

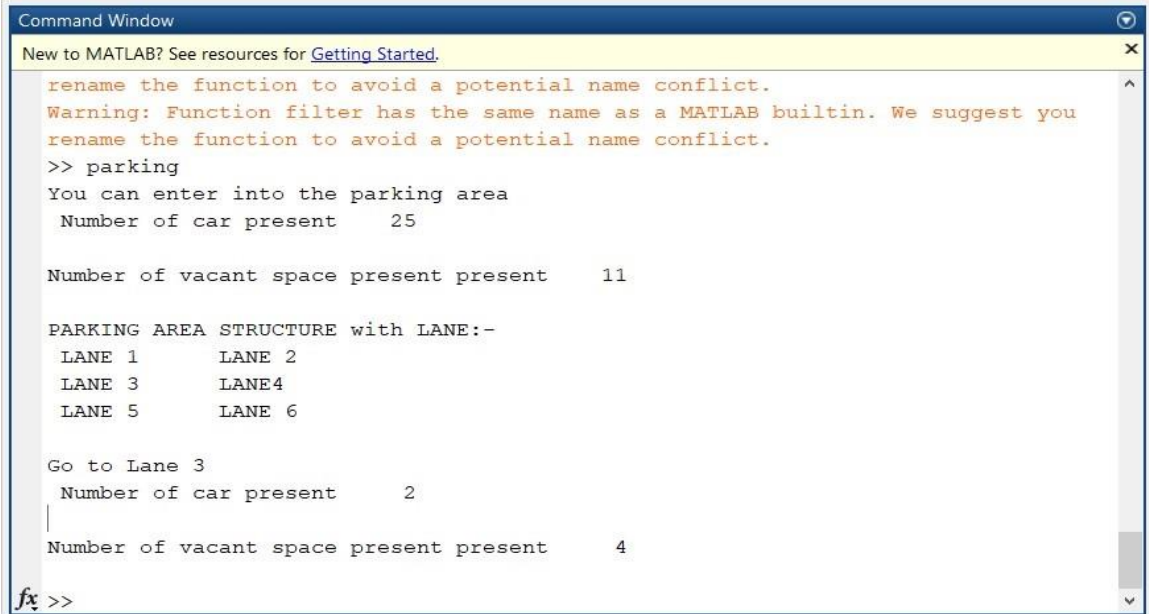
## PHASE -4 INNOVATION

# SMART PARKING SYSTEM

### INTRODUCTION:

This project primarily aims to create a smart parking system with the help of MATLAB programming and Arduino Uno which can automatically lift the bar, indicate traffic lights, and show the number of available parking spots to the driver.

Command window of MATLAB after the execution of code.



```
Command Window
New to MATLAB? See resources for Getting Started.
rename the function to avoid a potential name conflict.
Warning: Function filter has the same name as a MATLAB builtin. We suggest you
rename the function to avoid a potential name conflict.
>> parking
You can enter into the parking area
Number of car present      25

Number of vacant space present present      11

PARKING AREA STRUCTURE with LANE:-
LANE 1      LANE 2
LANE 3      LANE4
LANE 5      LANE 6

Go to Lane 3
Number of car present      2
|
Number of vacant space present present      4
fx >>
```

Two output figures are there after the execution of code.

Figure 1 – Observation of the Whole parking area

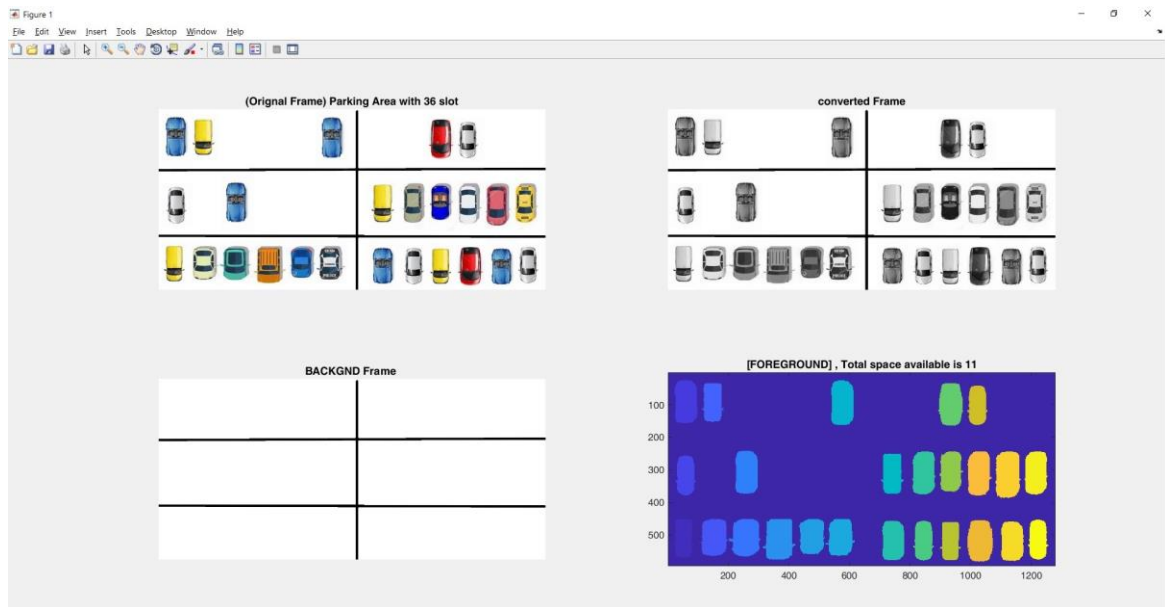
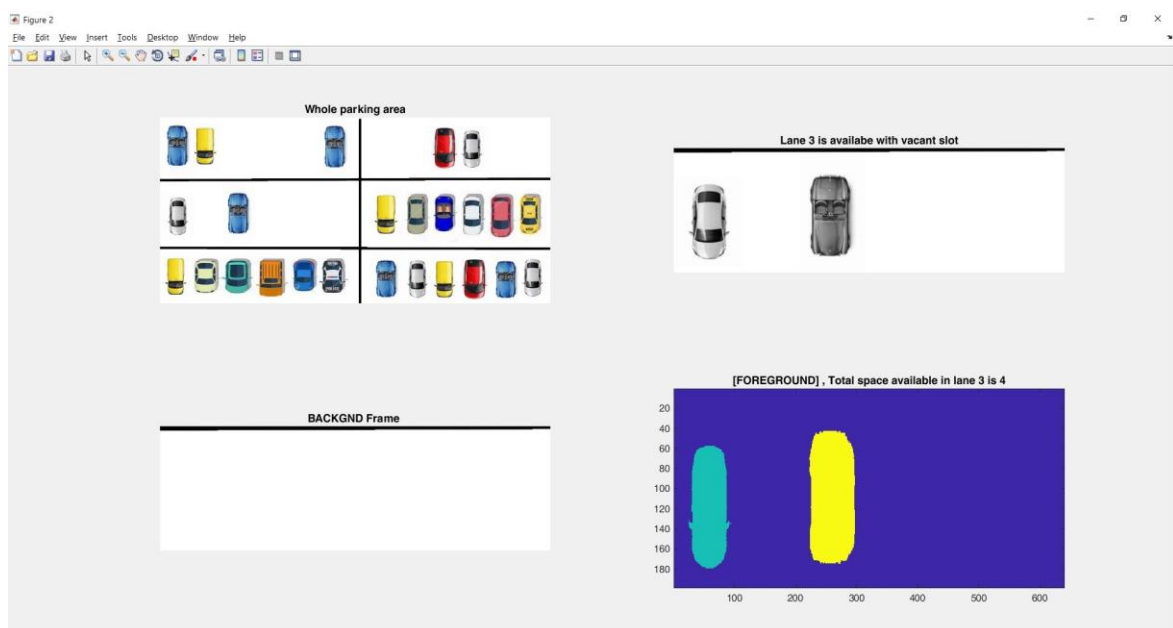


Figure 2 – Observation of the each lane in parking area and the vacant lane is shown.



## **CONCLUSION :**

The parking space detection system based on imageprocessing in MATLAB was designed and tested. It is possible to manage large area by just using several cameras. It is consistent in detecting incoming cars because it uses actual car images. It is cheap and easy-installed because of the simple equipment. Drivers can get useful real-time parking lot information from this system by the guidance information display.