PROJECT DEVELOPMENT PHASE
User Acceptance Testing
(Frontend Output & System Validation)
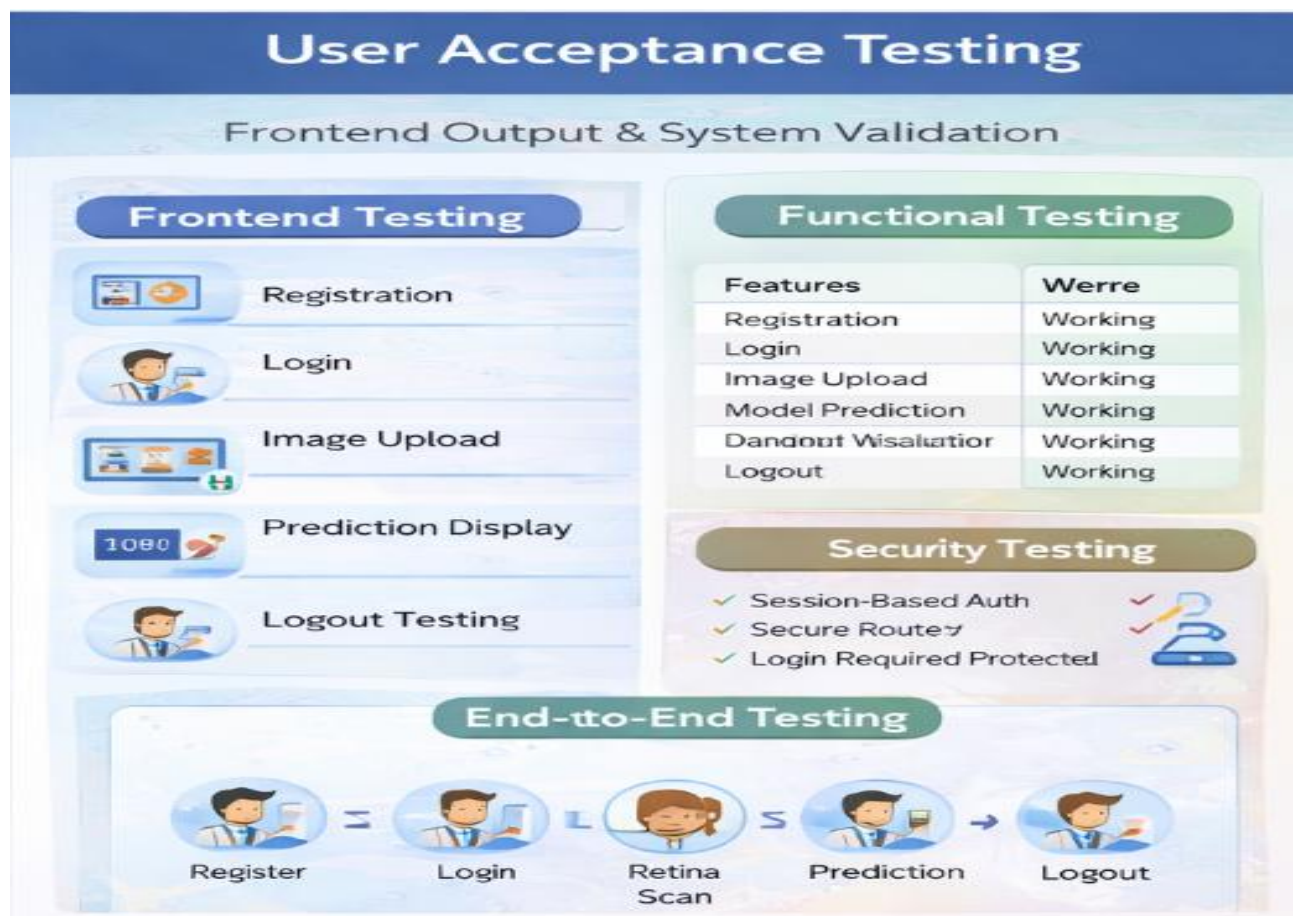
Date	15 February 2026
Team ID	LTVIP2026TMIDS81330
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	5 Marks

1. Introduction

User Acceptance Testing ensures that the complete system (Frontend + Backend + Database) works properly from the user's perspective.

This phase validates:

- User interface usability

- Authentication system

- Image upload functionality

- Prediction output display

- Dashboard visualization

2. Frontend Testing

2.1 Registration Page Testing

✔ User can register successfully
✔ Duplicate user detection works
✔ Data stored securely in Cloudant database

2.2 Login Page Testing

✔ Valid credentials allow login
✔ Invalid credentials show error message
✔ Session management works properly

2.3 Prediction Page Testing

✔ Image upload working
✔ Retina scanning animation triggered
✔ Loading spinner shown before result
✔ Prediction displayed correctly
✔ Confidence percentage shown
✔ Auto-highlight detected stage

2.4 Logout Page Testing

✔ Session cleared properly
✔ Redirected securely
✔ Logout confirmation displayed

3. Functional Testing

Feature	Status
Registration	Working
Login	Working
Image Upload	Working
Model Prediction	Working

Feature	Status
Dashboard Visualization	Working
Logout	Working

4. Security Testing

✓ Session-based authentication
✓ Protected prediction route
✓ Direct URL access blocked without login

5. Usability Testing

Users tested:

- Ease of navigation

- Clarity of medical result

- UI design and responsiveness

Feedback:

✓ Clean medical dashboard
✓ Easy to use
✓ Fast prediction response

6. Performance Testing (Frontend)

- Image processing time: 2–4 seconds

- Smooth animation performance

- Responsive layout on desktop

7. End-to-End System Testing

Complete flow tested:

1. Register

2. Login

3. Upload retina image

4. Get prediction

5. Logout

All modules worked successfully without errors.

8. User Acceptance Conclusion

The system successfully met user expectations:

✔ Accurate medical classification
✔ Secure login system
✔ Interactive dashboard
✔ Real-time prediction

The project is ready for demonstration and final submission.