Hands on coding assignment questions

1. Write a Python program that prompts the user to enter a sentence, and then prints out the sentence in reverse order (i.e. the last word first, and so on).

2. Write a Python program that reads in a CSV file with the following columns: name, age, and gender. The program should then prompt the user to enter a gender, and then print out the average age of all the people in the CSV file with that gender.

3. Write a Python program that prompts the user to enter a list of integers, and then finds the largest and smallest numbers in the list.

4. Write a Python program that reads in a text file, and then prints out the most common word in the file.

5. Write a Python program that prompts the user to enter a list of numbers, and then uses the bubble sort algorithm to sort the list in ascending order.

6. Write a Python program that prompts the user to enter a string, and then checks if the string is a palindrome (i.e. the same backwards as forwards).

7. Write a Python program that prompts the user to enter a list of strings, and then removes all duplicate strings from the list.

8. Write a Python program that reads in a CSV file with the following columns: name, salary, and department. The program should then print out the name of the person with the highest salary in each department.

9. Write a Python program that prompts the user to enter a list of integers, and then finds the median value of the list.

10. Write a Python program that prompts the user to enter a list of strings, and then uses the quicksort algorithm to sort the list in alphabetical order.

11. Write a Python program that prints out a pattern of stars in the shape of a triangle. The user should be prompted to enter the number of rows in the triangle.

12. Write a Python program that prompts the user to enter a number, and then prints out the Fibonacci sequence up to that number.

13. Write a Python program that prompts the user to enter a string, and then prints out all the permutations of the string.

14. Write a Python program that prompts the user to enter a number, and then prints out a multiplication table for that number up to 10. However, the table should only include odd numbers.

15. Write a Python program that prompts the user to enter a number, and then prints out a triangle of alternating numbers and stars. The triangle should start with the number 1 and alternate between numbers and stars on each row.

16. Write a Python program that prompts the user to enter a list of numbers, and then calculates the standard deviation of the list.

17. Write a Python program that prompts the user to enter a string, and then prints out the longest palindrome in the string.

18. Write a Python program that prompts the user to enter a number, and then prints out a pyramid of numbers. The first row should have one number, and each subsequent row should have two more numbers than the row above it.

19. Write a Python program that prompts the user to enter a list of integers, and then calculates the sum of all the numbers in the list that are divisible by 3 or 5.

20. Write a Python program that prompts the user to enter a number, and then prints out a triangle of numbers. The triangle should start with the number 1 and each subsequent row should have one more number than the row above it. However, each number in the triangle should be replaced with the sum of its digits.