Fundamentals of Programming 2
Exercise sheet 7 5%

Deadline for upload Friday 8th of March 6pm.

*** READ THE QUESTIONS CAREFULLY ***
*** NAME YOUR FILES Question1.java and Question2.java ***
*** SUBMIT NEAT, COMMENTED AND INDENTED CODE ***

Question 1

Write a Java program that reads the contents of the *names.txt* and *descriptions.txt* files that can be downloaded from MOODLE. The names.txt file contains the names of seven computer scientists and the descriptions.txt file contains a description for each of the seven scientists. You must use a method with the following signature in your solution.

```
public static void readFile(String filename, String[] array)
```

Your program output should look as follows:

```
Larry Page
Larry Page and Sergey Brin, the co-founders of Google, changed the way we access and use information on the internet.

Bjarne Stroustrup
Bjarne Stroustrup is a Danish computer scientist, most notable for the invention and development of the C++ programming language.

Ken Thompson
Ken Thompson created the Unix operating system and invented the B programming language.

Grace Hopper
Grace Hopper was a computer scientist and United States Navy Rear Admiral, born in 1906. She is known for her work on developing the first compiler.

Margaret Hamilton
Margaret Hamilton was director of the Software Engineering Division of the MIT Instrumentation Laboratory, which developed on-board flight software for NASA's Apollo program.

Hedy Lamarr
Hedy Lamarr was an Austrian-American actress and inventor who pioneered the technology that would one day form the basis for today's WiFi, GPS, and Bluetooth communication systems.

Guido van Rossum
Guido van Rossum is a Dutch programmer best known as the creator of the Python programming language.
```

Question 2

Part 1)

Write a function called **generatePassword** that generates a random password of **length 18** that may contain lowercase, uppercase, digits, and special characters.

TIP: See lecture 9 from semester 1.

Your **generatePassword** function should have the following signature.

```
public static String generatePassword()
```

The generatePassword function should generate a password similar to:

```
.j>("@H@P<M$p,.ECM
```

Part 2)

Write code that uses the generatePassword function to write 20 random password to a file called ***passwords.txt***. The passwords.txt file should look similar to the following example:

```
`zft2!N.u+qsX&;Sty
Yg&0{VofLE7gJbvWE2
@tD6A,}/0M%pnv-W}]
*pp,z$U+1_Jrfd>"?,
SLTAU[e:TN?) r(0;=
t<0QdQ#Q* I^B@PV+I
dXx}+1A$#E $N_nfTf
Y7K9rElgc#il9g2 Hh
EOUFqleU{fp<eXN({/
0)4vg-V/J=i=kX1v*x
S:I*;I#2QmJ]|+mI2W
.j>("@H@P<M$p,.ECM
0R(/$7Z8yjN@>R:}E[
U2C#)U"%K>a;x*qIBs
M3 PZTj/pWoQ&kM?SO
W0-Ck(Cyw`g0}b..\6
DqWXSSr.j4fa0=>LdY
Ur n's7\BUcYrN}lZ&
aJj}av':ezm+Yh0td_
```