Assignment 1 – Report

Fall 2021

Anesti Kolitsi

Dejvi Hodo

Contents

[Introduction 1](#_Toc93862355)

[Classes 1](#_Toc93862356)

[Assignment1main class 1](#_Toc93862357)

[CovidData class 2](#_Toc93862358)

# Introduction

This program allows the user to easily identify data from the world covid dataset file. The output shown will change based on the arguments that the user puts throw command lines.

The user must enter a specified command, which has the format of: <filename> <stat> <limit> <by> <display>. After a short time, usually 1-2 sec the program will be able to output the data that the user asked. It works through using Lists, Maps, and Streams. As well as a custom Object Class to save the data that allows the selected output of the of the data.

# Classes

## Assignment1main class

It is the main class of the program with 2 methods:

Main Method: takes the input from the user and sends it to the second method called generateData().

generateData: takes as parameters the input of the user. The main function of this method is to generate a List of Strings taken from the file as rows and edit it in a way to put what is needed into a Map, with ISC\_code and Date as the Key and a CovidData object as the value. If statements are used to detect if the user selected MAX or MIN as a STAT. Streams are used to filter, sort, limit and then output the data from the Map.

On .filter() we used a lambda statement to filter out the Data that has the Continent as the location. As it is a bug in the database.

.sorted() uses a Comparator that compares the values of the “by” argument and sorts them from smallest to bigger. We used a custom getter to get the correct value to keep everything clean. In the case of MAX stat we use the .reverse() method to reverse the sort.

Ending it on .foreach() with a lambda statement to print the data.

## CovidData class

This is the our Object class to save the data taken from the file. The constructor takes the String data and for the values that need a double, we convert them using parseString() method.

parseString() uses an if else statement to detect of the data taken is an empty String. If it is then it returns 0. Else it will return the double converted value of the String.

2 custom getters are used: getBy() and getDisplay() which both of them use switch statements to return the correct value.