Exercise (H1.1)

Given the string “Sun Mon Tue Wed Thu Fri Sat”, write a program that prints

“Sun”
“Mon”
“Tue”
“Wed”
“Thu”
“Fri”
“Sat”

Exercise (H1.2)

Given a string A and a character B, write a program that prints the substring inside A contained between the first and the last occurrences of B.

E.g., given
A = “Lorem Ipsum is simply dummy text of the printing and typesetting industry”
B = “s”

the program prints “sum is simply dummy text of the printing and typesetting indus”.

Exercise (H1.3)

Given a positive even integer number A, write a program that prints N such that 2*N=A without using the division operator.

Exercise (H1.4)

Given a positive integer N, write a program that prints the first N prime numbers.

E.g., given N = 3, the program prints

2
3
5

Exercise (H1.5)

Given a string A, write a program that prints the longest word in A.

E.g., given A = “It is impossible”, the program prints “impossible”.

Exercise (H1.6)

Given an integer number N ≥2, write a program that prints a tree with N layers.

E.g., given N = 5, the program prints

```
    o
   ooo
  ooooo
 ooooooo
ooooooooo
    o
```

Exercise (H1.7)

Given two positive integer numbers A and B, write a program that prints their least common multiple and greatest common divisor.

Exercise (H1.8)

Given two strings A and B whose length are a multiple of 3, write a program that prints a new string C composed of triplets of characters of A followed by triplets of characters of B.

E.g., given A = “aaabbb”, B = “cccdddeee”, the program prints C = “aaacccbbbdddeee”.

Exercise (H1.9)

Given a string A and a character B, write a program that prints how many times the pair BB appears in A.

E.g., given A = “pippo” and B = “p”, the program prints 1.

Exercise (H1.10)

Create a simple calculator where the user inserts two numbers A and B, and a string that indicates an operation (like “sum ” or “+”, “sub” or “-”, “ mult” or “*”, “div” or “/”, etc), and the calculator shows the result.

Exercise (H1.11)

Write a program that prints the absolute value of a given number.

Exercise (H1.12)

Given two coordinates (x1,y1) and (x2,y2), write a program that prints the linear equation y = ax + b of the straight line passing from the two coordinates. Note that slope of a line (a) is the ratio of the change in the second coordinate to the change in the first coordinate (y2-y1)/(x2_x1).

Exercise (H1.13)

Given three numbers a, b and c, write a program that calculates and prints the solutions of a quadratic equation $ax^2 + bx + c = 0$.

Exercise (H1.14)

Given two strings A and B and an integer P, write a program which builds a new string in which A is inserted to the Pth position of B. Check that P is a possible index for B, otherwise the new string will be B.

Exercise (H.15)

Given a string containing a sequence of numbers, e.g. “3 54 23 11 678 43 23 22”, write a program that calculates and prints their minimum, maximum and average values.