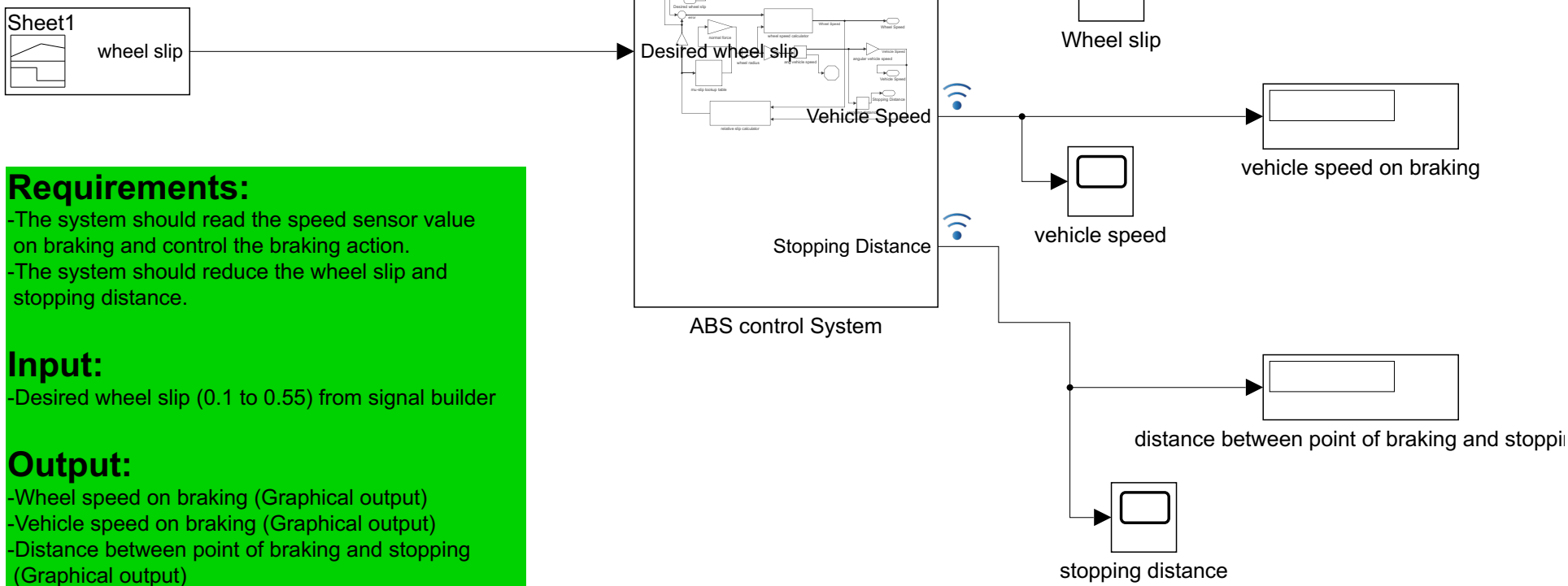
# ANTI-LOCK BRAKING SYSTEM (ABS)

Version 2

## INPUT PARAMETERS :

Mass of vehicle (m) = 120lbs
Gravity (g) = 9.81
Moment of inertia (I) = 5 ft^4
Radius of wheel (R) = 2 ft
Initial Velocity (v0)=100 ft/s




## Requirements:

-The system should read the speed sensor value on braking and control the braking action.
-The system should reduce the wheel slip and stopping distance.

## Input:

-Desired wheel slip (0.1 to 0.55) from signal builder

## Output:

-Wheel speed on braking (Graphical output)
-Vehicle speed on braking (Graphical output)
-Distance between point of braking and stopping (Graphical output)

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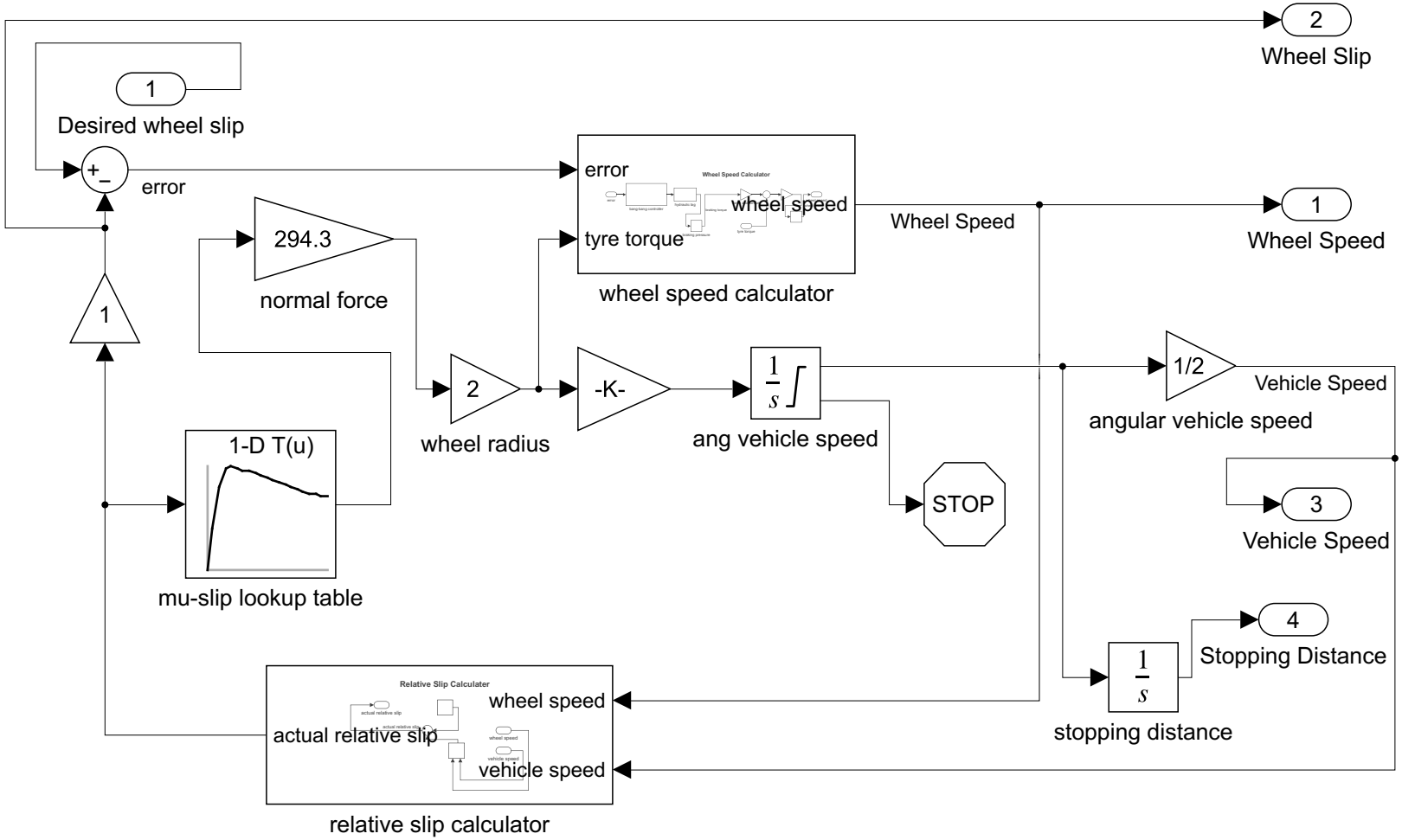
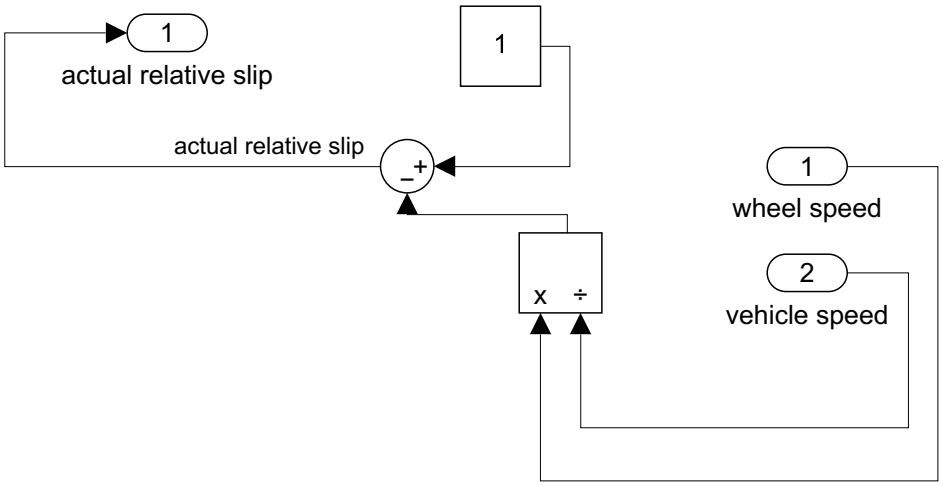
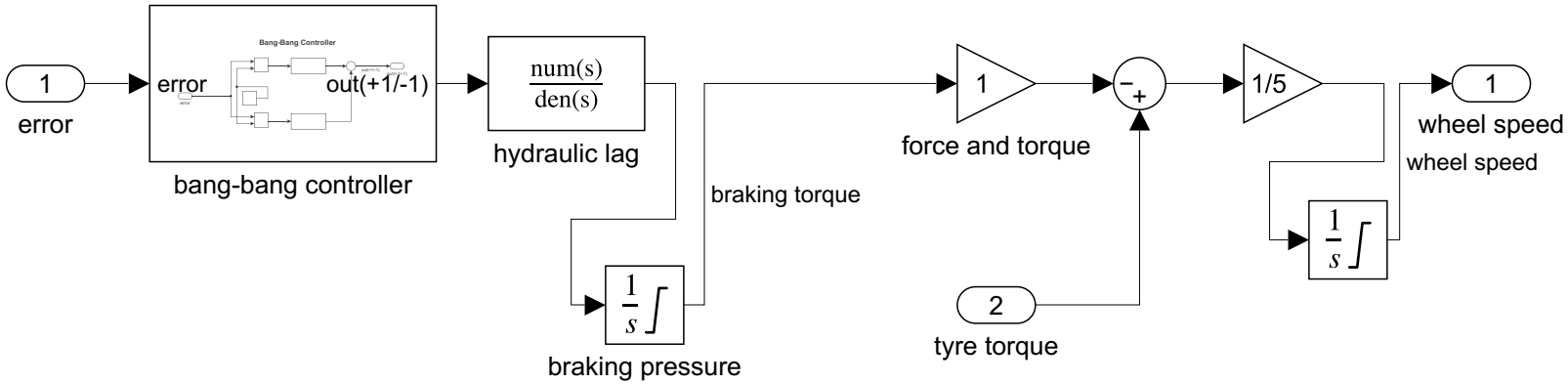
# ABS CONTROL SYSTEM



# Relative Slip Calculater



# Wheel Speed Calculator



# Bang-Bang Controller