Problem 4

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Problem 4

1/1 point (ungraded)

We also need a representation for a patient that accounts for the use of drug treatments and manages a collection of `ResistantVirus` instances. For this, we introduce the `TreatedPatient` class, which is a subclass of `Patient`. `TreatedPatient` must make use of the new methods in `ResistantVirus` and maintain the list of drugs that are administered to the patient.

Drugs are given to the patient using the TreatedPatient class's `addPrescription()` method. What happens when a drug is introduced? The drugs we consider **do not directly kill virus particles lacking resistance to the drug**, but prevent those virus particles from reproducing (much like actual drugs used to treat HIV). Virus particles with resistance to the drug continue to reproduce normally. Implement the `TreatedPatient` class.

Hint: `reproduce` function child resistances

If you are really unsure about how to think about what each child resistances should be changed to, here is a different approach. If the probability `mutProb` is successful, the child resistance switches. Otherwise, the child resistance stays the same as the parent resistance.

If you want to use numpy arrays, you should `import numpy as np` and use `np.METHOD_NAME` in your code.

```
# Enter your definitions for the ResistantVirus and TreatedPatient classes in this box.
# Part B: Problem 4
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# Part B: Problem 4: TreatedPatient Class
# 10.0/10.0 points (graded)
# We also need a representation for a patient that accounts for the use of drug treatments and manages a
# instances. For this, we introduce the TreatedPatient class, which is a subclass of Patient. TreatedPati
# methods in ResistantVirus and maintain the list of drugs that are administered to the patient.

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# drugs we consider do not directly kill virus particles lacking resistance to the drug, but prevent thos
# reproducing (much like actual drugs used to treat HIV). Virus particles with resistance to the drug cor
# Implement the TreatedPatient class.

```

Press ESC then TAB or click outside of the code editor to exit

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Test results

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```
CORRECT
```

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✔ Correct (1/1 point)

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