

## FILES

### Problem 1

Write a C++ program that will create a file named "**cube.txt**" containing the cubes of the first 100 integers. That is, the file should contain the numbers 1, 8, 27, 64, 125,...1000000.

### Problem 1

Write a C++ Application who generate 200 random integers on range  $[0,100[$  (including 0, not including 100) and print in the file 'number.txt' only the ones less than or equal to 50.

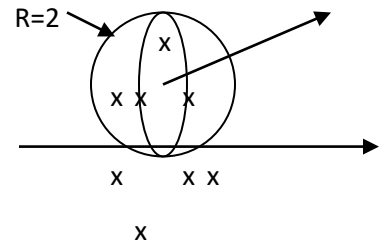
### Problem 3

Write a program that counts the number of times the substring 'and' appears in the input file 'in.txt', and writes this value to a file named 'out.txt'.

### Problem 4

Let 'point.txt' be a text file containing the positions  $(x_i, y_i, z_i)$  and the masses  $M_i$  of 200 particles (see form below) . Write a C++ program which copies from the file '**point.txt**' to '**pt100.txt**' File only the points lying inside a sphere of center O and radius  $R = 10$ .

$x_0$	$y_0$	$z_0$	$m_0$
.	.	.	.
.	.	.	.
$x_{99}$	$y_{99}$	$z_{99}$	$m_{99}$



### Problem 5

Write a C++ program that reads words from the external file named "input.txt", capitalizes them, and then writes them to the external file named "output.txt".

### Problem 6

Write a C++ program who merges two files into a third file. The numbers stored in the files “north.dat” and “south.dat” are sorted in increasing order. The program reads these two input files simultaneously and copies all their data to the file “combined.dat” so that they are all together in increasing order.

