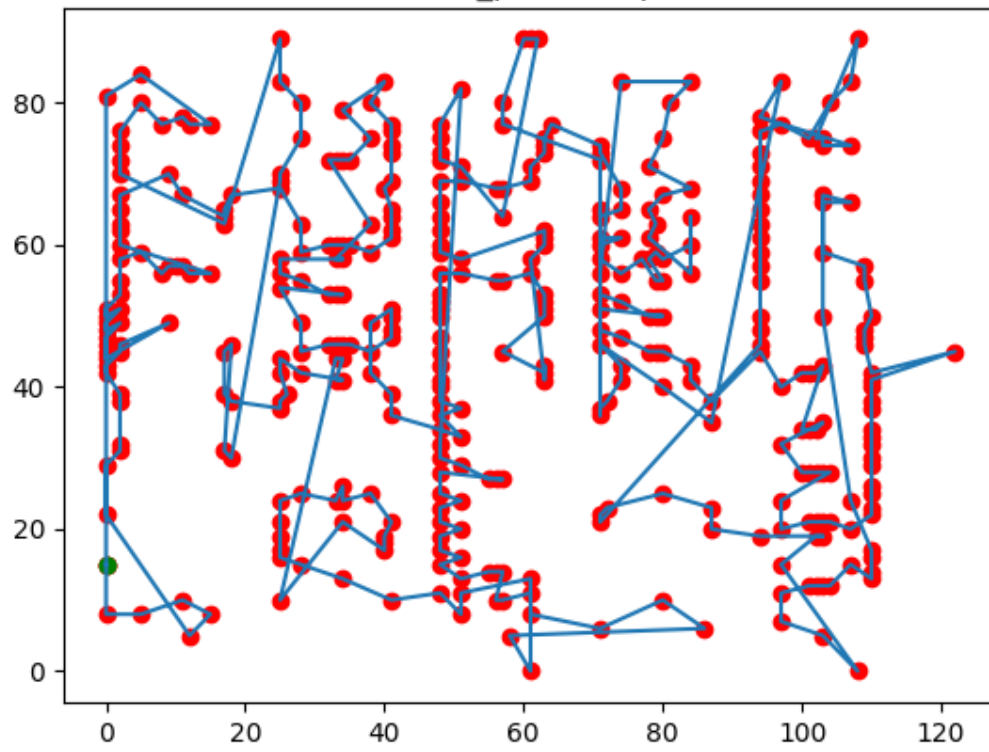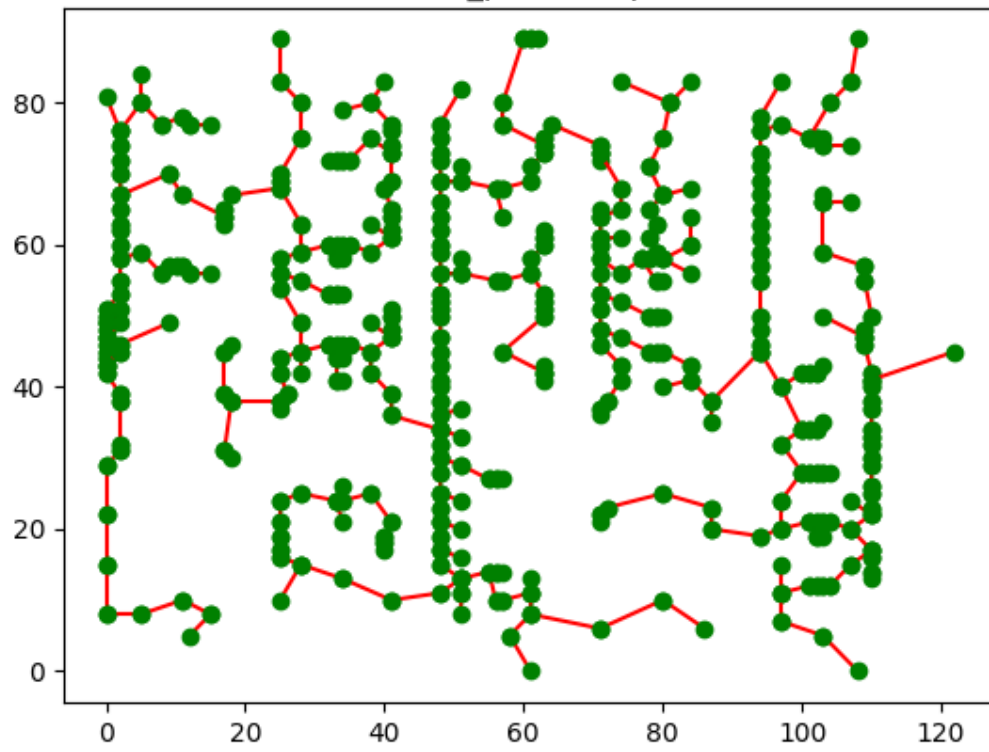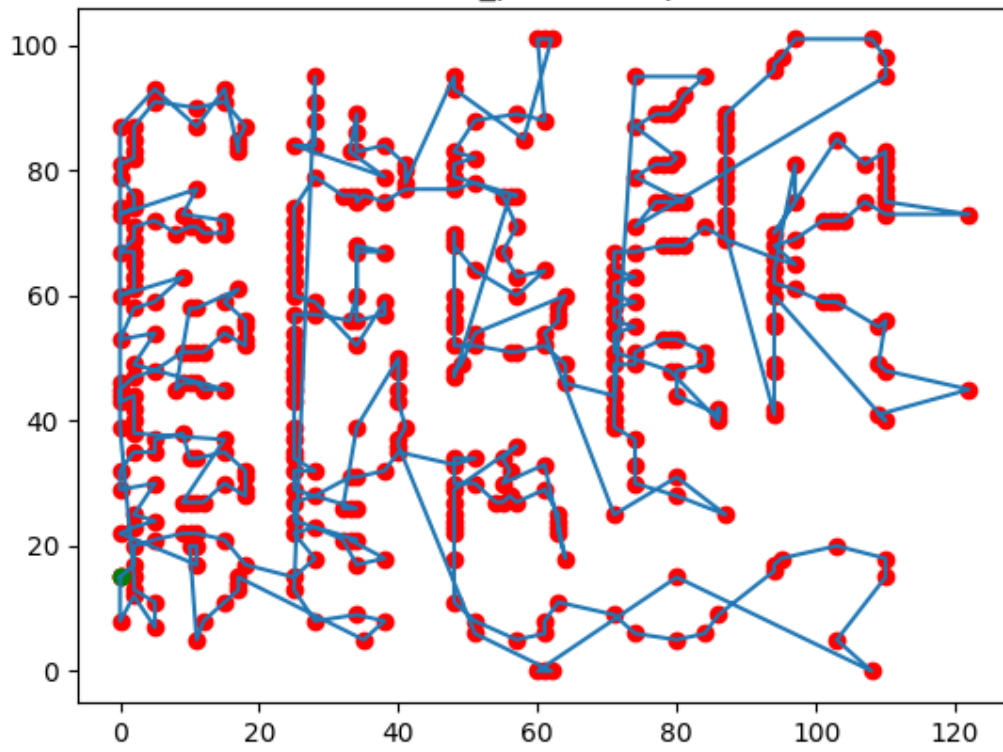conv_bcl380.tsp

mst_bcl380.tsp

conv_pbk411.tsp

mst_pbk411.tsp

conv_pbl395.tsp

mst_pbl395.tsp

conv_pbm436.tsp

mst_pbm436.tsp

conv_pbn423.tsp

mst_pbn423.tsp

conv_pka379.tsp

mst_pka379.tsp

conv_pma343.tsp

mst_pma343.tsp

conv_xqf131.tsp
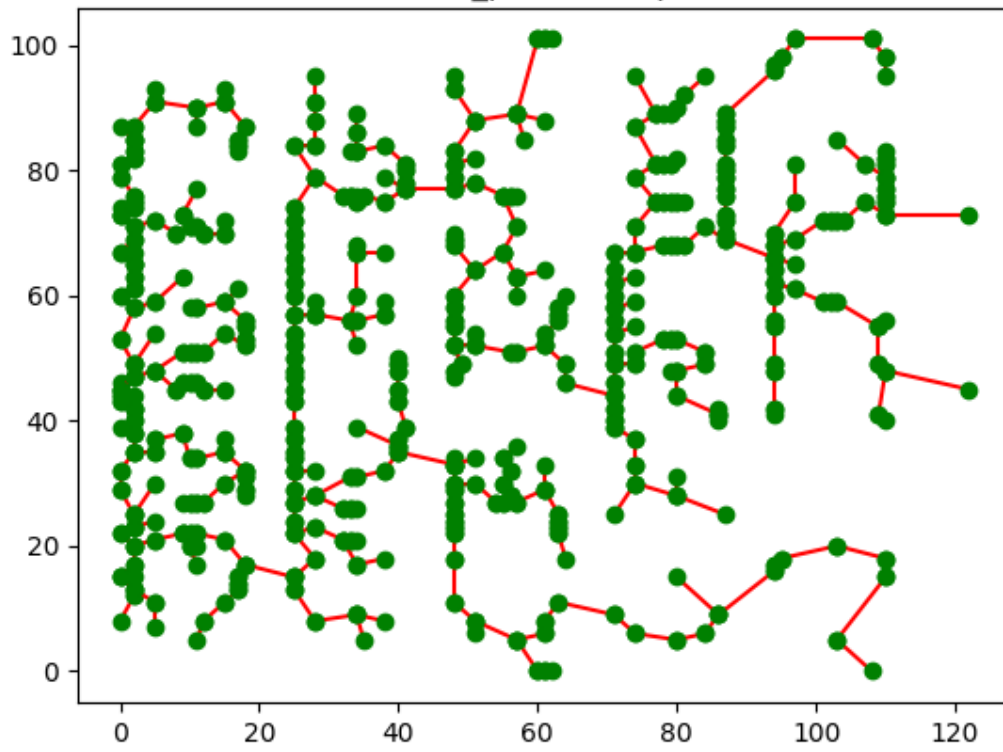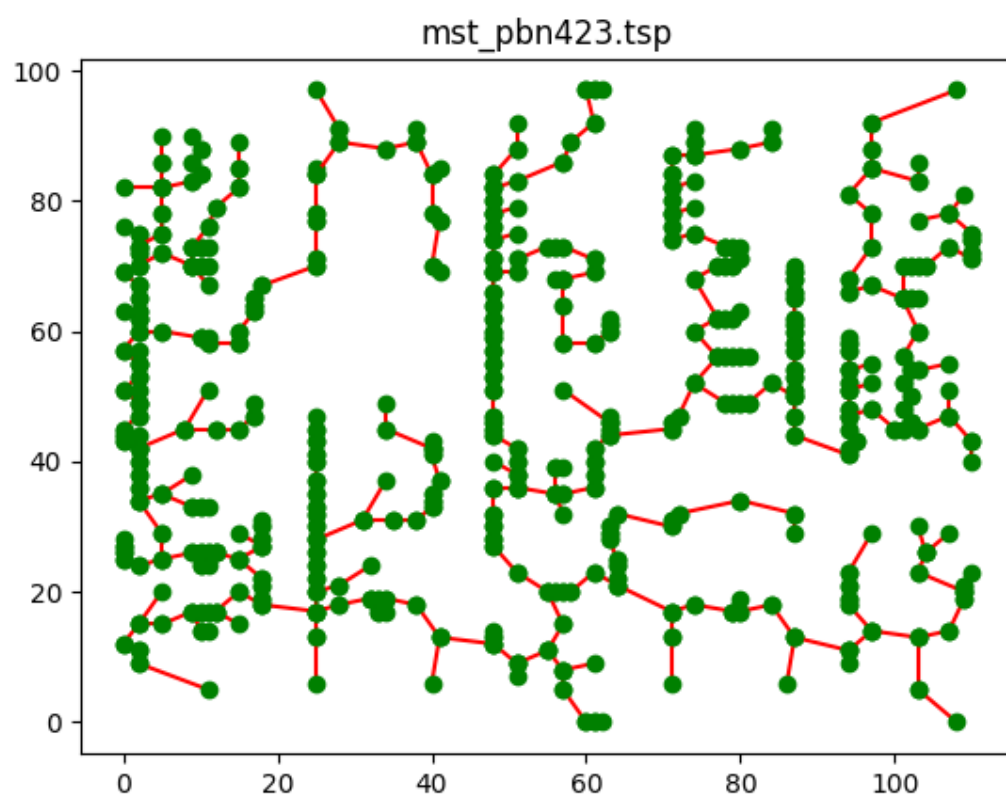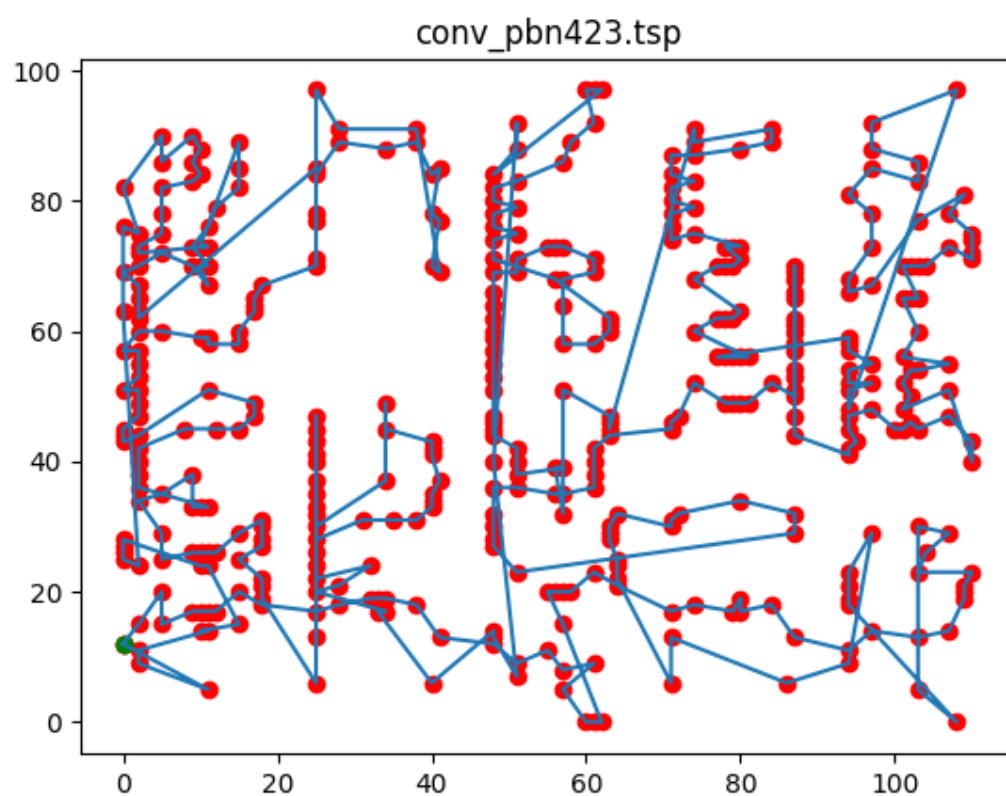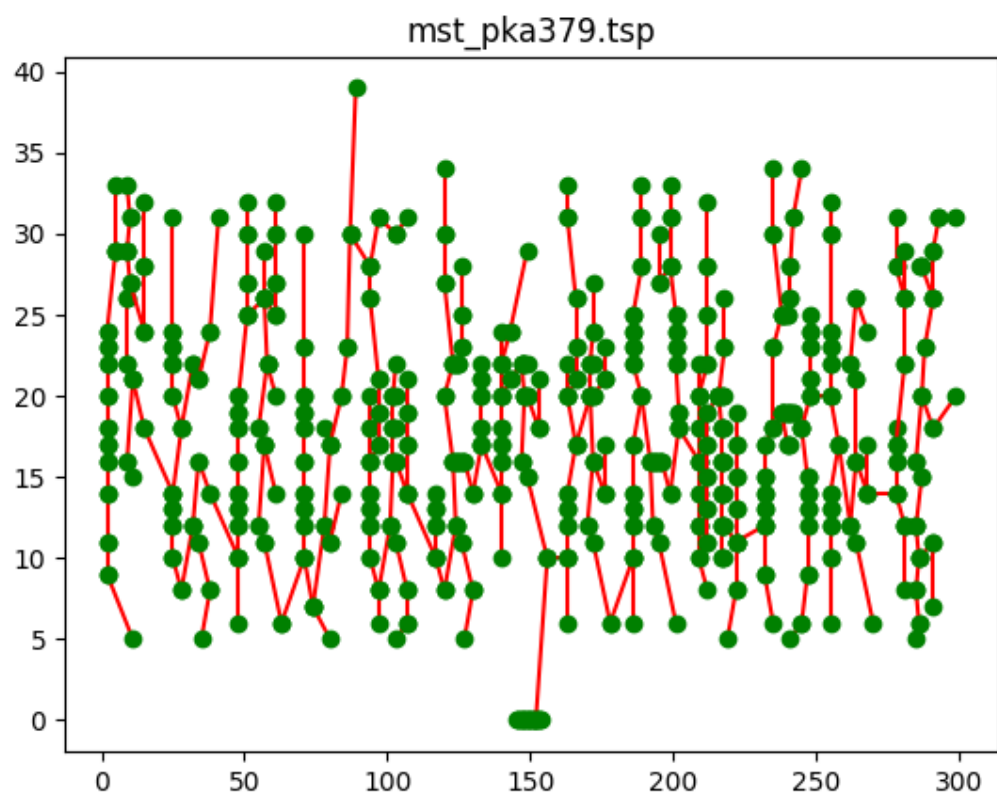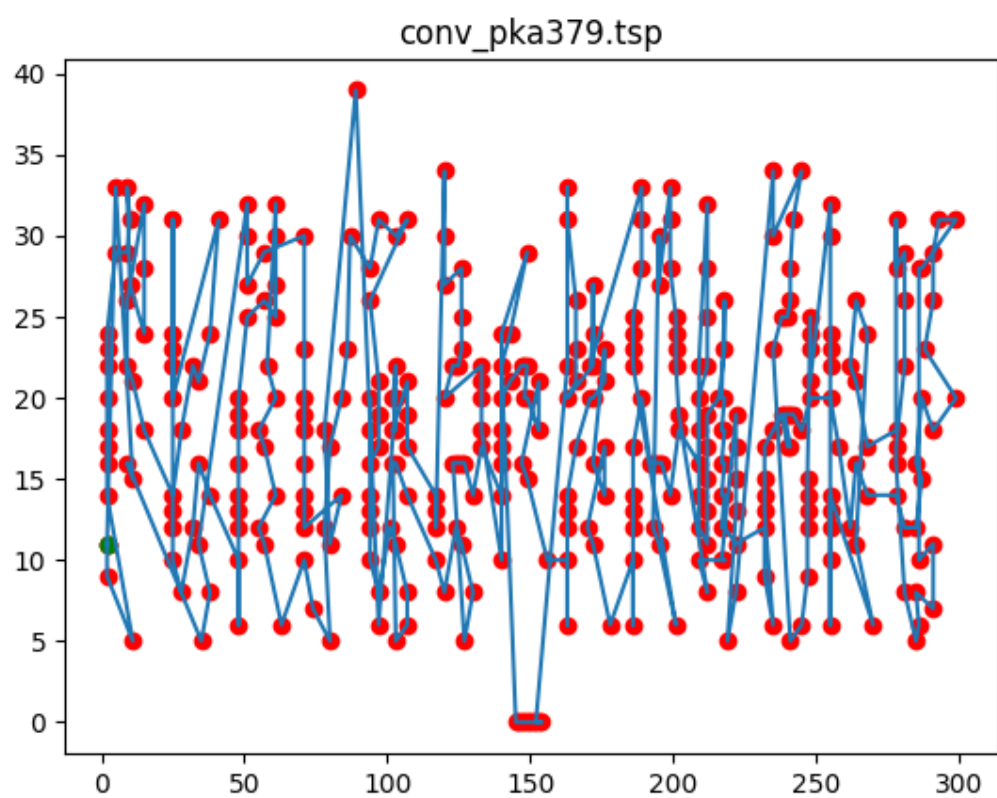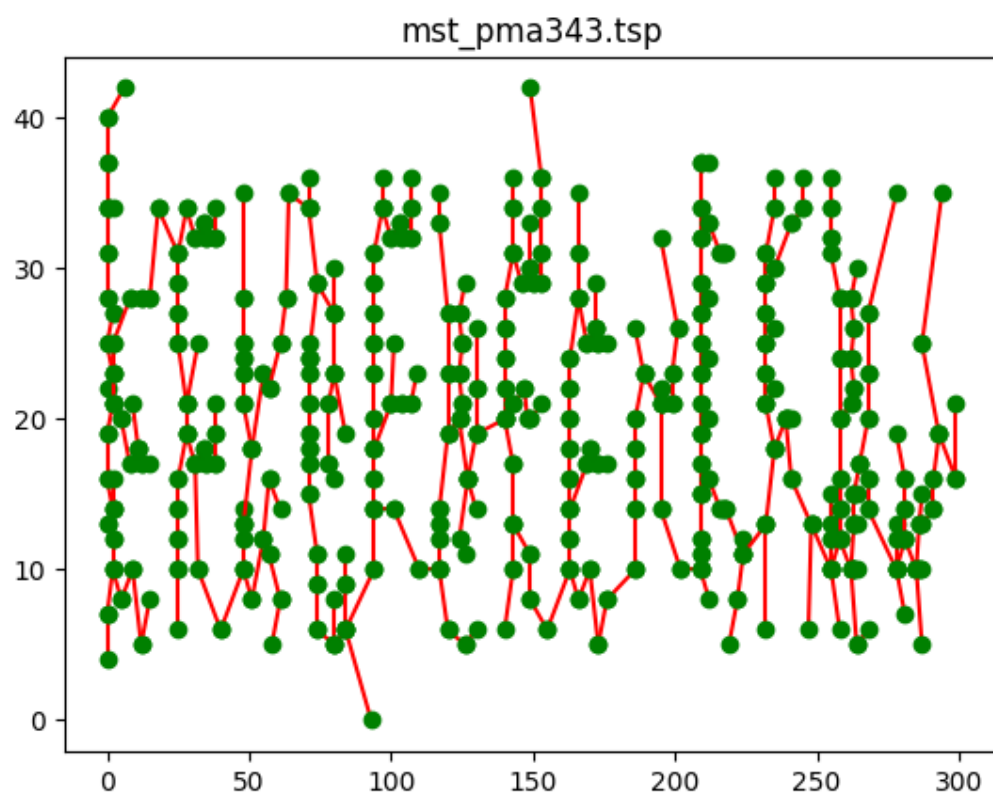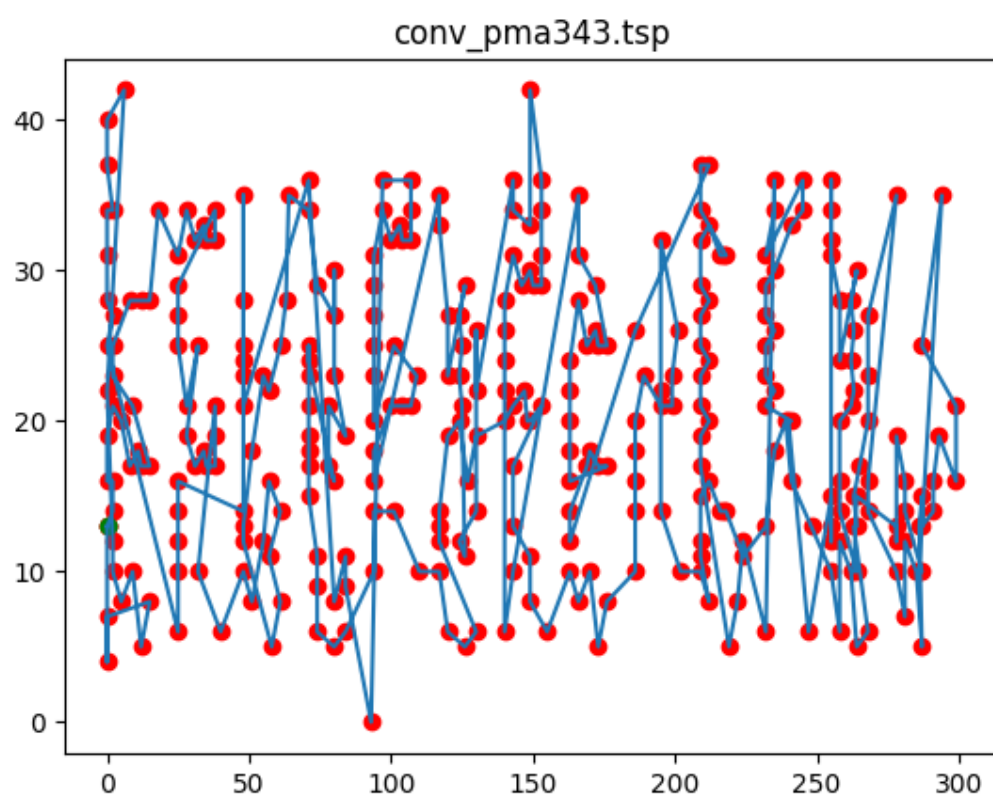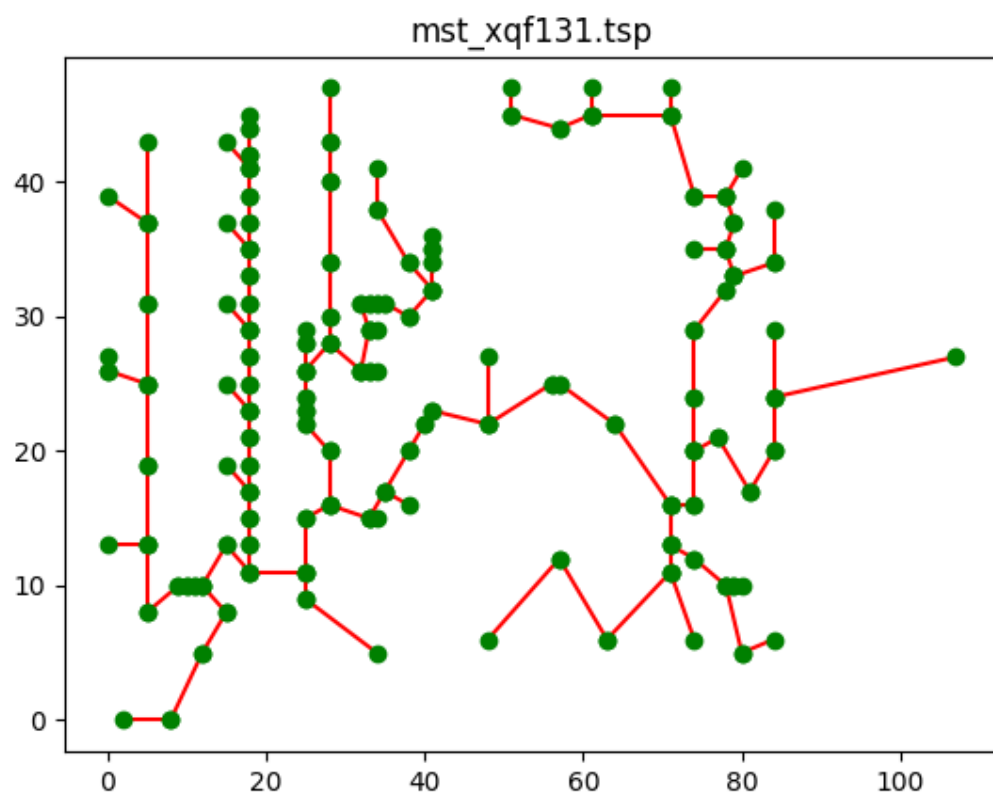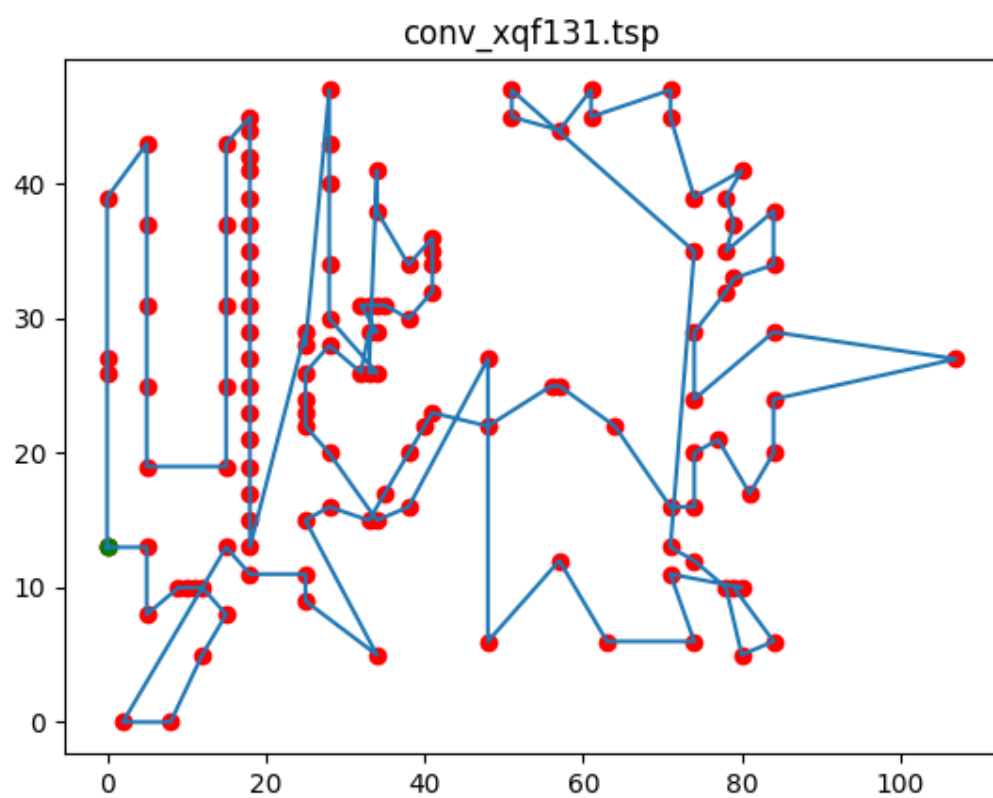
mst_xqf131.tsp

conv_xqg237.tsp

mst_xqg237.tsp

conv_xql662.tsp

mst_xql662.tsp

```
tsp:xqf131.tsp
mst weight:463
conv weight:695
(a):4248
(b):3927
(c):3853


tsp:pma343.tsp
mst weight:1143
conv weight:1849
(a):33894
(b):31785
(c):32438


tsp:xqg237.tsp
mst weight:878
conv weight:1426
(a):11596
(b):10812
(c):10449


tsp:pbl395.tsp
mst weight:1097
conv weight:1826
(a):18798
(b):17750
(c):18253
```
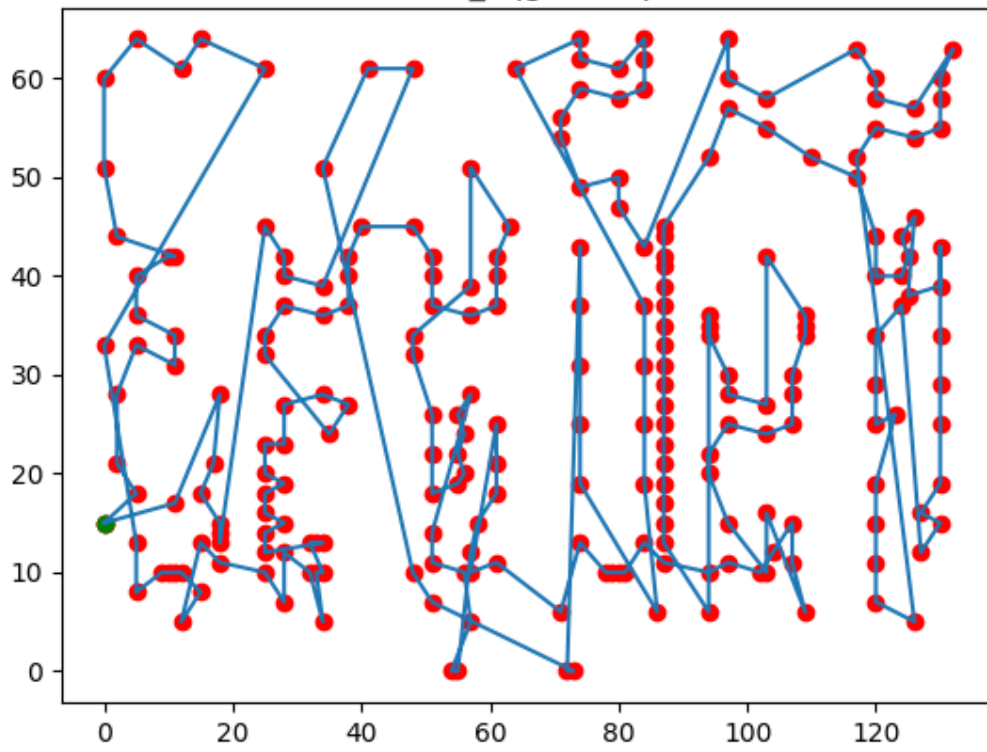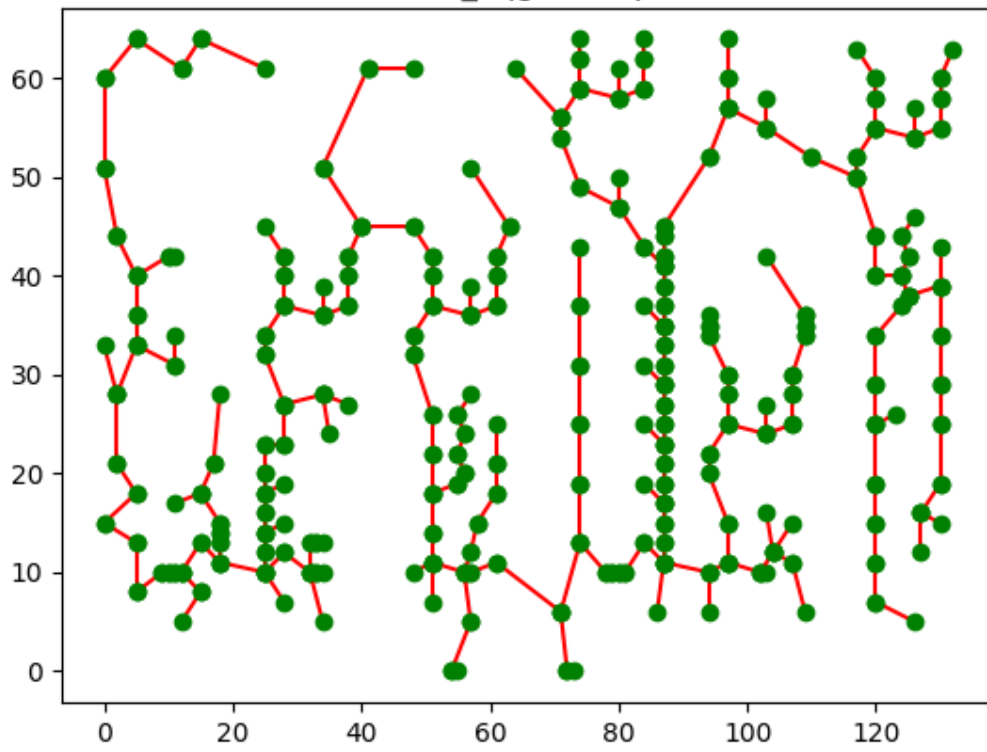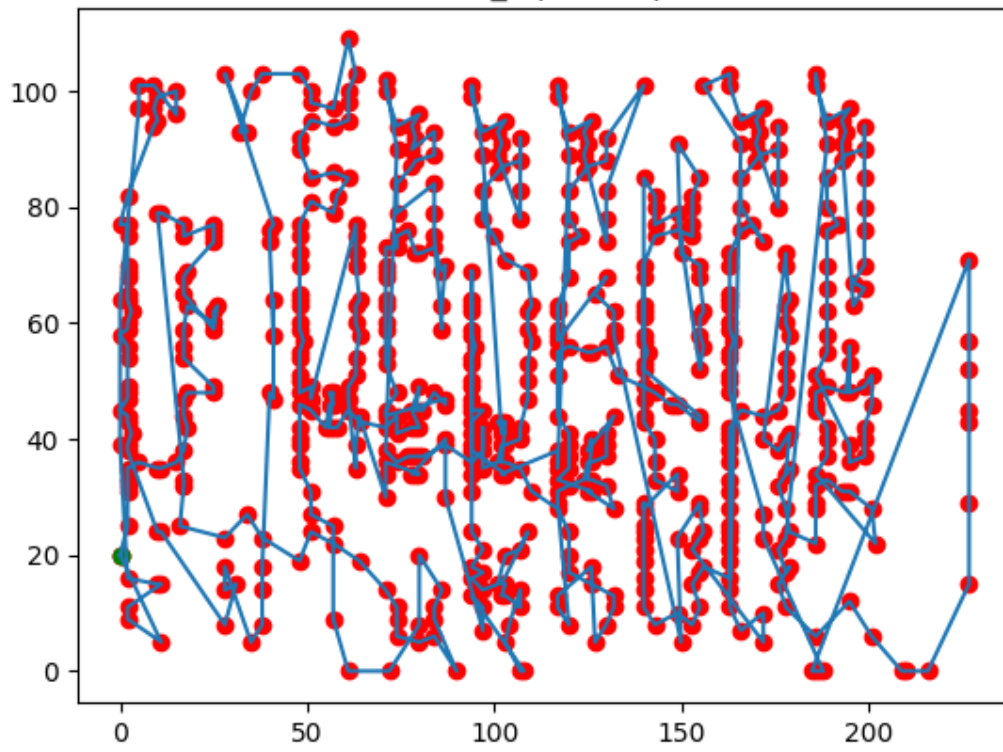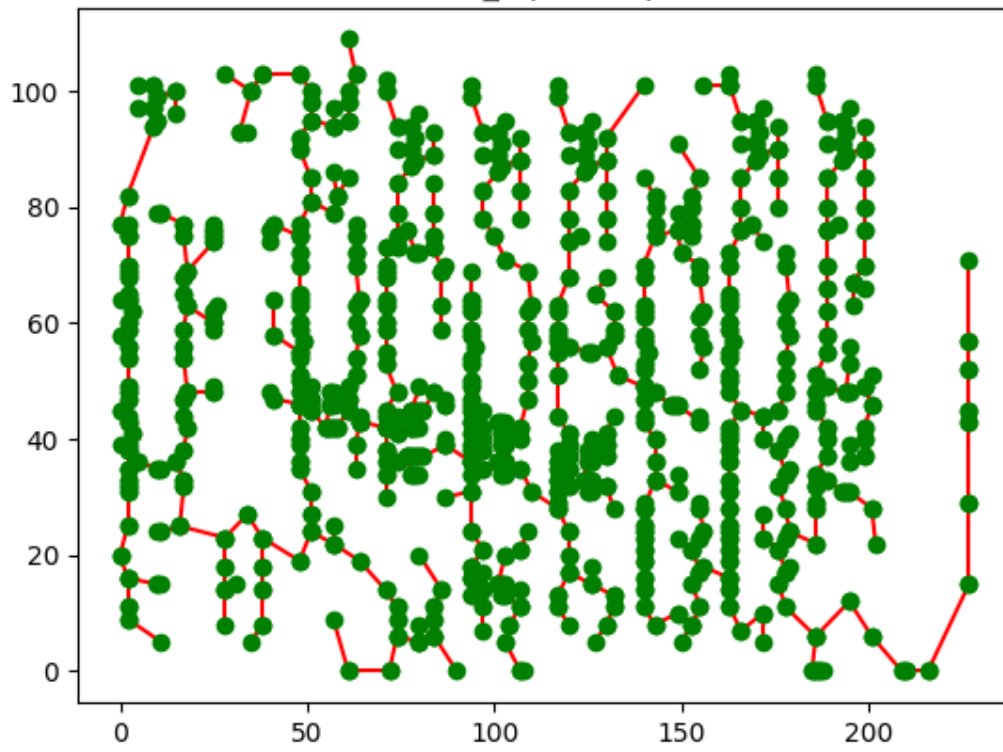
```
tsp:pbk411.tsp
mst weight:1157
conv weight:1876
(a):21267
(b):20023
(c):20597


tsp:bcl380.tsp
mst weight:1419
conv weight:2288
(a):24264
(b):22897
(c):23559


tsp:pbm436.tsp
mst weight:1238
conv weight:2062
(a):22075
(b):20938
(c):21692


tsp:pka379.tsp
mst weight:1117
conv weight:1801
(a):34939
(b):32644
(c):32830
```

```
tsp:xql662.tsp
mst weight:2193
conv weight:3639
(a):50475
(b):47807
(c):49827


tsp:pbn423.tsp
mst weight:1180
conv weight:1912
(a):21523
(b):20334
(c):21003
```

WNIOSKI

w każdym problemie cykl był ograniczony z góry przez 2 * wagę mst.
Losowanie permutacji dla tsp daje olbrzymie wagi