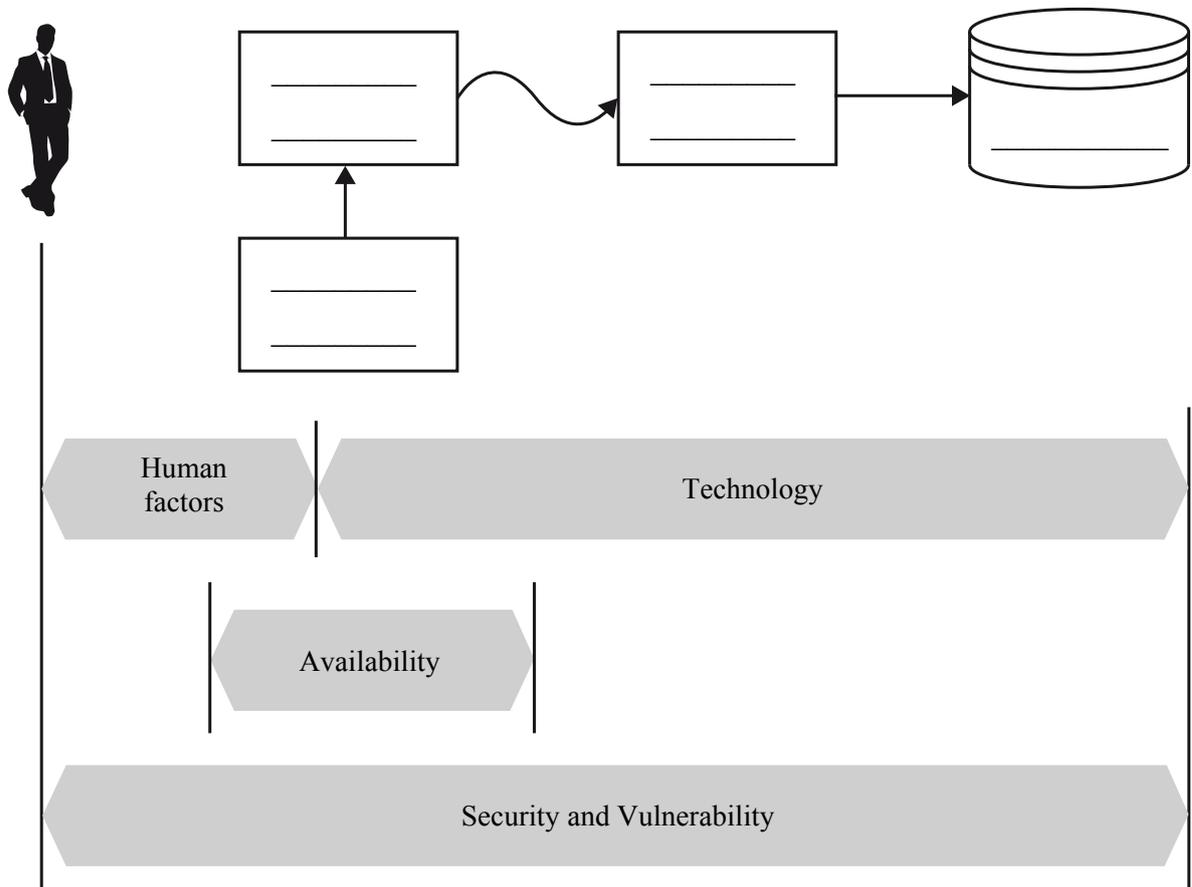
1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**6. Assign the correct definition?**

1. Identification \_\_\_\_\_
2. Authentication \_\_\_\_\_
3. Authorization \_\_\_\_\_

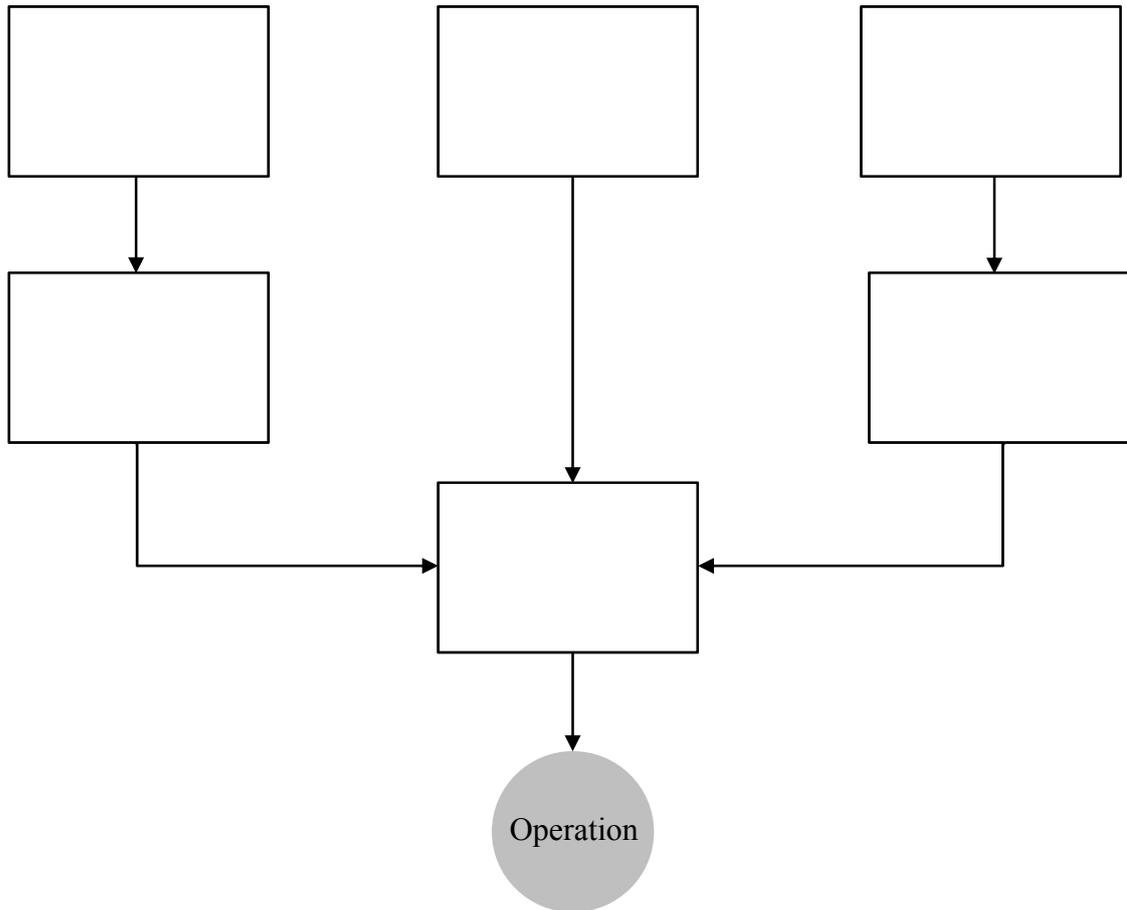
- 1 – after identification string or token is accepted, user has to prove his identity.
- 2 – allow or deny user access to the requested content or to a set of actions under based on his access rights
- 3 – user is identified by token or identification string (phone number or email address)

**7. Complete the entities involved in the authentication process.**



Authentication mechanism, System, Database, Input mechanism

8. Fill in objects belonging to access control model.



Subject, Object, Operation, Permission, Classification, Role