

```

from PyQt5.QtGui import *
from PyQt5.QtCore import *
from qgis.core import *
from qgis.utils import iface

```

```
import processing
```

```

wpath=r'C:\JACEK2\QGISHEL18\Hel18\dzien2a\dane_2B\proc4'
ww1=r'C:\JACEK2\QGISHEL18\Hel18\dzien2a\dane_2B\pl_stacje_pom_Krak.shp'
ww2=r'C:\JACEK2\QGISHEL18\Hel18\dzien2a\dane_2B\dem_Krak.tif'

```

```

ww3=wpath+'\punkty25bufa.shp'
ww4=wpath+'\stab.csv'
ww5=wpath+'\dem1.tif'
ww6=wpath+'\pol1.shp'
ww6f=wpath+'\pol1f.shp'
ww7=wpath+'\punkt.shp'
ww8=wpath+'\poligonWW2.shp'

```

```

pointIDPP=4          # identyfikator punktu
DD=1                 # przewyższenie

```

```
# otaczamy punkty buforami
```

```

processing.run('qgis:buffer',{'INPUT':ww1,'DISTANCE':25,
                             'SEGMENTS':30,'END_CAP_STYLE':0,'JOIN_STYLE':0,
                             'MITER_LIMIT':2,'DISSOLVE':0,'OUTPUT':ww3})

```

```
# wykonujemy zonal statistics
```

```

processing.run('qgis:zonalstatistics',{'INPUT_RASTER':ww2, 'RASTER_BAND':1,
                                       'INPUT_VECTOR':ww3, 'COLUMN_PREFIX':'dem_', 'STATS':2})

```

```
# wyprowadzenie tabeli z danymi
```

```

processing.run('qgis:statisticsbycategories',{'INPUT':ww3,
                                             'VALUES_FIELD_NAME':'dem_mean', 'CATEGORIES_FIELD_NAME':['IDPP'],
                                             'OUTPUT': ww4})

```

```
HH=0
```

```
in_plik=open(ww4,'r')
```

```
kk=0
```

```

for line in in_plik.readlines():
    if kk>1:
        lista=line.split(',')
        if int(lista[0])==pointIDPP:
            HH=float(lista[7])

```

```
    kk+=1
```

```
in_plik.close()
```

```
granica=HH+DD
```

```
# tworzymy raster < granica (1) i wektoryzujemy do warstwy poligonow
```

```
fff='where (A<'+str(granica)+' ,1,65535) '
```

```

processing.run('gdal:rastercalculator',{'INPUT_A':ww2,'BAND_A':1,
                                       'INPUT_B':None,'BAND_B':-1,'INPUT_C':None,'BAND_C':-1,
                                       'INPUT_D':None,'BAND_D':-1, 'INPUT_E':None,'BAND_E':-1,
                                       'INPUT_F':None,'BAND_F':-1,'FORMULA':fff,'NO_DATA':None,
                                       'RTYPE':2,'EXTRA':None,'OPTIONS':None,'OUTPUT':ww5})

```

```

processing.run('gdal:polygonize',{'INPUT':ww5,'BAND':1,'FIELD':'ID',
                                'EIGHT_CONNECTEDNESS':0,'OUTPUT':ww6})

```

```
# selekcja poligonow na podstawie lokalizacji
```

```
# ekstrakcja punktu
```

```
fff='IDPP='+str(pointIDPP)
```

```

processing.run('qgis:extractbyexpression',{'INPUT':ww1,'EXPRESSION':fff,
                                           'OUTPUT':ww7,'FAIL_OUTPUT':None})

```

```
# ekstrakcja poligonu na podstawie lokalizacji
```

```
processing.run('qgis:fixgeometries',{'INPUT':ww6,'OUTPUT':ww6f})
```

```

processing.run('qgis:extractbylocation',{'INPUT':ww6f,'PREDICATE':0,
                                         'INTERSECT':ww7,'OUTPUT':ww8})

```