

```
data = [{"name": "border_1", "coordinates": [[-2.530936396466567,
140.83355449140075], [-9.586374677928985, 140.77090814709663], [-
9.57075704770386, 141.18680208921435], [-2.472062411080418,
141.26695185899734], [-2.530936396466567, 140.83355449140075]]},
{"name": "border_2", "coordinates": [[-8.957272189822097,
124.97502996341623], [-9.031631852084145, 124.98542095347855], [-
8.97211934618667, 125.06058024103976], [-8.919511728116946,
125.12711040520885], [-8.954353092866118, 125.19470741233603], [-
9.031743770395247, 125.23350519162179], [-9.120436512834276,
125.23565865872419], [-9.205979849223612, 125.21557589324102], [-
9.231227373233935, 125.1554769615112], [-9.223974715471947,
125.05540980776571], [-9.282590035217094, 125.06598201361015], [-
9.342723491182774, 125.10279077785856], [-9.423883646444644,
125.12190141538542], [-9.485008493251197, 125.05960693962325], [-
9.413994208193783, 125.00810209511666], [-9.326094322199813,
124.95224589255497], [-9.238573037771877, 124.93606722915396], [-
9.171395073426423, 124.95297192914381], [-9.128749756749498,
124.99221461748215], [-9.127111818390922, 125.08138216998769], [-
9.088934272806814, 125.12943804733217], [-9.062571801488785,
125.06905480295984], [-9.085457395425967, 124.96832229728152], [-
9.051042536672632, 124.88794530276398], [-8.979737588390318,
124.88640304078812], [-8.957272189822097, 124.97502996341623]]},
{"name": "border_3", "coordinates": [[2.085314714216624,
109.65329891736829], [1.9559937084539636, 109.48248837442765],
[1.7689120355974448, 109.4455123082823], [1.6094727802982407,
109.54812033863303], [1.434857301721533, 109.68807357218027],
[1.3033761111034146, 109.85788835032346], [1.1116730245773487,
110.0636411852474], [0.9586800311986469, 110.23391998308071],
[0.7521851356657002, 110.45984493410009], [0.7554752507911632,
110.69298364787431], [0.8618169130907519, 111.01632825879307],
[0.9521997095048664, 111.15688163341355], [0.887534288664983,
111.46196250979479], [0.859810847175277, 111.73464012678905],
[0.9544353565000505, 112.03890092212832], [1.0614000358255127,
112.26857457557206], [1.3016827337809032, 112.33645824226215],
[1.4038252858976041, 112.57334901120419], [1.3594918775126341,
112.86357321091715], [1.2322687205233267, 113.10910802295946],
[1.1560109783631263, 113.42778494448088], [1.1242066127408277,
113.76197903312537], [1.2068179766078109, 114.04185532552907],
[1.2778248309908935, 114.32750235991728], [1.346819963076191,
114.73936073837346], [1.7037562436944182, 114.91019106250032],
[2.084595687972564, 115.05031763288274], [2.345208558897414,
115.26965343724744], [3.026217219479436, 115.61394266558065],
[3.471549206788883, 115.86174795547088], [4.00839361411142,
116.05254057242216], [4.003895837709072, 116.82732202738963],
[3.895022643124095, 117.6199213020189], [4.200439402647725,
117.92925893838841], [4.681041463462332, 117.86687645311129],
[4.713546240375968, 117.12219190532826], [4.7483469471216635,
116.26255385535215], [4.506921186858911, 115.62080657732426],
```

```
[3.903928369240042, 115.47152098245135], [3.159883188605788,
115.22062848641468], [2.8821503792844423, 114.80628036069044],
[2.1041168319851287, 114.55917780582226], [1.68533484520758,
113.92939848072696], [1.5619796672066015, 113.51689704608165],
[1.5735959876019554, 113.23692888850807], [1.6831893347666993,
112.93332858362365], [1.6732030619295128, 112.54983843784144],
[1.5755036587433644, 112.15483295948918], [1.3351438178853476,
112.04625972803532], [1.1783293664246808, 111.77091634474323],
[1.1578978629331695, 111.51158231130914], [1.1545987471830863,
111.16068150217407], [1.1231731552250461, 110.82886719081317],
[1.045711765764236, 110.61392348033621], [1.066880184629063,
110.412440364165], [1.2287699153698635, 110.24534533148879],
[1.4399160319934647, 110.02900352700327], [1.651238311280819,
109.8639922243662], [1.7930965542195978, 109.77466105798146],
[2.085314714216624, 109.65329891736829]]}, {"name": "border_4",
"coordinates": [[5.531151552580241, 95.34944760284584],
[5.390409318278969, 95.71506427342526], [5.254778031673112,
96.00880013660243], [5.107549464118361, 96.3929722303974],
[5.02006600496571, 96.92167908163096], [4.952742176682561,
97.29122114421328], [4.7732428505430455, 97.62047395959691],
[4.571037495569679, 97.75913001671276], [4.246914876656962,
98.0229171639649], [4.00373396010816, 98.19772920618418],
[3.7406628998137714, 98.42144570510902], [3.4390089001685737,
98.80887532441649], [3.1260765924246963, 99.22238928757632],
[2.910122233262856, 99.58701220500441], [2.1972123647390993,
100.09312988437165], [1.8911650626125245, 100.4782876847338],
[1.6497342162957362, 101.06846842777611], [1.1396973694703083,
101.49693562661488], [0.6821192594856714, 102.15411357098553],
[0.13085681744863817, 102.67107978529074], [-0.10149741824791209,
103.03442061363276], [-0.12204310009895594, 104.08364971578384],
[0.6827857411452082, 103.7387141077519], [1.4439551651593874,
102.83305764261112], [2.606905956852756, 100.93302307469969],
[3.92361937542253, 99.22468898819179], [5.416815809480423,
97.87251281251054], [5.983122677708712, 96.35718141295273],
[5.531151552580241, 95.34944760284584]]]}, {"name": "border_5",
"coordinates": [[1.2057215314385534, 103.31259527409686],
[1.1451954753466704, 103.51327155256268], [0.8570484819574573,
103.59176246126604], [0.9381384658472911, 103.67397089187992],
[1.1185416989839259, 103.77010896560475], [1.2022267142669223,
103.89646866856948], [1.2301237838979313, 104.09159129518764],
[1.2456657362613819, 104.31056097997028], [1.2568440260507654,
104.54958141153635], [1.2342775649010809, 104.74593952410696],
[0.9776053427746227, 104.93539132049483], [0.8952123561654916,
104.72864305604779], [1.0125499254904888, 104.22708336833261],
[1.0556144926117856, 104.00980933353758], [0.9731350834359185,
103.83188242503857], [0.8444760075201545, 103.7284140807248],
[0.7636594600044312, 103.540300196601], [0.8660104054198178,
103.42120639155146], [0.9977319953533142, 103.3322374890939],
[1.1032651996373917, 103.24395740777315], [1.2057215314385534,
```

103.31259527409686]]]]

data

```
[{'name': 'border_1',  
  'coordinates': [[-2.530936396466567, 140.83355449140075],  
                  [-9.586374677928985, 140.77090814709663],  
                  [-9.57075704770386, 141.18680208921435],  
                  [-2.472062411080418, 141.26695185899734],  
                  [-2.530936396466567, 140.83355449140075]]},  
{'name': 'border_2',  
  'coordinates': [[-8.957272189822097, 124.97502996341623],  
                  [-9.031631852084145, 124.98542095347855],  
                  [-8.97211934618667, 125.06058024103976],  
                  [-8.919511728116946, 125.12711040520885],  
                  [-8.954353092866118, 125.19470741233603],  
                  [-9.031743770395247, 125.23350519162179],  
                  [-9.120436512834276, 125.23565865872419],  
                  [-9.205979849223612, 125.21557589324102],  
                  [-9.231227373233935, 125.1554769615112],  
                  [-9.223974715471947, 125.05540980776571],  
                  [-9.282590035217094, 125.06598201361015],  
                  [-9.342723491182774, 125.10279077785856],  
                  [-9.423883646444644, 125.12190141538542],  
                  [-9.485008493251197, 125.05960693962325],  
                  [-9.413994208193783, 125.00810209511666],  
                  [-9.326094322199813, 124.95224589255497],  
                  [-9.238573037771877, 124.93606722915396],  
                  [-9.171395073426423, 124.95297192914381],  
                  [-9.128749756749498, 124.99221461748215],  
                  [-9.127111818390922, 125.08138216998769],  
                  [-9.088934272806814, 125.12943804733217],  
                  [-9.062571801488785, 125.06905480295984],  
                  [-9.085457395425967, 124.96832229728152],  
                  [-9.051042536672632, 124.88794530276398],  
                  [-8.979737588390318, 124.88640304078812],  
                  [-8.957272189822097, 124.97502996341623]]},  
{'name': 'border_3',  
  'coordinates': [[2.085314714216624, 109.65329891736829],  
                  [1.9559937084539636, 109.48248837442765],  
                  [1.7689120355974448, 109.4455123082823],  
                  [1.6094727802982407, 109.54812033863303],  
                  [1.434857301721533, 109.68807357218027],  
                  [1.3033761111034146, 109.85788835032346],  
                  [1.1116730245773487, 110.0636411852474],  
                  [0.9586800311986469, 110.23391998308071],  
                  [0.7521851356657002, 110.45984493410009],  
                  [0.7554752507911632, 110.69298364787431],  
                  [0.8618169130907519, 111.01632825879307],  
                  [0.9521997095048664, 111.15688163341355],  
                  [0.887534288664983, 111.46196250979479],
```

```
[0.859810847175277, 111.73464012678905],
[0.9544353565000505, 112.03890092212832],
[1.0614000358255127, 112.26857457557206],
[1.3016827337809032, 112.33645824226215],
[1.4038252858976041, 112.57334901120419],
[1.3594918775126341, 112.86357321091715],
[1.2322687205233267, 113.10910802295946],
[1.1560109783631263, 113.42778494448088],
[1.1242066127408277, 113.76197903312537],
[1.2068179766078109, 114.04185532552907],
[1.2778248309908935, 114.32750235991728],
[1.346819963076191, 114.73936073837346],
[1.7037562436944182, 114.91019106250032],
[2.084595687972564, 115.05031763288274],
[2.345208558897414, 115.26965343724744],
[3.026217219479436, 115.61394266558065],
[3.471549206788883, 115.86174795547088],
[4.00839361411142, 116.05254057242216],
[4.003895837709072, 116.82732202738963],
[3.895022643124095, 117.6199213020189],
[4.200439402647725, 117.92925893838841],
[4.681041463462332, 117.86687645311129],
[4.713546240375968, 117.12219190532826],
[4.7483469471216635, 116.26255385535215],
[4.506921186858911, 115.62080657732426],
[3.903928369240042, 115.47152098245135],
[3.159883188605788, 115.22062848641468],
[2.8821503792844423, 114.80628036069044],
[2.1041168319851287, 114.55917780582226],
[1.68533484520758, 113.92939848072696],
[1.5619796672066015, 113.51689704608165],
[1.5735959876019554, 113.23692888850807],
[1.6831893347666993, 112.93332858362365],
[1.6732030619295128, 112.54983843784144],
[1.5755036587433644, 112.15483295948918],
[1.3351438178853476, 112.04625972803532],
[1.1783293664246808, 111.77091634474323],
[1.1578978629331695, 111.51158231130914],
[1.1545987471830863, 111.16068150217407],
[1.1231731552250461, 110.82886719081317],
[1.045711765764236, 110.61392348033621],
[1.066880184629063, 110.412440364165],
[1.2287699153698635, 110.24534533148879],
[1.4399160319934647, 110.02900352700327],
[1.651238311280819, 109.8639922243662],
[1.7930965542195978, 109.77466105798146],
[2.085314714216624, 109.65329891736829]]},
{'name': 'border_4',
 'coordinates': [[5.531151552580241, 95.34944760284584],
```

```
[5.390409318278969, 95.71506427342526],
[5.254778031673112, 96.00880013660243],
[5.107549464118361, 96.3929722303974],
[5.02006600496571, 96.92167908163096],
[4.952742176682561, 97.29122114421328],
[4.7732428505430455, 97.62047395959691],
[4.571037495569679, 97.75913001671276],
[4.246914876656962, 98.0229171639649],
[4.00373396010816, 98.19772920618418],
[3.7406628998137714, 98.42144570510902],
[3.4390089001685737, 98.80887532441649],
[3.1260765924246963, 99.22238928757632],
[2.910122233262856, 99.58701220500441],
[2.1972123647390993, 100.09312988437165],
[1.8911650626125245, 100.4782876847338],
[1.6497342162957362, 101.06846842777611],
[1.1396973694703083, 101.49693562661488],
[0.6821192594856714, 102.15411357098553],
[0.13085681744863817, 102.67107978529074],
[-0.10149741824791209, 103.03442061363276],
[-0.12204310009895594, 104.08364971578384],
[0.6827857411452082, 103.7387141077519],
[1.4439551651593874, 102.83305764261112],
[2.606905956852756, 100.93302307469969],
[3.92361937542253, 99.22468898819179],
[5.416815809480423, 97.87251281251054],
[5.983122677708712, 96.35718141295273],
[5.531151552580241, 95.34944760284584]]},
{'name': 'border_5',
 'coordinates': [[1.2057215314385534, 103.31259527409686],
 [1.1451954753466704, 103.51327155256268],
 [0.8570484819574573, 103.59176246126604],
 [0.9381384658472911, 103.67397089187992],
 [1.1185416989839259, 103.77010896560475],
 [1.2022267142669223, 103.89646866856948],
 [1.2301237838979313, 104.09159129518764],
 [1.2456657362613819, 104.31056097997028],
 [1.2568440260507654, 104.54958141153635],
 [1.2342775649010809, 104.74593952410696],
 [0.9776053427746227, 104.93539132049483],
 [0.8952123561654916, 104.72864305604779],
 [1.0125499254904888, 104.22708336833261],
 [1.0556144926117856, 104.00980933353758],
 [0.9731350834359185, 103.83188242503857],
 [0.8444760075201545, 103.7284140807248],
 [0.7636594600044312, 103.540300196601],
 [0.8660104054198178, 103.42120639155146],
 [0.9977319953533142, 103.3322374890939],
```

```
[1.1032651996373917, 103.24395740777315],  
[1.2057215314385534, 103.31259527409686]]}]
```

KODE PENYELESAIAN

```
#Pendefinisian Fungsi untuk melacak Border  
def PBorder(a):  
    NewCoordinates = []  
    for i in data:  
        if i['name'] == PilihanBorder:  
            for j in i['coordinates']:  
                NewCoordinates.append(' '.join(map(str, j)))  
    return NewCoordinates  
  
#Looping agar User menginput sesuai  
while True:  
    PilihanBorder = input('Silakan pilih border: ')  
    for k in data:  
        if k['name'] == PilihanBorder:  
            Koordinat = PBorder(PilihanBorder)  
            print(f>Nama Border: {PilihanBorder}')  
            print('Kordinat Tak Normal: ', k['coordinates'])  
            print('Koordinat Normal: ', ' '.join(map(str,  
Koordinat)))  
            break  
        else:  
            print(f"{PilihanBorder} tidak tersedia pada data border")  
            continue  
    break  
  
asd tidak tersedia pada data border  
da tidak tersedia pada data border  
zxc tidak tersedia pada data border  
wfe tidak tersedia pada data border  
f tidak tersedia pada data border  
Nama Border: border_1  
Kordinat Tak Normal: [[-2.530936396466567, 140.83355449140075], [-  
9.586374677928985, 140.77090814709663], [-9.57075704770386,  
141.18680208921435], [-2.472062411080418, 141.26695185899734], [-  
2.530936396466567, 140.83355449140075]]  
Koordinat Normal: -2.530936396466567 140.83355449140075, -  
9.586374677928985 140.77090814709663, -9.57075704770386  
141.18680208921435, -2.472062411080418 141.26695185899734, -  
2.530936396466567 140.83355449140075
```