| **Scenario** | **HTTP Verb** | **REST Resource** | **Parameters** | **Returns** |
| --- | --- | --- | --- | --- |
| User creates route and the system calculates it | POST | /routes | {  "userId": 123,  "destinationId": 45,  "startingPoint": {  "lat": 40.631,  "lng": 22.957  },  "stops": []  } | {  "routeId": 88,  "estimatedArrivalTime": "12 mins",  "directions": [  "Go straight",  "Turn left at exhibit 5",  "Destination is on your right"  ],  "destinationId": 45,  "userId": 123  } |
| User selects different starting point and the system calculates the route | PUT | /routes{id} | {  "startingPoint": { "lat": 40.630, "lng": 22.960 }  } | {  "routeId": 88,  "estimatedArrivalTime": "13 mins",  "directions": [  "Turn right at exhibit 3",  "Go straight",  "Destination is on your left"  ],  "destinationId": 45,  "userId": 123  } |
| User selects multiple stops and the system calculates the route | PUT | /routes{id} | {  "stops": [  { "lat": 40.632, "lng": 22.958 },  { "lat": 40.633, "lng": 22.959 }  ]  } | {  "routeId": 88,  "estimatedArrivalTime": "25 mins",  "directions": [  "Go straight",  "Stop 1: Exhibit A",  "Stop 2: Exhibit B",  "Destination is on your right"  ],  "destinationId": 45,  "userId": 123  } |
| User cancels navigation | DELETE | /routes{id} |  | {  "message": "Route navigation cancelled successfully."  } |
| Inaccessible destination | GET | /destinations/{destinationId}/accessibility |  | {  "destinationId": 45,  "accessible": false,  "message": "The destination is currently closed.",  "suggestedAlternatives": [  { "destinationId": 46, "name": "Alternative Exhibit 1" },  { "destinationId": 47, "name": "Alternative Exhibit 2" }  ]  } |
| System fails to calculate a route | PUT | /routes/{id} |  | {  "message": "Unable to calculate route at this time.",  "error": "Timeout after 5 seconds",  "suggestions": [  "Check your internet connection.",  "Try another destination.",  "Try again later."  ]  } |
| User loses GPS signal during navigation |  |  |  |  |
| User checks traffic levels during route planning |  |  |  |  |
| Personalized Route generation | POST | /routes/personalised | {  "userId": 123  } | {  "routeId": 90,  "estimatedArrivalTime": "20 mins",  "directions": [...],  "basedOn": "user preferences"  } |
| User has no saved preferences | POST | /routes/personalised |  | {  "error": "User preferences not found.",  "message": "Cannot generate personalized route.",  "suggestion": "Complete your profile to enable this feature."  } |