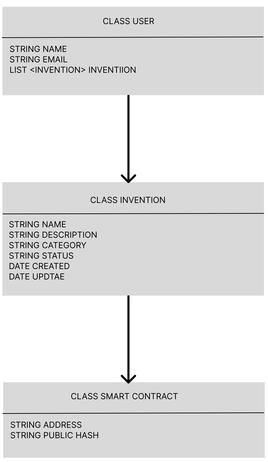
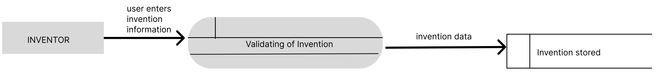
CLASS DIAGRAM - DEX INVENTION KENYA (DexKE)

```
class User {
  String name;
  String email;
  List<Invention> inventions;
}

class Invention {
  String name;
  String description;
  String category;
  String status;
  Date createdAt;
  Date updatedAt;
}

class EthereumSmartContract {
  String address;
  String ABI;
}
```



DATA FLOW DIAGRAM

Data Source - Users enters information about the invention
Data process - DexKE validates the information and registration
Data store - DexKE stores the information about invention using SHA254 cryptography
Data destination - DexKE sends a notification to the usr of the Smart Contract has been activated



BEHAVIOURAL MODELS

Use Case: Register an Invention

Actor: User

Description: The user registers an invention with the DexKE.

Steps:

1. The user enters the name and description of the invention.
2. The user selects the category of the invention.
3. The user clicks the "Register" button.

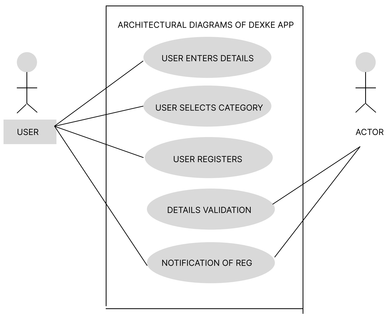
Trigger: The user wants to register an invention.

Precondition: The user has created an account with the DexKE.

Postcondition: The invention is registered with the DexKE.

Exceptions:

* The user enters invalid information.
* The invention already exists.



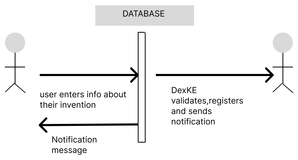
SEQUENCE DIAGRAM

User → DexKE: Enters information about their invention

DexKE → User: Validates the information

DexKE → User: Registers the invention

DexKE → User: Sends a notification to the user that the invention has been registered



FLOWCHART

Start

User enters the name and description of the invention.

User selects the category of the invention.

User clicks the "Register" button.

DEXKE validates the information.

DEXKE registers the invention.

DEXKE sends a notification to the user that the invention has been registered.

End