1. Fill in the gap.

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

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2. The speaker identification task involves 3 research areas:

1. **feature extraction**
2. **feature normalization**
3. **classification and decision**

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3. Speech features for identification are divided into more levels:

X **Acoustic**

☐ Lower level features

X **Prosodic**

X **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

X **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. **physical property of vocal organs: size, toughness, shape, etc.**
2. **temper and health condition**
3. **education, origin, social background**

Erasmus+
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6. Assign the correct definition?

1. Identification **(3)**
2. Authentication **(1)**
3. Authorization **(2)**

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)

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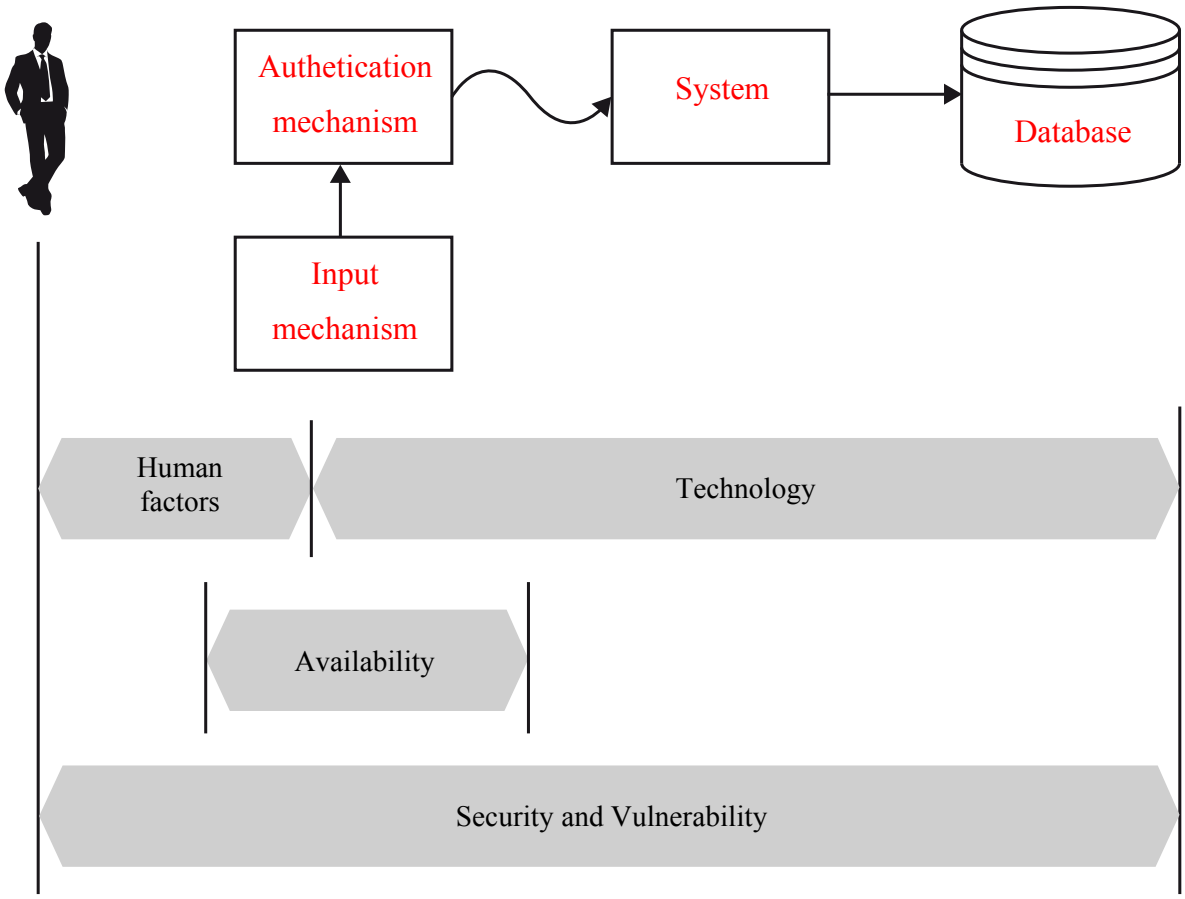
7. Complete the entities involved in the authentication process.



Authentication mechanism, System, Database, Input mechanism

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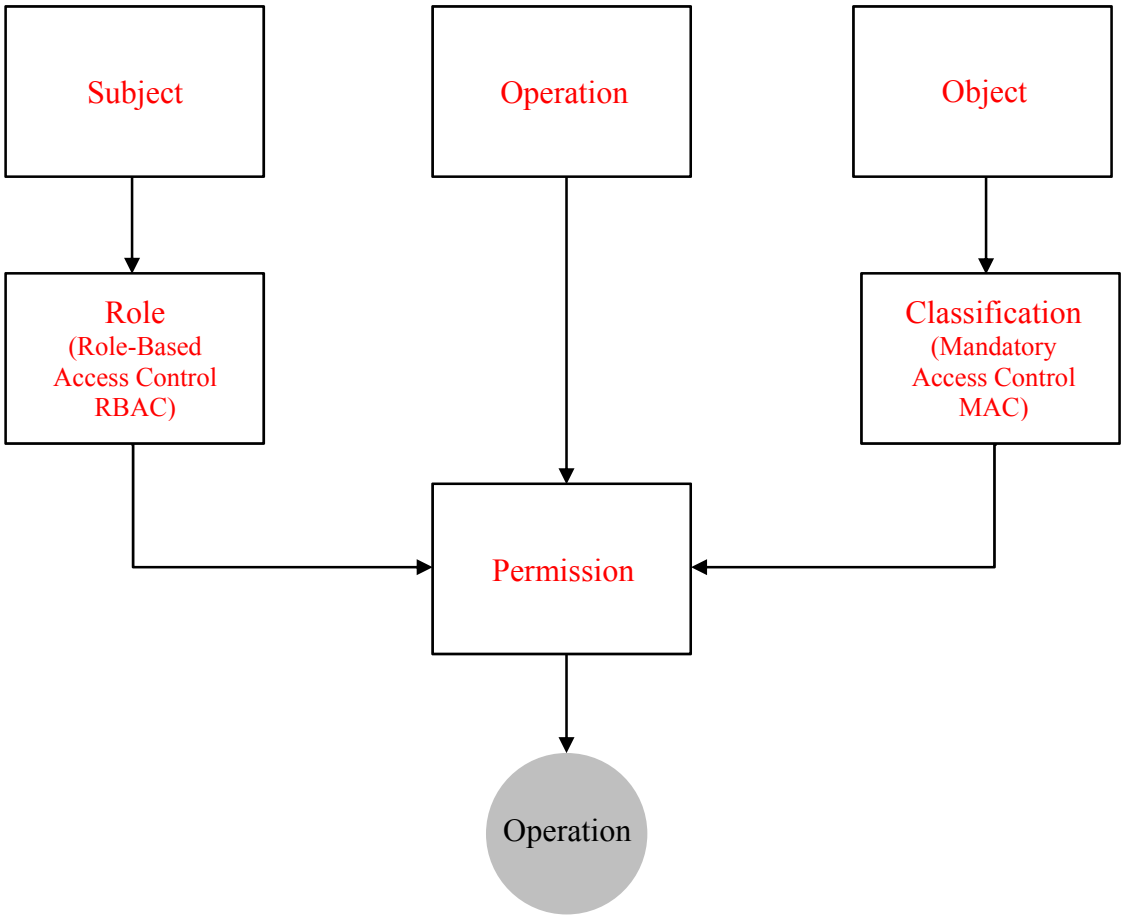
8. Fill in objects belonging to access control model.



Subject, Object, Operation, Permission, Classification, Role

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