**Parking lot building architecture**: a cubic, the parking lot cars maximum capacity is N cars. Based on the number of cars, the number of stories will be decided. Each level should have maximum of K-2 cars, where K is the maximum number of cars that fit each story. Two empty spots are necessary to allow car(s) sliding. Number of bays is equal to the square root of K. K is a perfect square. Each level has two spots where cars can be lifted a cross stories using  an elevator.

**PAPS:** this system deals with parking vehicles automatically. The parking space could be considered as a matrix with same number of rolls and columns. The matrix has two spots(positions) inside where must be empty whenever parking is processed. To give the best strategy, entrance point has influence on the results. For similarly real life examples, airport parking and Klotski game could give reference for this problem. Algorithms with high efficiency should be available to give optimal parking strategy for every new-coming vehicle need to be parked. More domain rules are required to simplify this situation.

**Interactive screen displays**: a display in bay where User could interact with Guide System

**Self-service Machine**: a physical machine on which User could make payment

**Transaction processing system**: a system used to process payment and detail with any possible failure or unpredictable issues

**Mobile application**: a mobile application software which User could use to know about the parking system