**Planning:**

**Routing** – find best path to travel from A to B. Maps, current position, and destination is used to define route.

Different algorithms are used to determine the path by mapping the path as graph to determine route.

The cost associated with each possibility and movement is found to determine the least cost path.

**A\* algorithm** is very famous for such problems.

Once routing is done which is high level then we generate trajectory based on the objects on the way.

Instead of usual XY coordinates **Frenet Coordinates** is used for trajectory where Longitudinal and Lateral axis are used to determine the position.

Multiple possibilities of path are considered with taking the path with least cost and then velocity is determined over the course of time this is called Path and velocity decoupled planning