

CSC211: Practical 1 [Marks].

DEADLINE: 24 Feb, 2023 @ 10:00 PM. NB: No excuses for late hand-ins

Welcome to your first practical, CSC211 students. This is a revision practical to see how well you grasp your first year Java knowledge and skills.

Question 1: Valid UWC account password [20 marks]

Introduction: At UWC, students are strongly encouraged to change their password as soon as they complete their initial login. To do so, please follow this [link](#), or copy and paste the link below into your browser.

Changing your password is important to protect your account since all UWC essential services share this account. We highly recommend taking this step to safeguard your information.

Link: <https://mypassword.uwc.ac.za/>

Task: Create a class called `Practical11`, inside the class write a method called `verifyPassword` that takes in a String password and returns a Boolean detecting whether the given password String is valid.

Instructions:

- Create a class called **Practical11**
- Write a method `verifyPassword`
 - Takes in a String “password” as variable
 - Returns Boolean detecting whether the given password is valid based on the following rules:

Validation rules:

- Minimum length: 8
- Minimum number of lowercase characters: 1
- Minimum number of uppercase characters: 1
- Minimum number of digits: 1
- Minimum number of special characters: 1

For bonus, display/print out the invalid reason or reasons before returning the Boolean, based on the Boolean output whether the password is valid with a message.

Question 2: File read write [30 marks]

You have been tasked with creating a class called **Practical12**, which can read in a text file named **rhyme.txt** containing a welcoming rhyme to second-year computer science students. Once the file is read, the class should then write a new file called **rhyme2.txt** in the following format:

[Verse number][Line number] line from file.

To accomplish this, you will need to use file input and output operations within the class.

Instructions:

1. Create a class **Practical12** to read in **rhyme.txt**
2. Loop or do something to keep track of each line and verse
3. Create a new text file **Rhyme2.txt**
4. Write each new line in the format displayed below to the file **Rhyme2.txt**:

[Verse number] [Line number] line from file

5. Write your full name and student number at the end or beginning of the text file.

Sample Input:

The moon shines bright in the midnight sky,
As I lay here and wonder why,
The stars twinkle, one by one,
A peaceful sight, when day is done.

The night is calm, and all is still,
A moment to rest, and just be still,
With the gentle breeze, and the rustling trees,
I drift away, to a place of peace.

Sample Output:

[1][1] The moon shines bright in the midnight sky,
[1][2] As I lay here and wonder why,
[1][3] The stars twinkle, one by one,
[1][4] A peaceful sight, when day is done.

[2][1] The night is calm, and all is still,
[2][2] A moment to rest, and just be still,
[2][3] With the gentle breeze, and the rustling trees,
[2][4] I drift away, to a place of peace.

NB: Please use the chat room on iKamva for queries about the practical, and csc211UWC2023@gmail.com for other personal queries.

SUBMISSION AND GRADING

Please submit a (zipped) folder named **StudentNumber_Practical_1.zip**, which contains your java implementation (**NB: only JAVA codes should be submitted, not .class files or IDE folder structures**). Also, please **comment your name, student number, file name and Practical 1 in each Java file**.

Marks will be allocated as follows:

S/N	Task	Points
	Question 1	20
	Question 2	30

WARNING: ACADEMIC DISHONESTY/PLAGIARISM

We cannot over emphasize this. Please be warned that tutors and markers will run your report/solution through a plagiarism checker. Any person found guilty of plagiarizing will get zero for this assignment and will face the university's disciplinary action. We do encourage you to share ideas but we also draw a careful line between that and plagiarism.

Note that any persons that allow their work to be copied will also be guilty of this offence. So, please always guide your assignment with all diligence, and describe the solution in your own way as much as possible.

Good luck!