TIRANA'S PUBLIC TRANSPORTATION MANAGEMENT SYSTEM

USER SCENARIOS - narrative descriptions that illustrate how users would interact with a system or product to accomplish specific goals. They're an important tool in software design and development that help teams understand user needs, workflows, and expectations.

Scenario 1: Route Planning

Primary Actor: Alba (college student)

Secondary Actors: Transportation system, bus/train operators

Actor's Goals:

- Find the fastest route from her apartment to the university campus
- Arrive on time for her early morning class
- Minimize walking distance and transfers

Preconditions:

- Alba has the transportation app installed on her smartphone
- She has an active user account
- Her device has internet connectivity
- The system has up-to-date transit schedule information

Main Tasks:

- Open the transportation app
- Enter starting location (apartment)
- Enter destination (university campus)
- Specify desired arrival time (9:00 AM)
- Review route options
- Select preferred route based on arrival time and transfer count

Possible Extensions:

- Save the route as a favorite for future use
- Set up recurring journey alerts for this route
- Share route information with classmates

- View historical performance data for the route

Variations in Interaction:

- Alba could specify departure time instead of arrival time
- She could prioritize routes with less walking over faster routes
- She could exclude certain transportation types (e.g., avoid trams)
- She could use voice commands instead of typing locations

System Information Requirements:

- Alba's current location (if location services enabled)
- Saved locations from her profile
- Her transportation preferences (if previously set)
- Her route history to suggest common destinations

External Environment Changes:

- Alba must inform the system if she changes her starting location
- She needs to update her arrival time requirement if class schedule changes
- Weather conditions may affect her preference for routes with less walking

Information Desired from System:

- Estimated travel times for each route option
- Number of transfers required
- Walking distances between transfers
- Platform/stop numbers for each segment
- Cost of the journey

Notifications about Unexpected Changes:

- Alba wants to be informed about delays affecting her selected route
- She wishes to receive alerts about service disruptions
- She wants notifications about crowding conditions on her route
- She desires updates if a faster route becomes available

Scenario 2: Real-time Updates

Primary Actor: Marko (business professional)

Secondary Actors: Bus driver, traffic management system

Actor's Goals:

- Receive accurate information about bus arrival times
- Minimize waiting time at the bus stop
- Plan his arrival at work with precision

Preconditions:

- Marko has the transportation app installed
- GPS tracking is active on public transit vehicles
- The system has real-time traffic information
- Marko is physically at the bus stop

Main Tasks:

- Open the transportation app while at the bus stop
- Check real-time arrival information for his bus
- Monitor updates about delays
- Receive notification when bus is approaching
- Board the bus when it arrives

Possible Extensions:

- Request notification if the expected delay increases
- View alternative routes if delay is significant
- Report issues with the bus service
- Rate the accuracy of arrival predictions

Variations in Interaction:

- Marko could check arrival times through SMS if app is unavailable
- He could use QR code at the bus stop to get specific stop information
- He could call customer service for verbal updates
- He could receive updates through smartwatch notifications

System Information Requirements:

- Marko's selected bus route number
- His current bus stop location
- His typical commute pattern/schedule

External Environment Changes:

- Marko doesn't need to inform the system about traffic conditions
- The system obtains traffic data automatically from other sources
- Weather events affecting service are automatically factored in

Information Desired from System:

- Exact minutes until bus arrival
- Current location of the bus
- Reason for any delays
- Capacity status of the approaching bus

Notifications about Unexpected Changes:

- Marko wants alerts when bus arrival time changes by more than 2 minutes
- He wishes to be notified if his bus is rerouted
- He needs to know if service is suspended
- He desires real-time updates about alternative options if his bus is cancelled

Scenario 3: Trip Payment

Primary Actor: Elena (tourist)

Secondary Actors: Payment processor, fare management system

Actor's Goals:

- Purchase the most cost-effective fare option for her week-long stay
- Avoid multiple transactions for different transit modes
- Have convenient access to fare validation

Preconditions:

- Elena has downloaded the transportation app
- She has created a user account
- She has a valid payment method added to the app
- The system offers digital fare options

Main Tasks:

- Access the payment section of the transportation app
- Review available fare options (single rides, day passes, week passes)
- Compare costs based on planned travel activities

- Select and purchase a week pass
- Store the digital pass in her account
- Use the pass for validation on various transit vehicles

Possible Extensions:

- Add multiple passes for travel companions
- Receive tax receipt for business expense reporting
- Extend pass duration if plans change
- Transfer unused credit to another pass type

Variations in Interaction:

- Elena could purchase passes at physical kiosks instead of the app
- She could use contactless payment directly at validators
- She could buy passes in advance of her arrival
- She could set up auto-renewal for extended stays

System Information Requirements:

- Elena's payment details
- Her account information for storing the digital pass
- Her device information for validation capability

External Environment Changes:

- Elena must update the system if her stay duration changes
- She needs to report if her device is lost/stolen to protect her digital pass
- She should inform the system if her payment method changes

Information Desired from System:

- Complete fare options with price comparison
- Coverage details for each pass type
- Validation instructions for different transportation modes
- Remaining balance/validity period of her pass
- Usage history and statistics

Notifications about Unexpected Changes:

- Elena wants notifications about fare policy changes
- She wishes to be informed about promotional discounts

- She needs alerts about expiration of her pass
- She desires information about service changes affecting pass value

Scenario 4: Accessibility Requirements

Primary Actor: Agroni (wheelchair user)

Secondary Actors: Station attendants, accessibility services

Actor's Goals:

- Find an accessible route that accommodates his wheelchair
- Travel safely and independently to his medical appointment
- Avoid unexpected accessibility barriers

Preconditions:

- Agroni has the transportation app with accessibility features
- His accessibility profile is set up in the system
- The system has up-to-date accessibility information for stations/vehicles
- Accessibility features like elevator status are monitored in real-time

Main Tasks:

- Open the app and enable accessibility filter
- Enter medical appointment destination
- Review accessible route options
- Check elevator availability and platform accessibility
- Select preferred accessible route
- Follow accessible navigation instructions

Possible Extensions:

- Request assistance at specific stations
- Report accessibility issues encountered during journey
- Rate accessibility of stations and vehicles
- Save accessibility preferences for future journeys

Variations in Interaction:

- Agroni could filter routes based on specific accessibility needs
- He could request step-free routes only
- He could prioritize routes with station attendants available
- He could select routes with accessible bathrooms en route

System Information Requirements:

- Agroni's specific accessibility needs from his profile
- His current location to provide contextual accessibility guidance
- Information about his mobility device (wheelchair type/dimensions)

External Environment Changes:

- Agroni must inform the system if his mobility needs change
- He needs to update the system if he will have an accompanying assistant
- He should report if he encounters incorrect accessibility information

Information Desired from System:

- Elevator operational status in real-time
- Location of accessible entrances/exits
- Availability of boarding assistance
- Gap/height information between platform and vehicle
- Accessible bathroom locations
- Expected crowding levels that might affect accessibility

Notifications about Unexpected Changes:

- Agroni wants immediate alerts about elevator outages
- He wishes to be informed about temporary accessibility barriers
- He needs notifications about changes to scheduled assistance
- He desires updates about alternative accessible routes if issues arise

Scenario 5: Route Navigation

Primary Actor: Beni (bus driver)

Secondary Actors: Dispatchers, traffic management system, passengers

Actor's Goals:

- Navigate an unfamiliar route efficiently

- Maintain the scheduled timetable
- Provide safe and reliable service to passengers

Preconditions:

- Beni has logged into the driver interface of the system
- He has been assigned a route in the system
- His vehicle is equipped with the navigation system
- The system has current traffic and road condition data

Main Tasks:

- Log into the driver interface before starting shift
- Access assigned route information
- Follow turn-by-turn navigation
- Monitor scheduled arrival times for each stop
- Adjust driving pace to maintain schedule
- Complete route according to timetable

Possible Extensions:

- Report road hazards encountered on the route
- Request dispatcher assistance if needed
- Document unusual occurrences during the shift
- Provide feedback on route timing accuracy

Variations in Interaction:

- Beni could use voice commands while driving
- He could switch between map view and text instructions
- He could enable notifications for specific waypoints
- He could customize alert volumes and types

System Information Requirements:

- Vehicle specifications (size, weight, height)
- Beni's driver ID and authorization level
- Special route restrictions or detours

External Environment Changes:

- Beni must inform the system about unexpected road closures

- He needs to report traffic incidents affecting the route
- He should update about vehicle mechanical issues
- He must notify about passenger capacity issues

Information Desired from System:

- Turn-by-turn navigation instructions
- Time cushion/delay at each scheduled stop
- Upcoming stops and scheduled arrival times
- Road restrictions relevant to his vehicle
- Number of passengers expected at stops
- Alternative routes in case of obstructions

Notifications about Unexpected Changes:

- Beni wants alerts about route detours or changes
- He wishes to receive information about traffic conditions ahead
- He needs notifications about schedule adjustments from dispatch
- He desires immediate alerts about emergencies affecting his route

Scenario 6: Incident Management

Primary Actor: Jera (safety officer)

Secondary Actors: Bus driver, police, emergency services, affected passengers

Actor's Goals:

- Coordinate effective response to a minor collision
- Document incident details accurately
- Minimize service disruption
- Ensure passenger safety

Preconditions:

- Jera has access to the incident management system
- The bus involved has automatic incident reporting capability
- Communication channels with driver and response teams are established
- Incident protocols are defined in the system

Main Tasks:

- Receive and acknowledge automated alert about collision
- View incident location on management dashboard
- Communicate with the driver to assess situation
- Coordinate appropriate response teams
- Document incident details and upload evidence
- Initiate required reporting sequence
- Monitor service rerouting around incident area

Possible Extensions:

- Arrange alternative transportation for affected passengers
- Conduct follow-up investigation of incident
- Generate incident analysis reports
- Schedule vehicle inspection following incident
- Update safety protocols based on incident data

Variations in Interaction:

- Jera could escalate to emergency services if needed
- She could delegate certain response tasks to team members
- She could prioritize different aspects of the response
- She could implement different procedures based on severity assessment

System Information Requirements:

- Vehicle identification and driver information
- Passenger count at time of incident
- Route and schedule information
- Vehicle telemetry data before/during incident
- Onboard camera footage

External Environment Changes:

- Jera must update the system on police/emergency services involvement
- She needs to report road closure duration estimates
- She should inform about vehicle recovery status
- She must provide updates on passenger status and needs

Information Desired from System:

- Exact incident location with mapping

- Vehicle and driver details
- Service impact assessment
- Historical incident data for the location/route
- Contact information for all relevant parties
- Automated rerouting suggestions

Notifications about Unexpected Changes:

- Jera wants alerts about condition changes of involved parties
- She wishes to be informed about cascading service disruptions
- She needs updates on response team ETA changes
- She desires notifications about media inquiries or public attention

Scenario 7: Refund Processing

Primary Actor: Nina (fare services specialist)

Secondary Actors: Passenger requesting refund, payment processor, accounting system

Actor's Goals:

- Evaluate refund request fairly and according to policy
- Process appropriate refund amount
- Document refund decision accurately
- Communicate outcome to passenger

Preconditions:

- Passenger has submitted refund request with supporting documentation
- Nina has access to the refund processing module
- System has passenger account and purchase history
- Refund policies are clearly defined in the system

Main Tasks:

- Access refund processing module
- Enter passenger account information
- Review pass purchase history and usage data

- Verify medical documentation provided
- Determine appropriate refund amount based on policy and usage
- Process refund transaction to original payment method
- Document decision rationale
- Send confirmation to passenger

Possible Extensions:

- Offer store credit instead of monetary refund
- Apply special consideration for extenuating circumstances
- Flag account for future considerations
- Suggest alternative fare products for passenger's needs

Variations in Interaction:

- Nina could request additional documentation if needed
- She could process partial or full refund depending on circumstances
- She could escalate unusual cases to supervisor
- She could apply different refund methods based on original payment type

System Information Requirements:

- Complete passenger account history
- Purchase details of the monthly pass
- Usage data showing how much of the pass was utilized
- Applicable refund policies and exception criteria

External Environment Changes:

- Nina must update the system if passenger provides additional information
- She needs to document any policy exceptions applied
- She should note if the case establishes a precedent for future refunds

Information Desired from System:

- Full purchase history and transaction details
- Pass usage statistics and patterns
- Automated refund calculations based on use

- Previous refund history for the passenger
- Similar cases and their resolutions
- Financial impact of refund decision

Notifications about Unexpected Changes:

- Nina wants alerts about policy changes during processing
- She wishes to be notified if passenger submits additional information
- She needs updates if payment processor reports issues
- She desires information about related service disruptions that might affect decision

Scenario 8: Multi-Modal Journey Planning

Primary Actor: Aleks (young professional)

Secondary Actors: Various transportation service providers, payment systems

Actor's Goals:

- Plan an efficient journey to a suburban conference location
- Combine multiple transportation modes seamlessly
- Arrive at the conference on time
- Minimize cost and inconvenience

Preconditions:

- Aleks has the transportation app installed
- The system integrates data from multiple transportation providers
- His account has payment methods configured
- The system has up-to-date schedule information for all transport modes

Main Tasks:

- Enter conference destination address
- Set preferred arrival time
- Review calculated multi-modal options
- Compare journey times, costs, and transfer details
- Select preferred option balancing time and convenience

- Receive step-by-step guidance for the journey
- Execute the journey following system guidance

Possible Extensions:

- Save the journey for return trip planning
- Add calendar integration for the conference
- Purchase all required tickets in a single transaction
- Share journey details with conference organizers

Variations in Interaction:

- Aleks could prioritize specific transport modes
- He could set maximum walking distance preference
- He could exclude certain areas of the city
- He could optimize for cost instead of time

System Information Requirements:

- Aleks' starting location
- Any saved payment preferences
- His historical transportation preferences

External Environment Changes:

- Aleks must update the system if conference time changes
- He needs to inform about special luggage requirements
- He should indicate if he will be traveling with companions

Information Desired from System:

- Detailed breakdown of each journey segment
- Precise transfer instructions between modes
- Platform/stop numbers and exit directions
- Total cost breakdown by segment
- Walking directions with landmarks
- Estimated walking times between transfers
- Real-time updates during journey

Notifications about Unexpected Changes:

- Aleks wants alerts about delays affecting any segment of his journey

- He wishes to be informed about platform/gate changes
- He needs notifications about service cancellations with alternatives
- He desires updates about weather conditions affecting walking segments

Scenario 9: Group Travel Coordination

Primary Actor: Maria (teacher)

Secondary Actors: Students, school administration, bus operator, venue staff

Actor's Goals:

- Arrange transportation for a class field trip
- Keep all 28 students together during travel
- Ensure sufficient capacity on selected transportation
- Maintain schedule for educational activities

Preconditions:

- Maria has access to the group booking feature
- The system supports group reservations
- School has approved the field trip
- Transportation services have available capacity

Main Tasks:

- Access group booking feature in transportation app
- Specify number of travelers (28 students plus chaperones)
- Enter origin, destination, and travel date
- Review routes with sufficient capacity
- Evaluate group fare options
- Reserve space on specific bus
- Receive digital group ticket with QR code
- Monitor service status prior to trip

Possible Extensions:

- Request special accommodations for students with disabilities
- Arrange return transportation at specific time
- Coordinate with venue for arrival procedures
- Schedule additional stops for restroom breaks

Variations in Interaction:

- Maria could book one-way or round-trip service
- She could specify multiple pickup/dropoff points
- She could arrange for dedicated vehicle instead of regular service
- She could split the group across multiple vehicles if necessary

System Information Requirements:

- School account information for billing
- Number of travelers with age categories
- Special needs requirements for any students
- Contact information for all trip chaperones

External Environment Changes:

- Maria must inform the system if student count changes
- She needs to update if trip timing requirements change
- She should report any special equipment needs (projects, instruments)
- She must notify about changes to pickup/dropoff locations

Information Desired from System:

- Confirmation of sufficient vehicle capacity
- Total fare calculation with group discounts
- Driver contact information
- Vehicle identification details
- Boarding and deboarding instructions
- Estimated arrival times at destination
- Alternative options in case of service disruption

Notifications about Unexpected Changes:

- Maria wants immediate alerts about any service changes affecting the trip
- She wishes to receive notifications about significant delays
- She needs updates about vehicle changes or substitutions
- She desires information about route modifications due to road conditions

Scenario 10: Commuter Pass Management

Primary Actor: Iliri (daily commuter)

Secondary Actors: Fare management system, payment processor

Actor's Goals:

- Renew monthly commuter pass before expiration
- Avoid disruption to daily commuting routine
- Potentially optimize pass type based on usage patterns
- Complete renewal process efficiently

Preconditions:

- Iliri has an active account with payment method
- His current pass is valid but expiring in three days
- The system tracks pass expiration dates
- Renewal options are available for his pass type

Main Tasks:

- Receive and view notification about expiring pass
- Open the app to review current pass details
- Select renewal option
- Review pass alternatives based on travel patterns
- Confirm renewal selection
- Complete payment process
- Receive updated digital pass in the app

Possible Extensions:

- Change pass type based on new travel needs
- Update payment method during renewal
- Add zones or services to existing pass
- Schedule automatic renewals for future months

Variations in Interaction:

- Iliri could renew through website instead of app
- He could visit physical service center for renewal
- He could change pass duration (1-month to 3-month)
- He could downgrade or upgrade pass features

System Information Requirements:

- Iliri's current pass details and expiration date
- His payment method information
- His travel history and usage patterns

External Environment Changes:

- Iliri must inform the system if his commute pattern will change
- He needs to update if his payment method expires or changes
- He should notify if he'll require different transportation services

Information Desired from System:

- Current pass expiration date and time
- Available renewal options with pricing
- Comparison of current usage versus pass coverage
- Potential savings with alternative pass types
- Payment confirmation and updated expiration date
- Instructions for using renewed pass

Notifications about Unexpected Changes:

- Iliri wants alerts about fare structure changes affecting his pass
- He wishes to be informed about pass benefit changes
- He needs notifications if payment processing issues occur
- He desires updates about new pass options becoming available

Scenario 11: Transit During Service Disruption

Primary Actor: Lejla (hospital worker)

Secondary Actors: Emergency response teams, alternative service providers, transit authority

Actor's Goals:

- Find alternative transportation during subway disruption
- Arrive at the hospital on time for scheduled shift
- Stay informed about service restoration progress
- Navigate unfamiliar routes efficiently

Preconditions:

- Lejla has the transportation app with notifications enabled
- A water main break has disrupted her regular subway route
- The system has detected the disruption and implemented contingency plans
- Alternative transportation options are available

Main Tasks:

- Receive and view disruption notification
- Open the app to check alternative routes
- Review options including replacement buses and modified train routes
- Select fastest alternative given current conditions
- Follow turn-by-turn directions for the new route
- Monitor updates about repair progress
- Complete journey to work on time

Possible Extensions:

- Share disruption information with coworkers
- Save alternative route for future disruptions
- Report crowding conditions on replacement services
- Provide feedback on handling of disruption

Variations in Interaction:

- Lejla could call customer service for personalized assistance
- She could use transit authority's emergency website
- She could collaborate with coworkers for carpooling
- She could request employer assistance with transportation

System Information Requirements:

- Lejla's regular commute pattern
- Her work schedule timing requirements
- Her location when disruption occurs
- Her transportation preferences

External Environment Changes:

- Lejla must inform the system if she changes her destination
- She needs to update if her arrival time requirement changes
- She should report any observations about service conditions

Information Desired from System:

- Detailed explanation of disruption cause and extent
- Clear instructions for alternative transportation
- Real-time locations of replacement services
- Estimated arrival time via alternative route
- Updates on repair progress and timeline
- Expected duration of disruption
- Crowding levels on alternative services

Notifications about Unexpected Changes:

- Lejla wants immediate alerts about changes to replacement services
- She wishes to be informed about restoration progress
- She needs updates if alternative routes become unavailable
- She desires notifications when regular service resumes