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CS161 – Jess
Project 2
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GitHub link:

https://github.com/CWestLBCC/CS161-Project-2

1. Primes – Initially the math module will need to be imported. I chose to limit the user input between zero and one hundred for simplicity. If the number the user inputs is less than 2 it will return a False statement. Next the “math.sqrt” module can be used to validate if it is a prime number. It will return False if it is not. If it returns a True value the prime numbers will print as a list. This problem was the most difficult for me but I did figure it out on my own. My typo of the number one instead of the letter i on line 19 was the error.

2. Pbil – This program uses a while loop and prompts the user for a string input. The else function will end the game and print an error message if there’s a user error with the user input.

3. Turtle Polygons – Initially the turtle module will need to be imported. There will need to be a prompt for the user to input the sides of the polygon and the fill color. The formula for the angle will be taken from the formula given in the assignment. This will then need to be subtracted from 180 to get the correct angle to turn. This will be in an “if” loop that will use an “incorrect entry” in the else statement. I will also send the Turtle to the home position and make sure to add an exit on click at the end.

   Resources used were the formula from the assignment, Appendix B in the book, the Learning Center Tutor and https://docs.python.org/3/library/turtle.html.

   I needed to troubleshoot where the fill color would need to end and at what indent.

4. Number Guessing Game – Initially this will import the random module. The randint can be used to limit the number between zero and one hundred for simplicity. This will use a while loop and indicate the guessed number while it’s between zero and one hundred. Inside this loop will be if, elif, and else statements for when the number is too high, too low, or just right.

5. Chess / Wheat – A short paragraph introducing the game of chess will be at the beginning of the code. Initially the program will find the total grains of wheat paid to the inventor to the power of 64 minus one. This was easier than writing a for loop. Next the weight can be found by using the total grains times 50 mg. I assumed the measurements for wheat are 7 height x 3 width x 4 length on average. The total surface area can be found with the formula 2((3 x 4) + (7 x 4) + (7 x 3)). This can then be used

to find the total surface area using the total grains of wheat x the surface area of wheat. The calculations for the surface area of Oregon will need to be converted from km to mm by multiplying it by one million. Finally, finding the depth that the wheat will cover Oregon can be found by dividing the total surface area of the total wheat by the converted calculation of Oregon to mm^2. Resources used were the lecture information and my son verified my calculations.