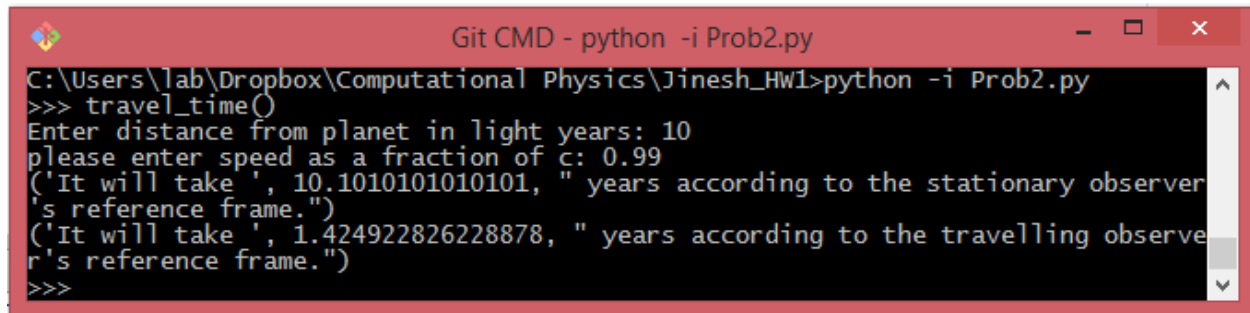


2. **Special relativity:** A spaceship travels from Earth in a straight line at a speed  $v$  to another planet  $x$  light years away. Write a program to ask the user for the value of  $x$  and the speed  $v$  as a fraction of the speed of light, then print out the time in years that the spaceship takes to reach its destination (a) in the rest frame of an observer on Earth and (b) as perceived by a passenger on board the ship. Use your program to calculate the answers for a planet 10 light years away with  $v = 0.99c$ .



```
Git CMD - python -i Prob2.py
C:\Users\lab\Dropbox\Computational Physics\Jinesh_HW1>python -i Prob2.py
>>> travel_time()
Enter distance from planet in light years: 10
please enter speed as a fraction of c: 0.99
('It will take ', 10.1010101010101, " years according to the stationary observer's reference frame.")
('It will take ', 1.424922826228878, " years according to the travelling observer's reference frame.")
>>>
```

- 1) Opened file from folder using CMD, and called the function `trave_time()`.
- 2) Prompted user distance and speed of craft as asked for in problem.
- 3) Outputted response of about 10.1 years for stationary observer and 1.42 years for moving observer.