**Configuration and AWS Credentials:**

The script uses the configparser module to read AWS credentials from a .config file.

AWS credentials (access key ID and secret access key) are read from the configuration file.

**ParkingLot Class:**

The ParkingLot class is defined to represent a parking lot. It takes square footage as input and calculates the maximum number of cars the parking lot can accommodate based on the size of each parking spot.

The parking lot is initialized as an array with empty spots.

The class includes a method map\_vehicles\_to\_spots() to create a mapping of vehicles to their respective spots.

The method save\_mapping\_to\_json() is used to save the vehicle mapping to a JSON file.

**Function to Upload to S3:**

The upload\_to\_s3 function takes a file path, S3 bucket name, and object key as parameters and uploads the specified file to the S3 bucket using the Boto3 library.

**Car Class:**

The Car class represents a car with a 7-digit license plate. It has a park method that attempts to park the car in a specified spot in the parking lot.

**Main Function:**

The main function is the entry point of the script.

It takes user input for the square footage of the parking lot.

It creates an instance of the ParkingLot class.

It generates a list of cars with random license plates.

It iterates over parking spots, randomly selects a car, and attempts to park it.

The script then maps vehicles to spots, saves the mapping to a JSON file, and uploads the JSON file to an S3 bucket.