

```

1  #!/usr/bin/python3.5
2  # -*-coding:Utf-8 -*
3
4  from pathlib import Path
5  from os import getcwd
6  from re import fullmatch
7
8
9  class PathManager:
10     """Make all paths
11
12     This is a static class.
13     """
14
15     ROOT = Path(getcwd() + '/results/')
16
17
18     @classmethod
19     def newProcessusId(cls):
20         path = Path(cls.ROOT)
21         cls.makeDir(path)
22         ids = [-1]
23
24         for folder in path.iterdir():
25             match = fullmatch('processus-(\d+)', folder.name)
26             if match is not None:
27                 ids.append(int(match.group(1)))
28
29         return max(ids) + 1
30
31
32     @classmethod
33     def getPath(cls,
34                processus_id, generations = None,
35                generation_id = None, ia_id_or_file = None, read_only = False
36                ):
37         path = Path(cls.ROOT)
38
39         # processus-00000/
40         path /= 'processus-' + '{0:05d}'.format(processus_id)
41
42         # processus-00000/generation-00/...
43         if generation_id is not None:
44             generations = generations if type(generations) is int else '00000'
45             path /= 'generation-' + '{0:0{1}d}'.format(generation_id, len(str(generations)))
46
47         # processus-00000/generation-00/selection/...
48         if ia_id_or_file in ('grading', 'final_grading', 'selection'):
49             path /= 'selection/' + ia_id_or_file
50         # processus-00000/generation-00/population/ia-000
51         elif type(ia_id_or_file) is int:
52             path /= 'initial_pop' if generation_id == 0 else 'population'
53             ia_id = ia_id_or_file
54             if ia_id is not None:
55                 path /= 'ia-{}.json'.format(ia_id)
56             else:
57                 raise ValueError('ia_id not given')
58         # processus-00000/generation-00/breeding
59         elif ia_id_or_file == 'breeding':
60             path /= 'breeding'
61         # processus-00000/generation-00/generation
62         elif ia_id_or_file is None:
63             path /= 'generation'
64         else:
65             raise ValueError('wrong ia_id_or_file value')
66         # processus-00000/processus
67         else:
68             path /= 'processus'
69
70         if (
71             path.name in ('generation', 'processus', 'final_grading', 'selection')
72             or path.parent.name == 'population'
73         ):
74             path = path.with_suffix('.json')
75
76         if not read_only:
77             cls.makeDir(path.parent)
78
79         return path
80
81
82     @staticmethod
83     def makeDir(path):
84         path.mkdir(parents=True, exist_ok=True)

```