

Exercises

On

Python

**INSTRUCTIONS –**

1. Create separate jupyter notebook for each exercise.
2. Use Comments for better understanding of code.

**Exercise 1**

**Email validator:-**

Make a program to check whether an email address is valid or not.

For instance, you could make sure that there are no spaces, and there is “@” symbol and a dot somewhere after it. Also check the length of the parts at the start, and that the end parts of the address are not blank.

Extensions:

1. Allow the user to choose to give a text file with a list of email addresses and have it process them all automatically.

**Exercise 2**

**Password reset program:-**

Only accept a new password if it is:

1. At least eight characters long
2. Has lower case and upper case letters.

The password reset program should also make the user input their new password twice so that the computer knows that the user has not made any mistakes when typing their new password.

Extensions:

1. Make some sort of algorithm to suggest how strong the password is (Weak, Medium, Strong) depending on length, whether or not the password has special characters in etc
2. Let the user input their username. The program should go to a text file with a list of usernames and old passwords, and the program should only let you change your password if you input your old password.

**Exercise 3**

**Make a two-player Rock-Paper-Scissors game:-**

**Instructions:-**

1. Ask for name of the players who are playing (using input)
2. Compare them
3. Print out a message of congratulations to the winner.

**Exercise 4**

Generate a random number between 1 and 9 (including 1 and 9). Ask the user to guess the number, then tell them whether they guessed too low, too high, or exactly right.

**Exercise 5**

Given a .txt file that has a list of a bunch of records and the record looks like this:

**agent-2030-1517462070-2038-preview\_Cross\_Sales-2018\_02\_01\_10\_44\_30-9999999910.mp3**

This record consist of date, time and phone number of a customer.

Date –> 2018\_02\_01

Time –> 10\_44\_30

Phone No -> 9999999910

**Instructions:-**

1. Read the text file.
2. Filter records on the basis of phone number.
3. Write filtered records in new text file.
4. Print filtered records.