5.1. Programming in Python:

1. Write a program that takes a string with multiple words and then capitalizes the first letter of each word and forms a new string out of it.
2. Write a python function to check whether the number is prime or not.
3. Write a python function that receives two numbers and generates a random number from that range. Using this function, the main program should print three numbers randomly.
4. Write a function that takes two numbers and returns the number that has minimum one’s digit.
5. Write a function to check whether the number entered by user is Armstrong number or not
6. Write a function to generate Fibonacci series upto nth term.
7. Write a function to take two strings and check if they are of same length.
8. Write a program to perform Insertion Sort
9. Write a function to perform Bubble Sort
10. Write a function to perform Binary Search
11. Write a Python function sin(x, n) to calculate the value of sin(x) using its Taylor series expansion up to n terms. Compare the values of sin(x) for different values of n with the correct value.
12. Write a random number generator that generates random numbers between 1 and 6 (simulates a dice).
13. Write a program Read a file line by line and print it.
14. Write a python program to read a file and print the contents after removing all punctuation marks
15. Write a python program to generate random numbers for password
16. Write a program to read the content from a file and write in another file.
17. Write a program to count the words “to” and “the” present in a text file “Article.txt”
18. Write a program that counts uppercase characters present in text file “Poem.txt”.
19. Write a program to remove all the lines that contain the character `a' in a file and write it to another file.
20. Write a program to read a text file and show the longest line from it.
21. Write a program to copy the lines which are starting from uppercase character to another file. Take the two filenames from user.
22. Write a program to Recursively find the factorial of a natural number.
23. Write a recursive code to find the sum of all elements of a list.
24. Write a recursive code to compute the nth Fibonacci number.
25. Write a program to perform recursive binary search.
26. Write a recursive a program to calculate power (a\*\*b)
27. Write a Python program to implement a stack and queue using a list data-structure.
28. Write a recursive Python program to test if a string is a palindrome or not.
29. Write a recursive code to compute Greatest Common divisor of two numbers.
30. Write a recursive code to generate Fibonacci series.
31. Write a recursive function to reverse a string and print it.
32. Using tkinter library create a graphical counter which increases per second and stops when stop button is pressed.
33. Using tkinter create a program that calculates the sum of two value entered by user and display the result in a label.
34. Create a graphical application that accepts user inputs, performs some operation on them, and then writes the output on the screen. For example, write a small calculator. Use the tkinter library.
35. Open a webpage using the urllib library.

35. Import the math module to calculate factorial,square and log2 of a number.