

Google Maps

Search Functionality

Positive Test Cases

- Search for a specific address by name (e.g., “Empire State Building”).
- Search using latitude and longitude coordinates.
- Search for a nearby place using keywords (e.g., “restaurants near me”).
- Search with partial address details (e.g., only city or zip code).
- Autocomplete suggestions for a search query.
- Search for businesses with specific filters (e.g., open now, rating).
- Use of voice input for searching a location.

Negative Test Cases

- Search with an invalid address or a non-existent place.
- Search with special characters or random strings.
- Search without an active internet connection.
- Search for a location in an unsupported country.
- Search using an incomplete or ambiguous location name (e.g., “Central”).
- Input a too-long query in the search bar (overflow scenario).
- Search for a place that has been recently removed or renamed.

Directions & Navigation

Positive Test Cases

- Get directions between two valid locations (A to B).
- Get directions for driving, walking, cycling, and public transportation.
- Select alternative routes with different time estimates.
- Recalculate route when deviating from the planned route.
- Use real-time traffic data to adjust ETA and route.
- Display turn-by-turn navigation.
- Save a route for offline use.
- Display landmarks, gas stations, or restaurants along the route.
- Provide multi-stop directions between more than two locations.

Negative Test Cases

- Get directions between an invalid or non-existent location.
- Attempt to get directions without GPS or location services enabled.
- Navigation recalculation fails after deviating from the route.
- Map not updating during real-time navigation (frozen map).
- Traffic information not loading due to a network issue.
- Directions show wrong or outdated road closures.
- Input invalid coordinates or out-of-bound locations for navigation.
- Fail to calculate directions when the distance is too long (cross-continental).

Real-Time Traffic Updates

Positive Test Cases

- Display real-time traffic congestion on highways and roads.
- Provide traffic updates (road closures, accidents) during navigation.
- Use traffic data to suggest faster routes.
- Change the color of roads to indicate different traffic levels (green, yellow, red).

Negative Test Cases

- Fail to load traffic data due to server issues.
- Incorrect traffic updates displayed (outdated or wrong information).
- Traffic updates not shown due to location service being disabled.
- Show inaccurate traffic data due to poor GPS signal.
- Display traffic for wrong or irrelevant roads.

Offline Maps

Positive Test Cases

- Download a map of a city or region for offline use.
- Access saved offline maps without internet connection.
- View directions and routes using offline maps.
- Update downloaded offline maps when connected to the internet.

Negative Test Cases

- Attempt to download an offline map with insufficient storage.
- Fail to download offline maps due to network issues.
- Offline maps do not load properly due to a corrupt file.
- Access expired offline maps (past expiration date).
- Incorrectly show “no internet” error when using offline maps.
- Fail to update offline maps automatically when connected to Wi-Fi.

GPS & Location Accuracy

Positive Test Cases

- Accurately detect the user’s current location using GPS.
- Update the user’s location in real-time as they move.
- Display current location with a high degree of precision.
- Lock onto the GPS signal quickly when the app is opened.
- Provide accurate directions based on real-time location changes.

Negative Test Cases

- Fail to detect the current location due to GPS signal loss.
- Show an incorrect or outdated location when GPS signal is weak.
- Significant lag in updating location in real-time.
- Location detection fails when location services are turned off.
- Incorrect current location due to network issues.
- Show large deviations in location accuracy (e.g., wrong street).

Place Reviews & Ratings

Positive Test Cases:

- Add a review for a place visited.
- Rate a location using a star rating system.
- Upload photos along with a review.
- Edit an existing review or rating.
- Mark a review as helpful or unhelpful.
- View aggregate ratings and reviews for a place.

Negative Test Cases:

- Add a review without rating the place.
- Attempt to review a place without visiting it (spam detection).
- Enter invalid or offensive text in a review.
- Submit a review without an active internet connection.
- Review fails to load due to server-side issues.
- Add duplicate reviews for the same location.
- Fail to upload photos due to file size limitations.

Location Sharing

Positive Test Cases:

- Share current location with friends/family via a link.
- Set a time limit for how long the location is shared.
- Stop location sharing after a certain period manually.
- Share the live route while navigating to a destination.

Negative Test Cases:

- Fail to share location due to no internet connection.
- Fail to stop location sharing after it has started.
- Incorrect or no live location updates while sharing due to poor GPS.
- Attempt to share a location without GPS enabled.
- Location sharing link does not work (broken link).
- Incorrect location data shared (outdated information).

Business Listings & Details

Positive Test Cases

- Search for a business and view its details (address, phone number, hours).
- View business photos uploaded by users or the business owner.
- See “Open Now” or “Closed” based on business hours.
- Click on the phone number to make a call directly from the app.
- Access directions to the business directly from the listing.

Negative Test Cases:

- Business details not updated (incorrect hours, outdated phone number).
- Business listing shows incorrect or irrelevant photos.
- Fail to load business information due to server issues.
- Inaccurate display of whether the business is open or closed.
- Incorrect business location on the map.

Route Planning (Multi-stop Routes)

Positive Test Cases:

- Add multiple stops to a single route (e.g., home, work, gym).
- Calculate the most efficient route considering all stops.
- Reorder stops during route planning.
- Receive ETA and traffic information for each leg of the journey.

Negative Test Cases:

- Add too many stops causing the route planner to crash.
- Route calculation fails after adding stops due to network issues.
- Incorrect order of stops during navigation.
- Fail to reroute after deleting or changing stops.
- Traffic and ETA updates fail to load for intermediate stops.

Street View

Positive Test Cases:

- View a street-level panorama for a searched location.
- Navigate through streets using the Street View feature.
- Access historical Street View images for a location.
- Zoom in/out in Street View.

Negative Test Cases:

- Street View fails to load for certain locations.
- Street View images are blurry or outdated.
- Fail to access Street View without an internet connection.
- Street View not available in certain regions.
- Navigation within Street View is slow or unresponsive.

Public Transit Directions

Positive Test Cases:

- Search for public transit directions between two locations.
- Display multiple transit options (bus, train, subway).
- Show live updates for transit arrival and departure times.
- Suggest routes with the fewest transfers.
- Offer walking directions to and from transit stations.

Negative Test Cases:

- Incorrect or outdated transit schedules displayed.
- Fail to show live updates for transit due to network issues.
- Public transit routes not showing alternative options.
- Incorrect or missing walking directions to/from transit stations.
- Transit option not available in certain cities.

Time and Distance Estimation

Positive Test Cases:

- Provide accurate time estimates for different modes of travel (car, bike, and walk).
- Adjust travel time estimate based on real-time traffic.
- Display distance between two locations in miles/kilometers.
- Calculate accurate total time for multi-stop trips.

Negative Test Cases:

- Incorrect time estimates due to outdated traffic data.
- Fail to update time estimate after a route recalculation.
- Distance displayed incorrectly due to GPS inaccuracies.
- Time estimate not considering traffic or road closures.
- Large deviations in time estimates due to poor route planning.

