### **1. Error Scenarios & Messages for User Journey:**

1. Input Errors:
   * Scenario: The customer provides invalid input, e.g., an invalid email format or a phone number with incorrect digits.
     + Message: "Please enter a valid email address." or "Please enter a valid 10-digit phone number."
2. Authentication Errors:
   * Scenario: An existing customer enters an incorrect password or fails 2-Factor Authentication.
     + Message: "Incorrect password. Please try again." or "2-Factor Authentication failed. Please ensure you're entering the correct code."
3. Session Timeouts:
   * Scenario: The customer takes too long to fill out the form.
     + Message: "Your session has expired due to inactivity. Please start again."
4. Duplicate Email:
   * Scenario: A new customer tries to register with an email that's already in the system.
     + Message: "This email is already registered. If this is you, please log in."
5. Credit Check Fail:
   * Scenario: The customer doesn't pass the credit check.
     + Message: "We regret to inform you that based on your credit history, we cannot proceed with your application at this time."
6. Third-Party API Fail:
   * Scenario: The system fails to retrieve data from the credit check API.
     + Message: "We're currently facing issues with our credit check service. Please try again later."

### **2. Error Scenarios & Messages for System/Internal Perspective:**

1. Database Connection Failures:
   * Scenario: The system cannot connect to the database.
     + Message: "Our system is currently experiencing technical issues. Please try again later."
2. Data Retrieval Errors:
   * Scenario: The system fails to retrieve a specific piece of data from the database.
     + Message: "We're currently having trouble retrieving your data. Please try again in a moment."
3. Data Insertion Errors:
   * Scenario: The system encounters an error while inserting data into the database.
     + Message: "We faced an issue while processing your request. Please try again."
4. API Connection Timeouts:
   * Scenario: The system cannot connect to a third-party API, or the API takes too long to respond.
     + Message: "Our services are taking longer than usual. Please wait or try again later."
5. System Overloads:
   * Scenario: Too many users are accessing the service simultaneously, leading to server overloads.
     + Message: "Our servers are currently busy. Please try again after some time."
6. Security Breaches:
   * Scenario: Suspicious activities detected, like potential SQL injection attempts.
     + Message: "Your request seems suspicious. If you believe this is an error, please contact our support."

It's also essential to log these errors internally, so developers or system admins can review and address the underlying causes. Proper monitoring tools can be set up to detect and notify about these issues in real-time.

### **3. User Experience and Data Integrity Errors:**

1. Incomplete Form Submission:
   * Scenario: A user tries to submit a form without filling in all the required fields.
     + Message: "All fields marked with an asterisk (\*) are required. Please complete the form before submitting."
2. Mismatched Passwords on Registration:
   * Scenario: During registration, the password and confirm password fields do not match.
     + Message: "The passwords do not match. Please ensure both fields are identical."
3. Password Strength Fail:
   * Scenario: A user chooses a password that does not meet the required strength criteria.
     + Message: "Your password should contain at least 8 characters, including an uppercase letter, a number, and a special character."
4. Invalid Credit Card Details:
   * Scenario: The customer enters an invalid credit card number or past expiry date.
     + Message: "Please enter a valid credit card number and ensure the expiry date is correct."
5. File Upload Errors:
   * Scenario: The user tries to upload a document that's too large or in an unsupported format.
     + Message: "The uploaded file exceeds the 5MB limit or is not in an accepted format. Please upload a smaller file or use a supported format."

### **4. Connectivity and Network Errors:**

1. Network Disconnections:
   * Scenario: The user's internet connection drops during the process.
     + Message: "We couldn't detect an active internet connection. Please check your network and try again."
2. Server Not Responding:
   * Scenario: The server takes too long to respond due to various potential issues.
     + Message: "Our servers are taking longer to respond than expected. Please try again later."

### **5. Limit and Access Errors:**

1. Rate Limit Exceeded:
   * Scenario: A user sends too many requests in a short time, potentially due to repeated actions or automated bots.
     + Message: "You're making requests too quickly. Please slow down and try again after a few minutes."
2. Unauthorized Access Attempt:
   * Scenario: Someone tries to access a section or resource they don't have rights to.
     + Message: "Sorry, you don't have the necessary permissions to access this section. If you think this is an error, reach out to our support team."
3. Exceeded Maximum Attempts:
   * Scenario: A user tries to log in or perform an action too many times unsuccessfully, e.g., entering the wrong password repeatedly.
     + Message: "You've exceeded the maximum number of attempts. For security reasons, your account has been temporarily locked. Please try again in 30 minutes or contact our support for assistance."
4. Access to Deprecated Features:
   * Scenario: A user tries to access a feature or service that has been phased out or deprecated.
     + Message: "The feature you're trying to access is no longer available. We apologize for any inconvenience. Please check our updates or contact support for alternatives."
5. Geographic or Regional Restriction:
   * Scenario: A user attempts to access a service or feature not available in their region.
     + Message: "Sorry, this service is not available in your region. We're constantly expanding, so please check back later."
6. Access from Blacklisted IP:
   * Scenario: A user tries to access the platform from a blacklisted IP address, possibly due to previous malicious activity.
     + Message: "Access from your location has been restricted. If you believe this is an error, please contact our support team."
7. Access Denied due to Subscription Level:
   * Scenario: A user with a basic subscription tries to use a feature exclusive to premium subscribers.
     + Message: "This feature is exclusive to premium subscribers. Upgrade your subscription to access this feature."
8. Resource Quota Exceeded:
   * Scenario: A user exceeds their allocated resources, such as storage space or API call limits.
     + Message: "You've reached your resource limit for this service. Please consider deleting some items, reducing usage, or upgrading your plan."
9. Expired Membership or Subscription:
   * Scenario: A user tries to use a service after their subscription or membership has expired.
     + Message: "Your subscription has expired. To continue using this service, please renew your subscription."

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### **6. Miscellaneous Errors:**

1. Expired Links:
   * Scenario: A user clicks on a link that is no longer valid, e.g., a password reset link that has timed out.
     + Message: "This link has expired or is invalid. Please request a new link or check the URL."
2. Unsupported Browser:
   * Scenario: A user is using a browser that doesn't support the platform's functionalities.
     + Message: "Your current browser isn't fully supported. For the best experience, please use the latest version of Chrome, Firefox, or Safari."
3. Feature Unavailability:
   * Scenario: The user tries to access a feature that's under maintenance or temporarily disabled.
     + Message: "This feature is currently unavailable. We're working on it and will have it up and running soon. We apologize for any inconvenience."