

Types of Actors

1. Primary Actor

User

- The main actor who interacts directly with the application.
- Performs core actions such as photo upload, receiving recommendations, managing wardrobe, and viewing fashion tips.
- Initiates all major system processes.

2. Secondary Actor

Admin

- Manages the overall system.
- Maintains user records, updates fashion datasets, and monitors system performance.
- Ensures accurate recommendation content and smooth operation.

Recommendation Engine (AI Module)

- Supports the system by analyzing user photos and generating personalized suggestions.
- Works in the background to process data and deliver outputs to the user.
- Although internal, it functions as a supporting actor in system operations.

3. External System Actor

Camera Device

- Provides real-time image capture for analysis.
- Interacts with the system when the user chooses “Take Photo.”

Cloud Storage Service

- Stores encrypted user images and profile data when cloud processing is enabled.
- Communicates securely with the system to upload and retrieve stored data.

Online Shopping Platforms

- Display recommended clothing and grooming products through external product links.

- Allow users to purchase suggested items.

Notification Service

- Sends push notifications for daily tips, reminders, and updates.
- Works externally to support user engagement.

Use Case Specification

UC01 – User Registration

Use Case Name	User Registration
Use Case ID	UC01
Primary Actor	User
Secondary Actors	None
Preconditions	<ul style="list-style-type: none"> – User is not already registered. – User has a valid email/phone.
Postconditions	<ul style="list-style-type: none"> – User account is created. – User data is stored securely.
Main Flow	<p>Description: User wants to create a new account.</p> <p>Actor's Actions:</p> <ul style="list-style-type: none"> – User opens the app and selects “Register.” – User enters required details (name, email/phone, password). – User submits the form. <p>System's Actions:</p> <ul style="list-style-type: none"> – System validates user data. – System checks if email/phone already exists. – System creates a new user account. – System displays confirmation message.
Alternate Flows	<ul style="list-style-type: none"> – If email/phone already exists → System shows error. – If password does not meet criteria → System prompts for correction.
Extensions	<ul style="list-style-type: none"> – User may choose social login (if added in future versions).
Special Requirements	<ul style="list-style-type: none"> – Password must be encrypted. – Email/phone must be validated.

◆ UC02 – User Login

Use Case Name	User Login
Use Case ID	UC02
Primary Actor	User
Secondary Actors	None
Preconditions	<ul style="list-style-type: none"> – User must be registered. – User must enter correct credentials.
Postconditions	– User is logged into the system.
Main Flow	<p>Actor's Actions:</p> <ul style="list-style-type: none"> – User opens app and selects “Login.” – User enters email/phone and password. <p>System's Actions:</p> <ul style="list-style-type: none"> – System verifies credentials. – System displays user dashboard.
Alternate Flows	<ul style="list-style-type: none"> – Wrong password → System shows error. – Account does not exist → System prompts registration.
Extensions	<ul style="list-style-type: none"> – User may choose “Remember Me.” – User may login via OTP in future versions.
Special Requirements	– Authentication must be secure and encrypted.

◆ UC03 – Set Password

Use Case Name	Reset Password
Use Case ID	UC03
Primary Actor	User
Secondary Actors	Email/SMS Service
Preconditions	– User must have a registered email/phone.
Postconditions	– Password is successfully reset.
Main Flow	<ul style="list-style-type: none"> – User selects “Forgot Password.” – User enters registered email/phone. – System sends OTP/reset link. – User enters new password.

Alternate Flows	<ul style="list-style-type: none"> – Wrong OTP → System shows error. – Expired link → System issues new token.
Extensions	<ul style="list-style-type: none"> – Two-step verification may be added.
Special Requirements	<ul style="list-style-type: none"> – OTP must be sent securely.

◆ UC04 – Upload Photo

Use Case Name	Uploaded Photo
Use Case ID	UC04
Primary Actor	User
Secondary Actors	Device Gallery
Preconditions	<ul style="list-style-type: none"> – User must be logged in.
Postconditions	<ul style="list-style-type: none"> – Photo is stored and ready for analysis.
Main Flow	<ul style="list-style-type: none"> – User selects “Upload Photo.” – User browses gallery and selects an image. – System uploads and prepares image for analysis.
Alternate Flows	<ul style="list-style-type: none"> – File type unsupported → System shows error. – Image too large → System requests compression.
Extensions	<ul style="list-style-type: none"> – Auto-enhancement of photo.
Special Requirements	<ul style="list-style-type: none"> – Image must be stored in encrypted form.

◆ UC05 – Capture Photo Using Camera

Use Case Name	Capture Photo Using Camera
Use Case ID	UC05
Primary Actor	User
Secondary Actors	Device Camera
Preconditions	

	<ul style="list-style-type: none"> – App has camera permissions. – User is logged in.
Postconditions	<ul style="list-style-type: none"> – Photo is captured and saved.
Main Flow	<ul style="list-style-type: none"> – User selects “Take Photo.” – Device camera opens. – User captures image. – System saves and prepares image for analysis.
Alternate Flows	<ul style="list-style-type: none"> – Permission denied → System requests camera access. – Camera not working → System shows error.
Extensions	<ul style="list-style-type: none"> – User may retake the picture.
Special Requirements	<ul style="list-style-type: none"> – Camera integration must follow OS security rules.

UC06 – Analyze Photo

Use Case Name	Analyze Photo
Use Case ID	UC06
Primary Actor	User
Secondary Actors	Recommendation Engine (AI Module)
Preconditions	<ul style="list-style-type: none"> – User must upload or capture a photo.
Postconditions	<ul style="list-style-type: none"> – System extracts facial and appearance attributes.
Main Flow	<p>Actor's Actions:</p> <ul style="list-style-type: none"> – User uploads/captures the image. <p>System's Actions:</p> <ul style="list-style-type: none"> – System receives the image. – System processes the photo using AI. – System identifies facial shape, skin tone, features, and style indicators. – System stores extracted attributes for recommendations.

Alternate Flows	<ul style="list-style-type: none"> – Low-quality image → System requests another photo.
Extensions	<ul style="list-style-type: none"> – Auto-correction of lighting and clarity.
Special Requirements	<ul style="list-style-type: none"> – Image processing must be efficient and secure.

◆ UC07 – Enter Style Preferences

Use Case Name	Enter User Preferences
Use Case ID	UC07
Primary Actor	User
Secondary Actors	None
Preconditions	<ul style="list-style-type: none"> – User must be logged in.
Postconditions	<ul style="list-style-type: none"> – Preferences are saved and used for recommendations
Main Flow	<ul style="list-style-type: none"> – User opens “Preferences.” – User selects preferred colors, styles, and clothing categories. – System saves the preferences.
Alternate Flows	<ul style="list-style-type: none"> – User enters incomplete data → System prompts completion.
Extensions	<ul style="list-style-type: none"> – User may reset all preferences.
Special Requirements	<ul style="list-style-type: none"> – Preferences must update recommendations immediately.

◆ UC08 – Generate Outfit Recommendations

Use Case Name	Generate Outfit Recommendations
Use Case ID	UC08
Primary Actor	User
Secondary Actors	Recommendation Engine

Preconditions	<ul style="list-style-type: none"> – User photo and preferences must be available.
Postconditions	<ul style="list-style-type: none"> – User receives personalized outfit suggestions.
Main Flow	<p>Actor's Actions:</p> <ul style="list-style-type: none"> – User selects “Get Recommendations.” <p>System's Actions:</p> <ul style="list-style-type: none"> – System combines photo features and preferences. – System generates outfit ideas. – System displays suitable clothing styles and color palettes.
Alternate Flows	<ul style="list-style-type: none"> – No recommendations match → System shows general style tips.
Extensions	<ul style="list-style-type: none"> – User may request “More Options.”
Special Requirements	<ul style="list-style-type: none"> – Recommendations must be accurate and relevant.

◆ UC09 – Get Color Palette Suggestions

Use Case Name	Color Palette Recommendations
Use Case ID	UC09
Primary Actor	User
Secondary Actors	AI Engine
Preconditions	<ul style="list-style-type: none"> – User photo and preferences must be available.
Postconditions	<ul style="list-style-type: none"> – Color suggestions are displayed to the user.
Main Flow	<ul style="list-style-type: none"> – User selects “Color Palette.” – System analyzes skin tone and contrast. – System displays best colors for clothing.
Alternate Flows	<ul style="list-style-type: none"> – Poor image quality → System requests a clearer photo.
Extensions	<ul style="list-style-type: none"> – User may save favorite palettes.

Special Requirements	<ul style="list-style-type: none"> – Analysis must be fast and precise.
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◆ UC10 – Provide Grooming & Hairstyle Tips

Use Case Name	Provide Grooming & Hairstyle Tips
Use Case ID	UC10
Primary Actor	User
Secondary Actors	AI Engine
Preconditions	<ul style="list-style-type: none"> – User's face attributes must be extracted.
Postconditions	<ul style="list-style-type: none"> – User receives hairstyle and grooming suggestions.
Main Flow	<ul style="list-style-type: none"> – User selects “Grooming Tips.” – System uses face shape to generate hairstyle recommendations. – System displays grooming advice (beard, makeup, skincare).
Alternate Flows	<ul style="list-style-type: none"> – Insufficient face detail → System prompts new photo.
Extensions	<ul style="list-style-type: none"> – User may request tips for specific occasions.
Special Requirements	<ul style="list-style-type: none"> – Grooming suggestions must match gender and face structure.

◆ UC11 – View Saved Recommendations

Use Case Name	View Saved Recommendations
Use Case ID	UC11

Primary Actor	User
Secondary Actors	None
Preconditions	<ul style="list-style-type: none"> – User must be logged in. – User must have saved recommendations earlier.
Postconditions	<ul style="list-style-type: none"> – System displays all saved suggestion lists.
Main Flow	<ul style="list-style-type: none"> – User opens “Saved Recommendations.” – System retrieves saved outfits, palettes, and grooming tips. – System displays them in categories.
Alternate Flows	<ul style="list-style-type: none"> – No saved items → System shows an empty message.
Extensions	<ul style="list-style-type: none"> – User may delete saved items.
Special Requirements	<ul style="list-style-type: none"> – Retrieval must be fast and organized.

◆ UC12 – Share Recommendations

Use Case Name	Share Recommendations
Use Case ID	UC12
Primary Actor	User
Secondary Actors	External Sharing Apps (WhatsApp, Instagram, Email)
Preconditions	<ul style="list-style-type: none"> – User must select a recommendation to share.
Postconditions	<ul style="list-style-type: none"> – System shares the selected item via chosen app.
Main Flow	<ul style="list-style-type: none"> – User selects “Share.” – User chooses the platform (WhatsApp/Instagram etc.). – System exports the recommendation preview. – System opens selected app for sharing.
Alternate Flows	<ul style="list-style-type: none"> – Sharing permission denied → System shows an error.
Extensions	<ul style="list-style-type: none"> – User may add a message before sharing.
Special Requirements	<ul style="list-style-type: none"> – Secure data sharing with no personal info leaked.

◆ UC13 – Receive Daily Style Tips

Use Case Name	Daily Style Tips
Use Case ID	UC13
Primary Actor	User
Secondary Actors	Notification Service
Preconditions	– Notifications must be enabled.
Postconditions	– User receives daily styling tips.
Main Flow	– System selects a daily tip based on user profile. – System sends a push notification. – User opens and reads the tip.
Alternate Flows	– Notifications disabled → System does not send alerts.
Extensions	– User may set custom timing.
Special Requirements	– Tips must be relevant and personalized.

◆ UC14 – Rate Recommendations

Use Case Name	Rate Recommendations
Use Case ID	UC14
Primary Actor	User
Secondary Actors	Recommendation Engine
Preconditions	– Recommendation must be generated.
Postconditions	– System stores rating and updates the model.
Main Flow	– User selects the item. – User gives rating (1–5 stars). – System saves rating in database. – System uses ratings to improve future recommendations.
Alternate Flows	– User cancels rating → No change.
Extensions	– User may also give written feedback.

Special Requirements	<ul style="list-style-type: none"> – Machine learning model must adapt over time.
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◆ UC15 – Search Fashion Tips

Use Case Name	Search Fashion Tips
Use Case ID	UC15
Primary Actor	User
Secondary Actors	Knowledge Base
Preconditions	<ul style="list-style-type: none"> – User must be logged in.
Postconditions	<ul style="list-style-type: none"> – System displays relevant fashion articles and tips.
Main Flow	<ul style="list-style-type: none"> – User opens “Search Tips.” – User types keywords (e.g., “summer outfit”). – System searches the knowledge base. – System displays matching results.
Alternate Flows	<ul style="list-style-type: none"> – No results found → System suggests categories.
Extensions	<ul style="list-style-type: none"> – User may filter by season/occasion.
Special Requirements	<ul style="list-style-type: none"> – Fast search and accurate results.

◆ UC16 – Update User Profile

Use Case Name	Update User Profile
Use Case ID	UC16
Primary Actor	User
Secondary Actors	None
Preconditions	<ul style="list-style-type: none"> – User must be logged in.
Postconditions	<ul style="list-style-type: none"> – Updated profile is saved in the

	system.
Main Flow	<ul style="list-style-type: none"> – User opens “Profile Settings.” – User edits information (name, age, skin tone, preferences). – User saves changes. – System updates the user profile.
Alternate Flows	<ul style="list-style-type: none"> – User leaves without saving → Changes discarded.
Extensions	<ul style="list-style-type: none"> – User may reset profile to default.
Special Requirements	<ul style="list-style-type: none"> – Data validation and secure storage.

◆ UC17 – Change App Theme (Light/Dark Mode)

Use Case Name	Change App Theme
Use Case ID	UC17
Primary Actor	User
Secondary Actors	None
Preconditions	<ul style="list-style-type: none"> – User must access settings.
Postconditions	<ul style="list-style-type: none"> – System applies the selected theme.
Main Flow	<ul style="list-style-type: none"> – User opens “Appearance Settings.” – User selects Light or Dark mode. – System applies theme instantly.
Alternate Flows	<ul style="list-style-type: none"> – User reverts back to previous theme.
Extensions	<ul style="list-style-type: none"> – Auto theme based on time (Day/Night).
Special Requirements	<ul style="list-style-type: none"> – Smooth UI transition with no delay.

◆ UC18 – Logout

Use Case Name	Logout
Use Case ID	UC18
Primary Actor	User
Secondary Actors	None
Preconditions	– User must be logged in.
Postconditions	– User session is terminated.
Main Flow	– User clicks “Logout.” – System confirms action. – System ends active session. – System redirects to login screen.
Alternate Flows	– User cancels logout → Remains logged in.
Extensions	– Auto logout after inactivity.
Special Requirements	– Must clear sensitive session data.

◆ UC19 – Delete Account

Use Case Name	Delete Account
Use Case ID	UC19
Primary Actor	User
Secondary Actors	Database System
Preconditions	– User must be logged in. – User confirms deletion.
Postconditions	– User data is permanently removed.
Main Flow	– User opens “Account Settings.” – User clicks “Delete Account.” – System warns about permanent deletion. – User confirms. – System deletes user data.
Alternate Flows	– User cancels → Account remains active.

Extensions	<ul style="list-style-type: none"> – System may archive data before deletion.
Special Requirements	<ul style="list-style-type: none"> – Must comply with data privacy regulations.



UC20 – Receive Notification Alerts

Use Case Name	Notification Alerts
Use Case ID	UC20
Primary Actor	User
Secondary Actors	Notification Service
Preconditions	<ul style="list-style-type: none"> – User must enable notifications.
Postconditions	<ul style="list-style-type: none"> – User receives app-related alerts.
Main Flow	<ul style="list-style-type: none"> – System generates notifications (daily tips, updates). – System sends push notifications. – User taps notification to view content.
Alternate Flows	<ul style="list-style-type: none"> – Notifications disabled
Extensions	<ul style="list-style-type: none"> – User may customize notification frequency.
Special Requirements	<ul style="list-style-type: none"> – Notifications must be timely and relevant.



UC21 – Browse Outfit Suggestions by Occasion

Use Case Name	Browse Occasion-Based Suggestions
Use Case ID	UC21
Primary Actor	User
Secondary Actors	Recommendation Engine

Preconditions	– User must be logged in.
Postconditions	– Occasion-based outfits are displayed.
Main Flow	<ul style="list-style-type: none"> – User opens “Occasion Recommendations.” – User selects an occasion (party, office, wedding, casual, etc.). – System analyzes stored preferences. – System displays recommended outfits and hairstyles.
Alternate Flows	– If no matches found → system shows “No suitable suggestions available.”
Extensions	– User may save the outfit to favorites.
Special Requirements	– Recommendations must be personalized and visually clear.

UC22 – View Detailed Product Information

Use Case Name	View Product Details
Use Case ID	UC22
Primary Actor	User
Secondary Actors	Online Store Page
Preconditions	– Product must exist.
Postconditions	– User views complete product details.
Main Flow	<ul style="list-style-type: none"> – User taps on a recommended product. – System opens the product details page. – System shows price, brand, material, colors, sizes, ratings, and store link.
Alternate Flows	– Product link not working → show error message.
Extensions	– User may add product to “Wishlist.”
Special Requirements	– Display must load quickly and clearly.

◆ UC23 – Manage Virtual Wardrobe

Use Case Name	Manage Virtual Wardrobe
Use Case ID	UC23
Primary Actor	User
Secondary Actors	None
Preconditions	– Virtual Wardrobe feature must be enabled.
Postconditions	– Items are added, viewed, or removed from wardrobe.
Main Flow	<ul style="list-style-type: none"> – User opens “Virtual Wardrobe.” – User adds outfit photos or selects suggested items. – System stores the items in categorized form. – User can view, rename, or organize items.
Alternate Flows	<ul style="list-style-type: none"> – User tries to add unsupported file type → System shows error.
Extensions	<ul style="list-style-type: none"> – Auto-categorization using AI (optional future feature).
Special Requirements	<ul style="list-style-type: none"> – Must store images securely and efficiently.



List of Use Cases

Use Case ID	Use Case Name
UC01	User Registration
UC02	User Login
UC03	Upload Photo for Analysis
UC04	Capture Photo Using Camera
UC05	Analyze User Appearance (Face + Body Features)
UC06	Generate Outfit Recommendations
UC07	Recommend Suitable Clothing Colors
UC08	Provide Grooming & Skincare Tips
UC09	Suggest Hairstyles & Accessories
UC10	Browse All Recommendations
UC11	Save Recommendation to Favorites
UC12	View Favorite Items
UC13	Remove Item from Favorites
UC14	Open Shopping Links for Products
UC15	View Daily Fashion & Grooming Tips
UC16	Update User Profile (Age, Skin Tone, Preferences)
UC17	Change App Theme (Light/Dark Mode)
UC18	Logout
UC19	Delete Account Permanently
UC20	Receive Notification Alerts
UC21	View Occasion-Based Recommendations
UC22	View Detailed Product Information
UC23	Manage Virtual Wardrobe (Add, View, Delete Items)

❖ Use Cases Diagram

