**Actors**

* **New User**:

A person who registers for an account on the platform.

* **Returning User**:

A person with an existing account who logs into the platform.

* **Content Creator**:

A registered user who uploads videos.

* **Viewer**:

An unregistered user who watches videos only.

* **Content Moderator**:

A platform employee responsible for reviewing flagged content, copyrights.

* **Authentication System**:

Manages user accounts, login processes, and security.

* **Automated Content Filtering System**:

Analyzes and flags potentially inappropriate content.

**Process Flow**

**1. User Registration and Account Verification:**

* A **New User** navigates to the registration page and fills out the sign-up form with their details (username, email, password, etc.).
* The **Authentication System** verifies the details, checks for uniqueness, sends a verification email, and upon user confirmation, activates the new account.

**2. User Login Session Management:**

* A **Returning User** logs into the platform providing username and password.
* The **Authentication System** verifies credentials and starts a new session, allowing the user to interact with the platform.

**3. Video Upload and Initial Content Filtering:**

* A **Content Creator** uploads a video with metadata (title, description, tags).
* The **Automated Content Filtering System** immediately scans the metadata and initial frames of the video for sexual content. If flagged, the video is held for review.

**4. Video Publishing and Holding for Review:**

* the video is published, and a notification is sent to the **Content Creator**.
* Video is sent to the **Automated Content Filtering System.**
* If flagged by **users** or **Automated Content Filtering System**, the video is sent to a queue for the **Content Moderator** to review.

**5. User Interaction and Flagging System:**

* **User** watch videos and interact with the platform (like, comment, share).
* If a **user** encounters sexual content, they can flag the video for review.

**6. Content Moderator Review:**

* The **Content Moderator** examines flagged videos, deciding to remove or keep the content based on the platform's policies.
* The **Content Creator** is notified of the decision and can appeal if their video is removed.

**7. User Feedback and System Improvement:**

* Feedback from **Content Moderators** and user flagging helps to improve the **Automated Content Filtering System**.
* User engagement data is collected to enhance the user experience and content recommendation algorithms.

**Data Flow Diagram (DFD) Elements Based on the Scenario:**

**External Entities:**

* New User
* Returning User
* Content Creator
* Viewer
* Content Moderator

**Processes:**

* User Registration
* Account Verification
* User Login
* Session Management
* Video Upload
* Content Filtering
* Publish Video
* Viewer Interaction & Flagging
* Content Moderator Review
* System Training & Feedback

**Data Stores:**

* User Account Database
* Video Metadata Database
* Video Content Database
* Flagged Videos Database
* Session Database
* Moderation Decision Logs

**Data Flows:**

* User details from New User to User Registration
* Verification status from Account Verification to New User
* Credentials from Returning User to User Login
* Video and metadata from Content Creator to Video Upload
* Flags and comments from Viewer to Flagged Videos Database
* Moderation outcomes from Content Moderator to Content Creator and Automated Content Filtering System