

Problem 1 - Password Cracker

Java Exclusive

Create a password cracking program (Lockpicking Style). This program should crack any password stored in an array.

(You can search the ASCII Table on the internet for reference)

(Hint: How do you open a lock using a lockpick?)

Input Format: No input is needed from the user.

Restriction: No imports are allowed. Also do not just copy the string, there must be a password-cracking algorithm present.\

Output Format: Print the cracked password.

Sample:

```
/* Imagine this password is hidden and you do not know it, make  
an algorithm that'll crack it */
```

Test Input:

```
String password = "AaZz\\|]{123 !@# \"$%^&*9 87Æ~ü";
```

Rubrics

Lockpick Password			
Points per Category	Lengthiness	Functionality	Total
0	101&101+ Lines of Code	Cannot crack any kind of password	
10	81-100 Lines of Code	Can crack number-only passwords	
20	61-80 Lines of Code	Can crack alphanumeric passwords	
30	51-60 Lines of Code	Can crack alphanumeric with space passwords	
45	41-50 Lines of Code	Can crack everything above and symbols	
60	40 or Less Lines of Code	Can crack all above and even some special characters (ü, Å, ~, etc.)	
Perfect Score	60	60	120

Submit the code here: https://bit.ly/iskode_PasswordCracker

Problem 2 - DNA

Java Exclusive

Write a program that creates a DNA structure using trigonometric functions. You can put as many base pairs as you want. It must have a visible slim center column in the middle of the dna structure to represent the hydrogen bonds.

Input Format: No inputs are needed from the client.

Restrictions: You cannot use any imports. You must use trigonometric functions to build the sugar-phosphate backbone. You may only use **Java** for this problem

Output Format: Make use of what is present in the ASCII Table (You can search the ASCII Table on the internet) when picking characters for the art design.

Note: This program is expected to produce ASCII art, so what the output looks like is what matters.

Rubrics

DNA

Points per Category	Lengthiness	Parts Present	Total
0	201&201+ Lines of Code	No Parts Present	
10	151-200 Lines of Code		
20	111-150 Lines of Code		
40	81-110 Lines of Code	Sugar-Phosphate Backbone Only	
50	51-80 Lines of Code	SP Backbone and Base Pairs Only	
60	50 or Less Lines of Code	Complete	
Perfect Score	60	80	140

Submit the code here: https://bit.ly/iskode_DNA