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CS 101

Program 4: Meteorites

**Algorithm**

* Greet user ‘Hello Space Enthusiast!’
* Ask user for input of file ‘Which file is holding your meteorite data?’ (try/except, function)
* Ask user for output file ‘Which file do you use to place the preferred data?’ (try/except, function)
* Encode the files fh = open("sample.txt", "r", encoding="utf­8")
* Ask user for input of lat. and long. (try/except, split string into two degrees) (try/except, function)

Longitude [180,-180] and Latitude [90,-90]

‘Enter the Latitude and Longitude separated by a comma: ‘

* Ask user for input of ‘What is the radius in miles of meteorite landings?’

deltaLong = long2 − long1 deltaLat = lat2 − lat1 a = (sin(deltaLat/2)) os(lat1) os(lat2) sin(deltaLong/2)) 2 + c \* c \* ( 2 c = 2 \* atan2(√a, √1 − a) d = 3961 \* c # 3961 is the radius of the earth in miles

* Make sure the header of the input file is written to the output file
* Read input file to find the data that fits the users input and write to output file
* Ask user if they want to run the program again or not Y/YES/N/NO (try/except, function)