**COVID 19 VISUALISATION AND POLICE STOP AND SEARCH API VISUALISATION IN UK**

**Project Description**

**Covid 19 visualisation**

The file contains daily number of cases data aggregated by age into 0-59, 60 plus and individual five-year bands. 7 day rolling averages and rates are also included where the data is presented by specimen date (the date the sample was collected from the patient). All COVID-19 data processing and visualisation must be done against this file. The file itself has been sourced from https://coronavirus.data.gov.uk/details/about-data#cases-by-age and is used as part of the UK Governments own reporting.

The application visualizes COVID 19 data among different age ranges in various locations in the UK at different times in 2020.

A cloud IDE (Jupyter notebook) was used. Jupyter Notebook offers a user-friendly, interactive data science environment for a variety of programming languages that may be used as a presentation or teaching tool in addition to serving as an IDE. For individuals who are just getting started with data science, it is ideal.

Markdowns are supported by the Jupyter Notebook, enabling you to include HTML elements like images and videos. Jupyter makes it simple to see and change your code so you can make engaging presentations and visualisations. Libraries like matplotlib, seaborn and pandas were used to create interactive visualisations.

Due to voluminous nature of the COVID dataset it was difficult to create a good plot using the whole dataset hence a data frame was created to specify the range of data.

**Stop and Search**

https://data.police.uk/ is the site for open data about crime and policing in England, Wales, and Northern Ireland. A publicly available API provides detailed crime data and information about individual police forces and neighbourhood teams.

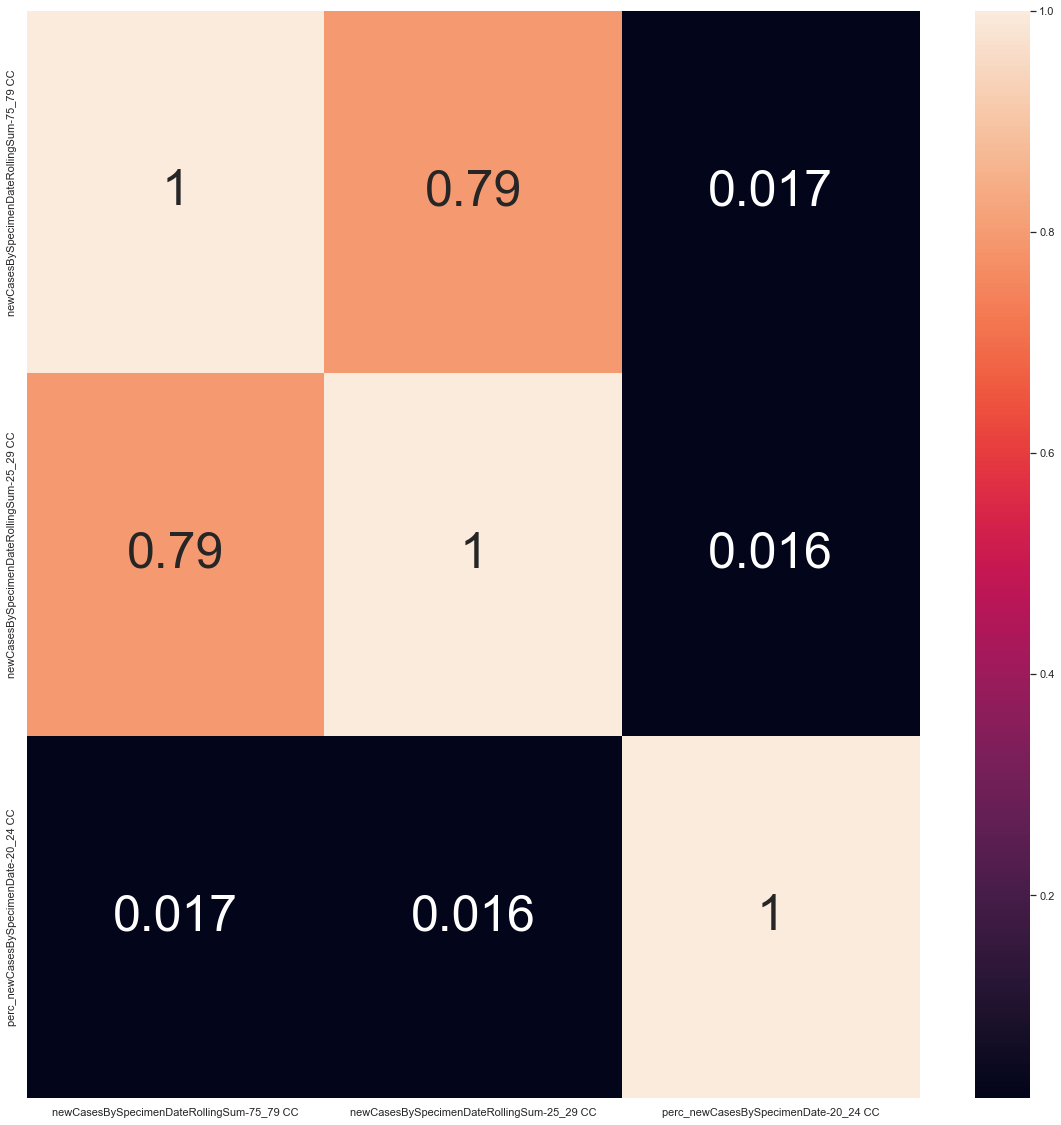
Using Python, I retrieved data from the API and processed it, and then visualise using Matplotlib. The data was requested and placed in a JSON file and then visualised. The location for the data retrieved was from the areas around the University of Liverpool. Which is very essential in keeping students safe.

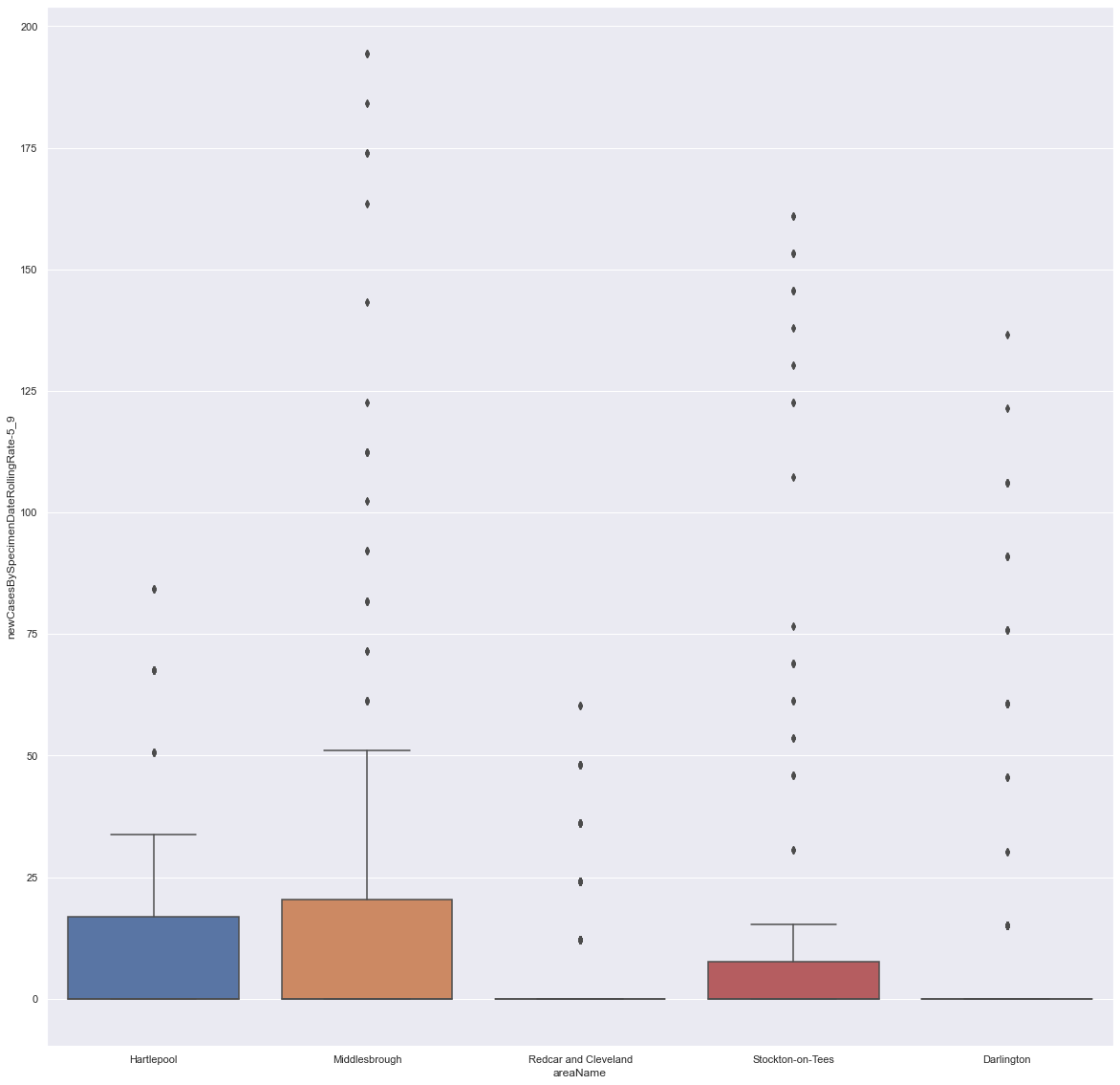
### How to Use the Project

**COVID 19**

The project seeks to incorporate Data processing and visualisation by creating data frames

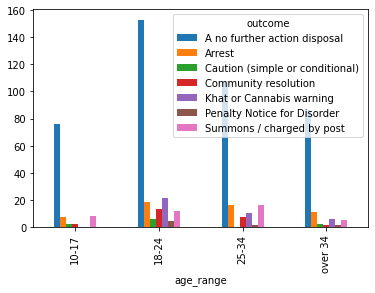
The project can be used to visualise a whole lot of information for the end user.

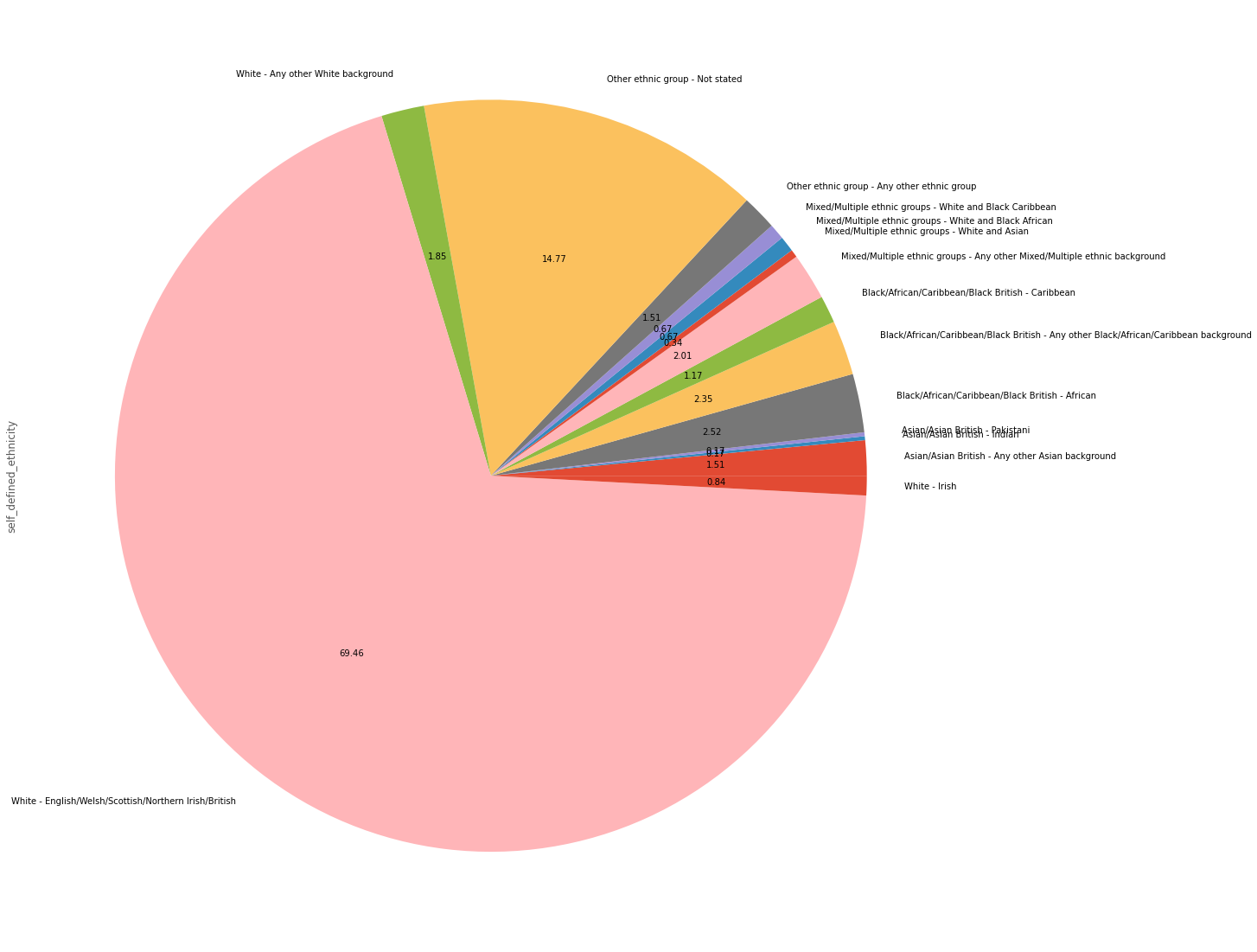




**Police Stop and Search**

The data is requested from the API and placed in a JSON file for easy analysis, pre-processing and visualisation.





The codes for the above projects can be found in my Github repository.

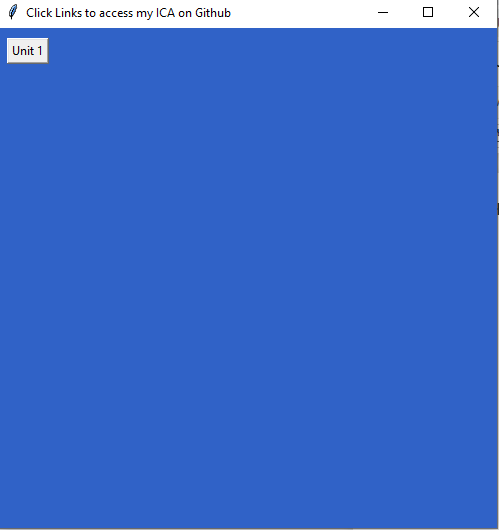
# [**https://github.com/SedemJ/Jude-Agboka-Python-assessment**](https://github.com/SedemJ/Jude-Agboka-Python-assessment)

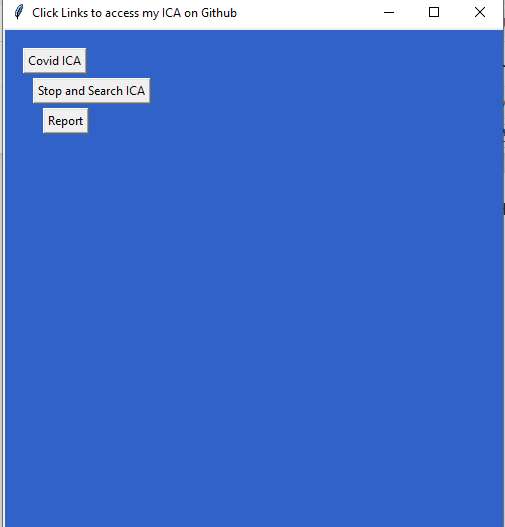
**GUI**

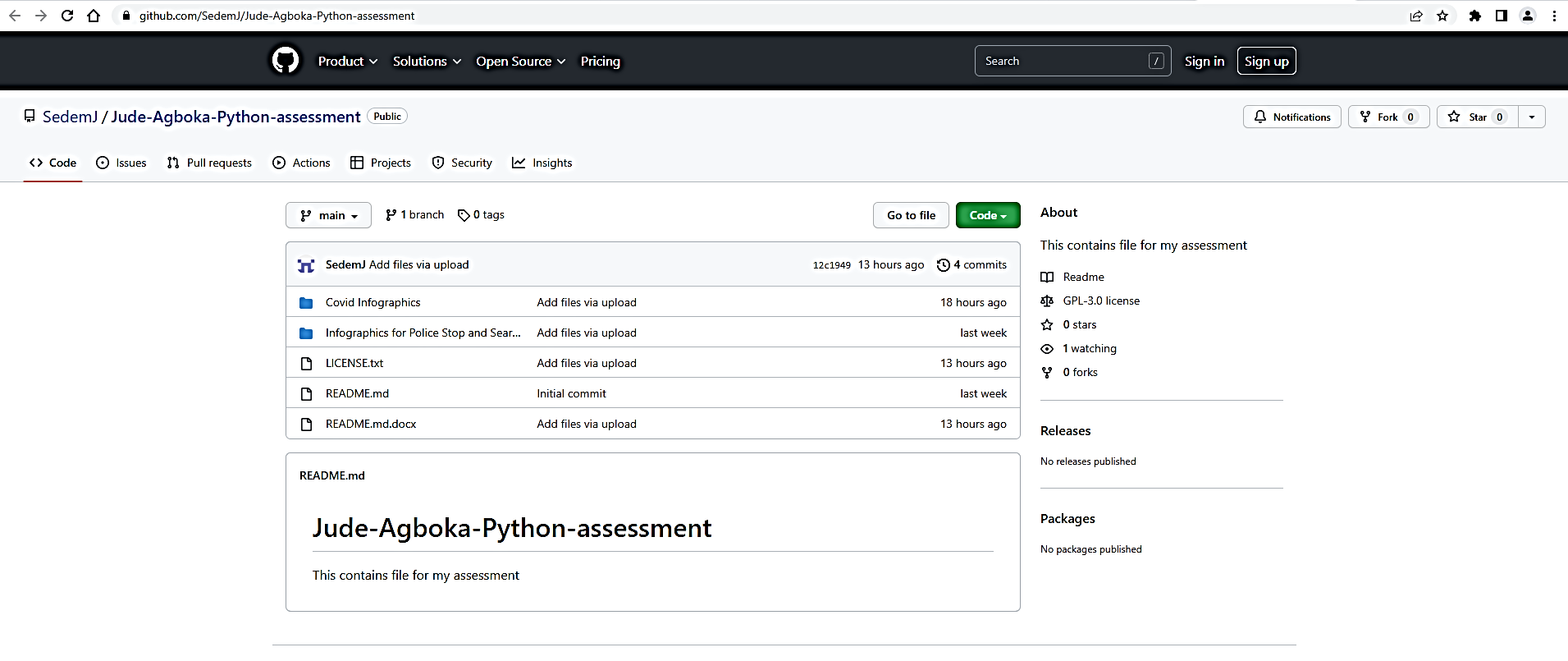
GUI was incorporated to provide a Graphical Interface for the project. The GUI was linked to my GitHub account. The user can access this by clicking on the GUI button to access all the infographics I have created so far by clicking on the Infographic files. The files can then be downloaded. This makes the project move accessible to end users.

# [**https://github.com/SedemJ/Jude-Agboka-Python-assessment**](https://github.com/SedemJ/Jude-Agboka-Python-assessment)

My GitHub has the license, README, My ICA report, Stop and Search codes, Covid codes, Covid Infographics and Stop and Search infographics.







### Include Tests

### To make sure the program runs smoothly unittest was incorporated using doctring test at the end of the code to ensure the codes run smoothly.

### import doctest

### doctest.testmod(verbose=True)

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Version 3, 29 June 2007

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To "propagate" a work means to do anything with it that, without

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An interactive user interface displays "Appropriate Legal Notices"

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1. Source Code.

The "source code" for a work means the preferred form of the work

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A "Standard Interface" means an interface that either is an official

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is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other

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"Major Component", in this context, means a major essential component

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The "Corresponding Source" for a work in object code form means all

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the work, and the source code for shared libraries and dynamically

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You may convey a work based on the Program, or the modifications to

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released under this License and any conditions added under section

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c) You must license the entire work, as a whole, under this

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6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms

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machine-readable Corresponding Source under the terms of this License,

in one of these ways:

a) Convey the object code in, or embodied in, a physical product

(including a physical distribution medium), accompanied by the

Corresponding Source fixed on a durable physical medium

customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product

(including a physical distribution medium), accompanied by a

written offer, valid for at least three years and valid for as

long as you offer spare parts or customer support for that product

model, to give anyone who possesses the object code either (1) a

copy of the Corresponding Source for all the software in the

product that is covered by this License, on a durable physical

medium customarily used for software interchange, for a price no

more than your reasonable cost of physically performing this

conveying of source, or (2) access to copy the

Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the

written offer to provide the Corresponding Source. This

alternative is allowed only occasionally and noncommercially, and

only if you received the object code with such an offer, in accord

with subsection 6b.

d) Convey the object code by offering access from a designated

place (gratis or for a charge), and offer equivalent access to the

Corresponding Source in the same way through the same place at no

further charge. You need not require recipients to copy the

Corresponding Source along with the object code. If the place to

copy the object code is a network server, the Corresponding Source

may be on a different server (operated by you or a third party)

that supports equivalent copying facilities, provided you maintain

clear directions next to the object code saying where to find the

Corresponding Source. Regardless of what server hosts the

Corresponding Source, you remain obligated to ensure that it is

available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided

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Source of the work are being offered to the general public at no

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A separable portion of the object code, whose source code is excluded

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adversely affects the operation of the network or violates the rules and

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Corresponding Source conveyed, and Installation Information provided,

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