Variable	Type	Meaning
L	Continuous	the length of the bin
W	Continuous	the width of the bin
H	Continuous	the height of the bin
x_i	Continuous	LBB coordinate of item i in x axis
y_i	Continuous	LBB coordinate of item i in y axis
z_i	Continuous	LBB coordinate of item i in z axis
s_{ij}	Binary	item i is in the left side of item j or not
u_{ij}	Binary	item i is under item j or not
b_{ij}	Binary	item i is in the back of item j or not
δ_{i1}	Binary	orientation of item i is front-up or not
δ_{i2}	Binary	orientation of item i is front-down or not
δ_{i3}	Binary	orientation of item i is side-up or not
δ_{i4}	Binary	orientation of item i is side-down or not
δ_{i5}	Binary	orientation of item i is buttom-up or not
δ_{i6}	Binary	orientation of item i is buttom-down or not