```
############CASE2##########################
BALL_X=[-800,-800,-3200,-3200,0,0,2400,2400,800,800,5600,5600,4000,4000,2400,2400,5600,5600]
BALL_Y=[4800,4000,2400,3200,2400,3200,4800,4000,5600,6400,800,1600,2400,3200,-3200,-2400,-2400,-1600]
BUMP_X=[-1315.88,-1168.96,-581.25,-583.86,6.46,-140.47,580.37,712.96,1109.59,1241.62,1541.2,1541.2,1541.2,1541.2,1466.99,1466.99,1541.2,1541.2]
BUMP_Y=[1268.35,1268.35,963.79,1119.07,1268.35,1268.35,1133.21,1265.45,1133.21,1265.45,840.71,980.79,420.3,280.13,-140.29,-280.45,-840.95,-700.87]
print("BALL_X=",BALL_X)
print("BALL_Y=",BALL_Y)
print("BUMP_X=",BUMP_X)
print("BUMP_Y=",BUMP_Y)


start_nodeX=np.zeros((int(len(BALL_X)/2)))
end_nodeX=np.zeros((int(len(BALL_X)/2)))
start_nodeY=np.zeros((int(len(BALL_X)/2)))
end_nodeY=np.zeros((int(len(BALL_X)/2)))
count=0
#for  i  in  range(0,len(BALL_X),2):
#    start_nodeX[count]=(BALL_X[i]+BALL_X[i+1])/2
#    end_nodeX[count]=(BUMP_X[i]+BUMP_X[i+1])/2
#    start_nodeY[count]=(BALL_Y[i]+BALL_Y[i+1])/2
#    end_nodeY[count]=(BUMP_Y[i]+BUMP_Y[i+1])/2
#    count=count+1
for  i  in  range(0,len(BALL_X),2):
    start_nodeX[count]=BALL_X[i]
    end_nodeX[count]=BUMP_X[i]
    start_nodeY[count]=BALL_Y[i]
    end_nodeY[count]=BUMP_Y[i]
    count=count+1
print("start_nodeX=",start_nodeX)
print("start_nodeY=",start_nodeY)
print("end_nodeX=",end_nodeX)
print("end_nodeY=",end_nodeY)
start_row_data=np.zeros((int(len(BALL_X)/2)))
goal_row_data=np.zeros((int(len(BALL_X)/2)))
start_col_data=np.zeros((int(len(BALL_X)/2)))
goal_col_data=np.zeros((int(len(BALL_X)/2)))
for  i  in  range(len(start_nodeX)):
    start_row_data[i]=int((start_nodeX[i]+7000)/219)
    goal_row_data[i]=int((end_nodeX[i]+7000)/219)
    start_col_data[i]=int((start_nodeY[i]+7000)/219)
    goal_col_data[i]=int((end_nodeY[i]+7000)/219)
```

BALL_x/y 座標及 BUMP_x/y 座標

等比例縮小

```
###############Class  Model###############
##############功能:  將訓練中還不成熟的矩陣內的pixel快速分類(讓他能變成一條線############
####起始位置#################
start_row=int(start_row_data[5])
start_col=int(start_col_data[5])

####目標的位置
goal_row=int(goal_row_data[5])
goal_col=int(goal_col_data[5])
```

選擇要跑的起終點 index