**7.2.2 Define problem.**

**-** User request four points, start point, end point, two middle points and their settings includes: walking distance, transfer turn and optimize option. System get requested points and settings, then search for suitable routes, for user travel from start point to end point though two middle points.

**7.2.3 Attribute Definition.**

* LIST\_JOURNEYS (reference attribute here…)
* COMBINATIONS: represent the list of element which combination from four points.

**7.2.4 Solution**

* Multi points search optimize route base one “Multi points algorithm not optimize”.
* To solve the problem, we follow these steps:
  + Step 1: Within four points: start point, end point and two middle points. We keep the start point and swap the remaining three points for creating the combinations, well call it is COMBINATIONS which include list of elements combination from four points. Suppose four inputted point from user is A, B, C, D so we have the COMBINATIONS is ABCD, ACDB, and ABDC.
  + Step 2: We use “multi point algorithm not optimize” to solve for each element in COMBINATIONS.
  + Step 3: With all LIST\_JOURNEYS are returned from “multi point algorithm not optimize” will retrieved first six element after the list is sorted follow two priorities below:
    - Time is high priority. We sort the list base on increasing time.
    - Distance is high priority. We sort the list base on increasing distance.