

PYTHON - PART 4 - ACTIVITIES

Computer systems
CFGS DAW

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Nomenclatura

A lo largo de este tema se utilizarán distintos símbolos para distinguir elementos importantes dentro del contenido. Estos símbolos son:

🔗 Actividad opcional. Normalmente hace referencia a un contenido que se ha comentado en la documentación por encima o que no se ha hecho, pero es interesante que el alumno investigue y practique.

👁 Atención. Hace referencia a un tipo de actividad donde los alumnos suelen cometer equivocaciones.

💡 Pista. Información adicional que ayuda a la resolución del ejercicio.

PYTHON - PART 4 - ACTIVITIES

1. PREVIOUS INFORMATION

The objective of this unit is to use For and While loops properly.

2. ACTIVITIES

(1) Write a program that reads 10 numbers using a `for` loop and show us average value.

(2) Repeat last exercise again using `while` loop.

(3) Write a program that reads a number N. Then, this program has to read N numbers and tell us what is the maximum and minimum value using a `for` loop.

(4) Repeat last exercise again using `while` loop.

(5) Write a program that reads a number N and display the associated pattern like right angle triangle using an asterisk.

For example, for N=4:

*

**

(6) Create a single program that calculates Fibonacci number. You can find more info [here](#)

(7) Create a program that ask a number and shows “YES” if it a prime number, else if it is not. You can find information about prime numbers [here](#).

(8) Create a program that ask a number N and print the odd numbers from N to 0.

(9) Create a program that asks indefinitely for a text string. For each one of them, a folder will be created inside the PYB4EX9 which name will be the string. The request will be made until the directory name was END (in capital letters).

(10) Write a program to display the pattern like pyramid using the alphabet. The program requests for the number of rows. Sample Output:

```
      A
     A B A
    A B C B A
   A B C D C B A
  A B C D E D C B A
```

(11) Write a program to find one's complement of a binary number.

(12) Write a program to convert a decimal number to binary number.

(13) Write a calculator that allows conversion between number systems.
Sample:

```
1. Decimal to binary
2. Binary to decimal
3. Decimal to hexadecimal
4. Hexadecimal to decimal
5. Binary to hexadecimal
6. Hexadecimal to binary
7. Exit
```

Select an option: 1

Number: 54

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```
1. Decimal to binary
2. Binary to decimal
3. Decimal to hexadecimal
4. Hexadecimal to decimal
5. Binary to hexadecimal
6. Hexadecimal to binary
7. Exit
```

Select an option: 7

Bye!