



coliffimo

User Guide

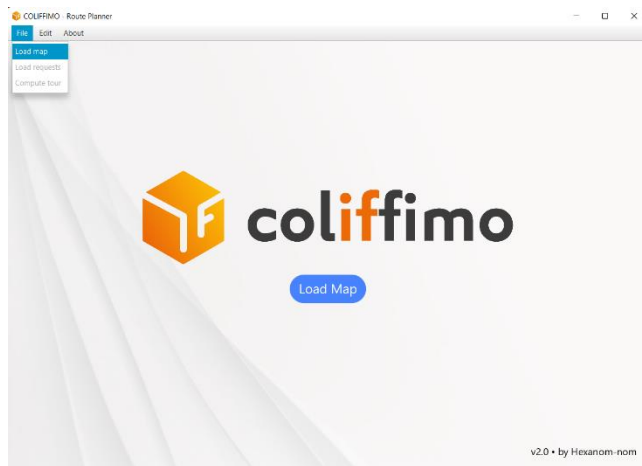
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1. Glossary

- **Intersection:** pair of coordinates, positions a point on the map
- **Segment:** line between two intersections (the origin and the destination), represents a street
- **Redundant segment:** a segment is considered redundant if there already exists a segment of the same origin and destination, while the existing one is shorter.
- **Stop:** an intersection where the delivery person will stop for a certain duration to either pick a package up or deliver it.
- **Delivery:** a stop type, where the delivery person will deliver a package
- **Pickup:** a stop type, where the delivery person will pick a package up
- **Request:** a pair of a pickup stop and a delivery stop
- **Warehouse:** a special stop type, which is the starting and the ending point of a delivery tour. The duration at that stop is always 0.
- **Path:** trajectory from one stop to another, corresponding to the shortest path possible
- **Delivery tour** (tour refers to delivery tour): complete trajectory of the delivery person, links together all the pickup and delivery points while starting and ending at the warehouse in a sequence of paths.
- **Map:** map of the delivery zone, may have different sizes
- **Graphical view:** GUI containing a map and a visual representation of the pickup and delivery stops, along with a visualization of a computed tour
- **Textual view:** GUI containing a textual description of the requests / stops
- **DSD:** Detailed Sequence Diagram
- **BO:** Business Object (*Objet Métier*)
- **UC:** Use Case

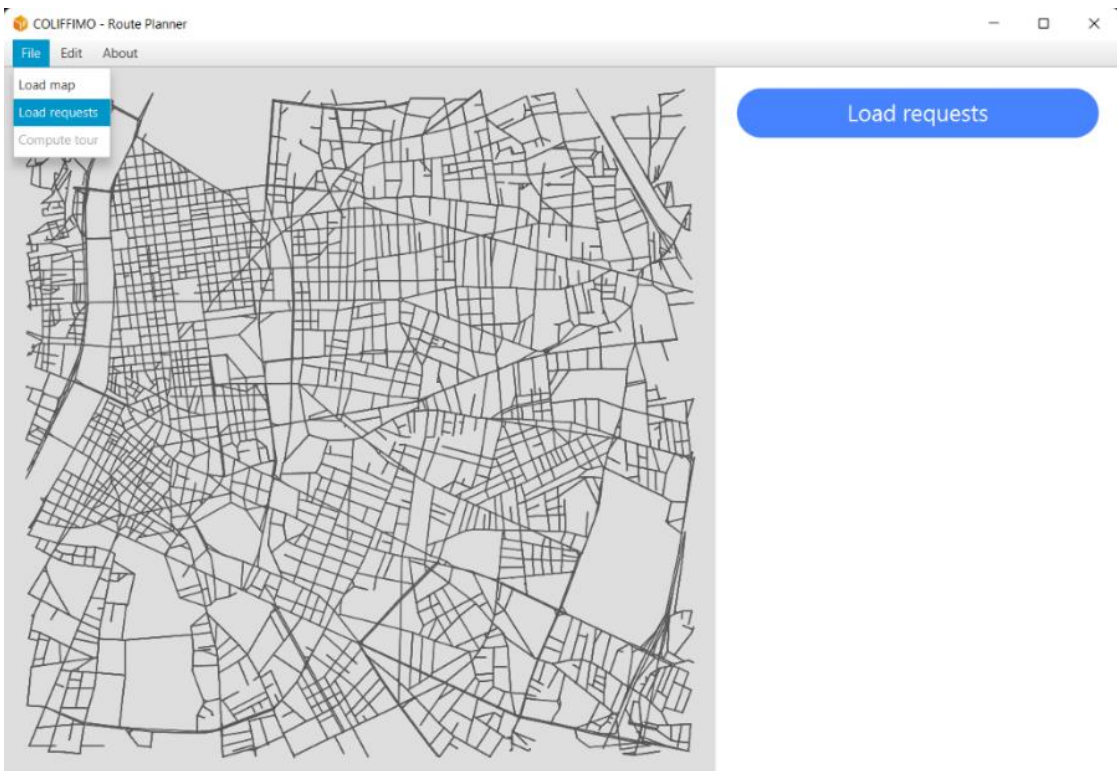
2. Load a map



To load a map, you can either use the **"Load Map"** button on *Coliffimo's* first page or go to the File tab in the top menu bar and click on Load Map. The application then asks you to choose an XML file to import. Select it in the file explorer window that opens.

You can see street names displaying on the bottom of the window whenever you hover your mouse on a street of the map. For more reading comfort, you can zoom in and out of the map / pan around by with your mouse pointer and scroll wheel.

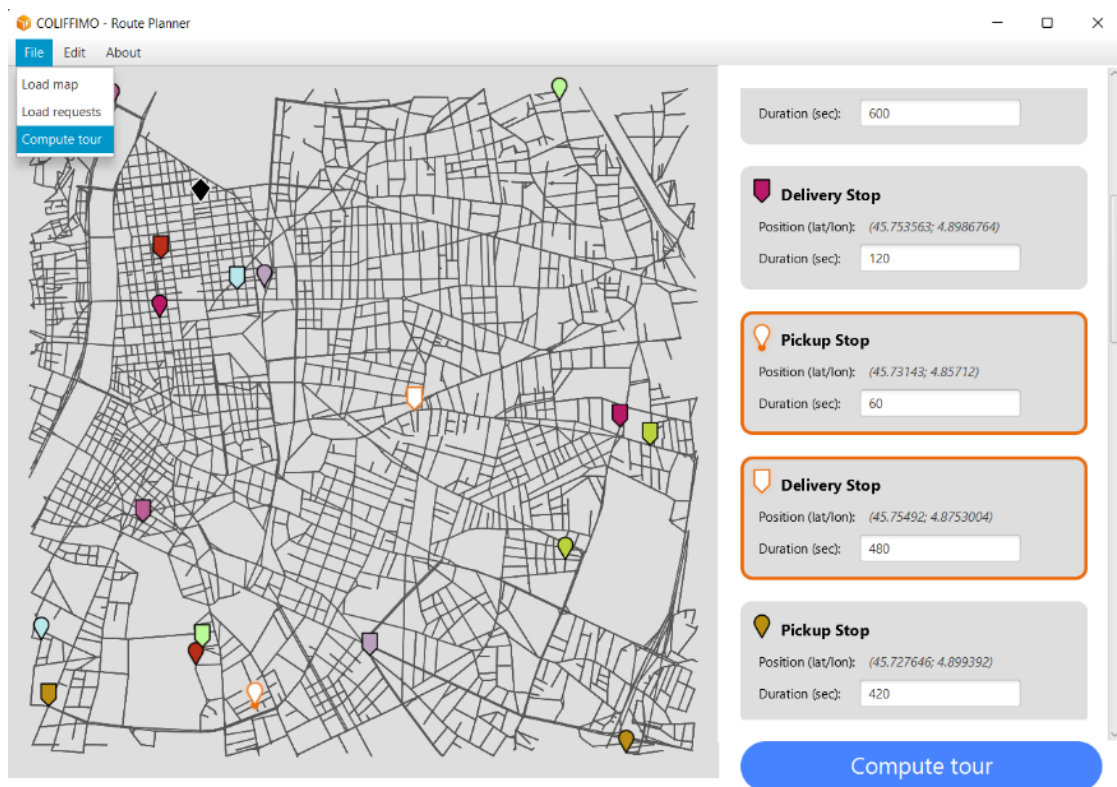
3. Load requests



After loading a map, you can load an XML file containing your requests by clicking on the **"Load requests"** button or go to the File tab in the top menu bar and click on Load Requests. Select it in the file explorer window that opens.

Your stops are now displayed in a textual view on the left of your window and on a graphical view on the map. Click on a stop on the map to highlight a request, and the corresponding stops (pickup and delivery) will be highlighted in the textual view. To spot a stop's position on the map, click on it in the textual view and the stop will be highlighted on the map as well.

4. Compute the tour

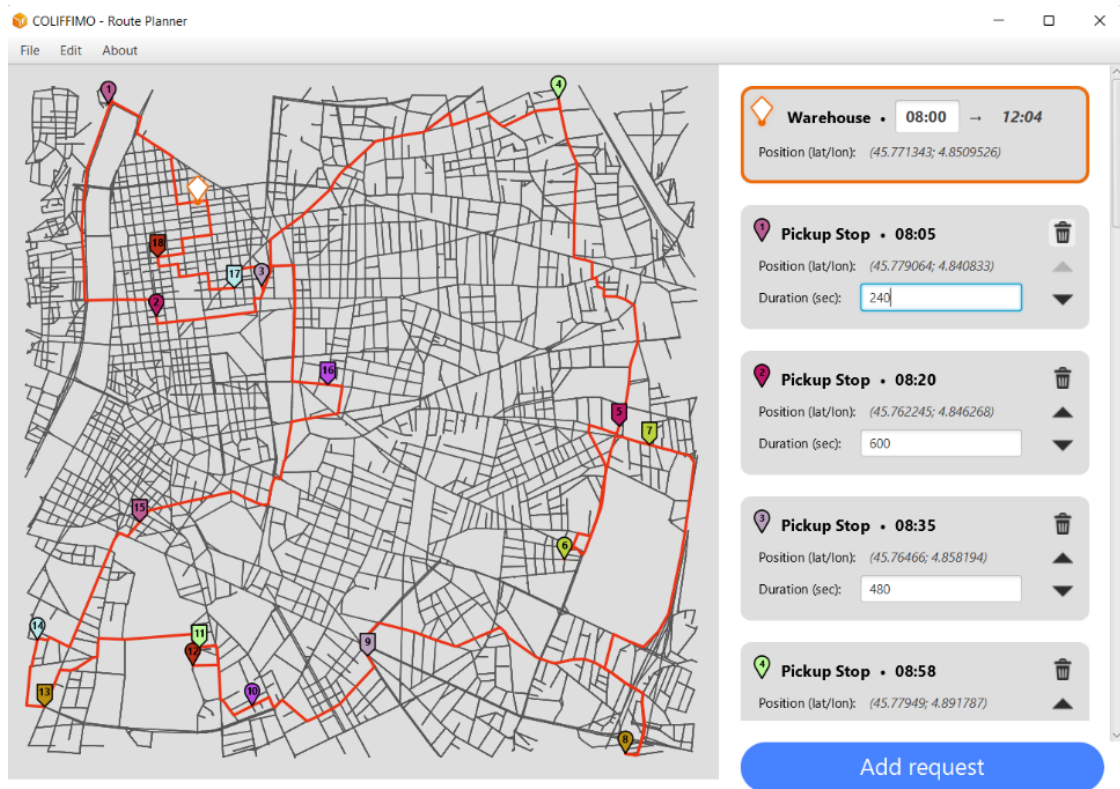


Once requests are loaded, you can ask to compute a tour by clicking **"Compute tour"** button or Compute tour option in File tab. While computing, CollFfimo displays intermediate, suboptimal tours computed by the algorithm. You can stop computing at anytime by clicking on **"Stop computing"** button.

Once a tour is computed, you can't compute another one unless you reload a requests file.

5. Modify the tour

Once *Coliffimo* has computed a tour, you are able to **edit** your list of requests, their stop's duration, or order. To undo or redo a modification, use the **Undo** or **Redo** options in Edit tab of the menu bar, or use the keyboard shortcuts **Ctrl+Z** and **Ctrl+Y**.



a. Add a request

Click on "**Add request**" button. Next, you have to click on the map where you want to put your pickup then delivery stops. Stops appears on map and textual view.

b. Delete a request

Clicking on the **bin icon** next to a stop in the textual view will delete the **pickup** and delivery stops associated to that request.

c. Move a stop

By **dragging and dropping** a stop on the map, you can change its position. It will be placed on the nearest intersection from the position where it was dropped.

d. Change stops' order

Let alone the warehouse, the start and end of every tour, the stops' order can be changed by clicking on the **arrows** next to them in the textual view. However, you cannot place a pickup stop after its associated delivery stop and vice versa.

e. Change stop's duration

Click on the **text field** next to "Duration" in the textual view of a stop and type the desired number of seconds. Hit enter or click away to apply changes.

f. Change warehouse departure time

Click on the **text field** next to the warehouse in the textual view and type the chosen departure time. Hit enter or click away to apply changes.