HACETTEPE UNIVERSITY

DEPARTMENT OF GEOMATICS ENGINEERING

GMT225

REFERENCE COORDINATE SYSTEMS

Assignment #2

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1. INTRODUCTION

In this code, our first goal is to convert the given Cartesian coordinates to the ellipse coordinate system and find their new positions.

2. METHODOLOGY

While writing this code, I first imported the numpy library. Then I wrote the code to enter the X, Y, Z coordinates of the point as float, and I wrote the code that will enter the input value that will select which ellipse conversion (GRS80 ellipsoid, WGS84 ellipsoid, PZ-90.02 ellipsoid). Lastly, I wrote the conversion function. While writing this function, I defined the transformation equations. I defined a while loop inside the function for iteration and while printing, I rounded the incomplete values to the exact value with the help of round functions.

3. RESULTS AND DISCUSSIONS

As a result, when I ran the function, the example in the homework instructions also gave the correct result.

4. ATTACHMENTS

Functions:

conversion( ):