In this present work we propose a novel mobile robot path planning algorithm. Autonomous robots which work without human operators are required in robotic fields. In order to achieve tasks, autonomous robots have to be intelligent and should decide their own action. When the autonomous robot decides its action, it is necessary to plan optimally depending on their tasks. More, when a robot moves from a point to a target point in its given environment, it is necessary to plan an optimal or feasible path avoiding obstacles in its way and answer to some criterion of autonomy requirements such as : thermal, energy, time, and safety for example. First, we assume that the goal position is unknown. Secondly, only obstacles in the “relevant” area (according to the logical position ) are consider, i.e. the obstacles that are far, or in the direction opposite to the movement of the robot are not relevant. In this context, a full range of “main sub_position concepts” for vehicle control have been investigated by the execution of the asked mission. These feasible sub_position works demonstrate that obstacle detection and collision avoidance are improved with good results. While this model has been successful for the path planning problem, it is problematic for robots to react, act, decide, and to take a suitable action ”high level reasoning”. Much of the challenge of the mobile robots requires intelligence at subconscious level. In this context, the proposed path planning algorithm provides the robot the possibility to move from the initial position to the final position (target). The results are satisfactory to see the great number of environments treated