TEST PLAN

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Abstract

In this document we will go over all tests, including unit tests as well as scenario tests, documenting their name along with their purpose and how we intend to check this.

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1 Introduction

For the rest of this document we will give a short summary of every newly created test that will check if the new features work as we intend them to. These new additions include the two new contact types, being Daycare and PreSchool, new data formats, being JSON and HDF5 as well as global schemes that will be used by all students, a visual output for the data via QT and an improvement to the generation of the population by factoring in new parameters that will make the generation of the population more diverse, so that we can check even more parameters for their influence on the spread of diseases.

2 Daycare and PreSchool

3 Data formats

3.1 JSON

3.2 HDF5

4 QT

5 improved population generation

5.1 demographic profile

5.1.1 DemographicProfile.age

What will it test? This test will check whether a given demographic profile for the young/old ratio is used.

How will we achieve this? We will achieve this by generating a population using a demographic profile for these ratios. We can check if the profile was used by comparing the generated population with the expected percentages.

5.1.2 DemographicProfile.cities

What will it test? This test will check whether a given demographic profile for the distribution of central cities compared to other cities is used.

How will we achieve this? We will achieve this by generating a population using a demographic profile for the different central cities versus other cities. We can check if the profile was used by comparing the generated population with the expected percentages.

5.2 Workplace contactpools

5.2.1 WorkplaceCSVReader.Test1

What will it test? This test will check whether we are able to read Workplace distribution csv's.

How will we achieve this? We will achieve this by passing a possible csv configuration to the reader. The returned format can then be checked in order to ensure that the configuration is read correctly.

5.2.2 WorkplaceSizePopulatorTest.NoPopulationTest

What will it test? The test will check whether the workplace size populator still works when there is no population available.

How will we achieve this? We can easily check this by passing a geogrid to the populator who has a population size of 0. If there are no exception thrown we now that the function did finish correctly.

5.2.3 WorkplaceSizePopulatorTest.OneWorkplaceTypeTest

What will it test? The test will check whether the workplace size populator can handle one single workplace type.

How will we achieve this? We can achieve this by passing a single workplace size to populator. We can check if this process was successful by analyzing the altered object.

5.2.4 WorkplaceSizePopulatorTest.TwoWorkplaceTypesTest

What will it test? The test will check whether the workplace size populator can handle two workplace types.

How will we achieve this? We can achieve this by passing two workplace sizes to the populator. In order to check if this was successful we can analyze the altered object by checking whether there are two different pools.

5.2.5 WorkplaceSizePopulatorTest.MultipleWorkplaceTypesTest

What will it test? This test will check whether the workplace size populator can handle multiple types and sizes.

How will we achieve this? We will achieve this by altering the configuration of the workplace sizes so that there are multiple. We can check if this was successful by analyzing the new populations' data.

5.2.6 WorkplaceSizeGeneratorTest.OneWorkplaceTypeTest

What will it test? This test will check whether the workplace size generator can handle one single type of workplace.

How will we achieve this? We can achieve this by passing one single type to the generator. We can check whether this was successful by checking the resulting populations data.

5.2.7 WorkplaceSizeGeneratorTest.ZeroWorkplaceTypesTest

What will it test? This test will check whether the workplace size generator can handle zero types of workplaces.

How will we achieve this? We can achieve this by passing no types to the generator. To check if this was successful we can check whether the generated population has any workplace data.

5.2.8 WorkplaceSizeGeneratorTest.FiveWorkplaceTypesTest

What will it test? This test will check whether the workplace size generator can handle multiple types of workplaces.

How will we achieve this? We achieve this by passing five different types to the generator. The generated population will, if the process was successful, have five different workplaces, all with their expected sizes.