

# Python Network & DB Programming

## OutLab-8

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### Submission Guidelines for assignment

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1. In the file readme.txt in the team-name directory, which contains the contribution of each team member, roll number and references (cite where you get code/code snippets from).
2. Rename the directory team-name to actual team name instead of  
E.g. Coders
3. Compress the directory to <team\_name>.tar.gz  
e.g. coders.tar.gz
4. Submit one assignment per team. Please.

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### Problem 1

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“a word, phrase, or sequence that reads the same backwards as forwards, e.g. *madam* or *Malayalam*; is known as a Palindrome”

- Diptesh Kanojia (After a Google search)

Create a module **ISPALIN.py** in which you have to create a function **ISPALIN()** which takes a string as a parameter and returns a boolean indicating whether the string is a palindrome or not.

Now, create one python program **q1.py** in which you take **T** strings as input and output Yes/No by using the module **ISPALIN**.

**Input:-** First line of input contains a single integer T, the number of test cases. Each of the next T lines contains a string S.

**Output:-** For each string S, output Yes/No if they are palindrome or not.

**Example Input:-**

5  
GhhG

Kite  
LoL  
PesP  
Pp

**Example Output:-**

Yes  
No  
Yes  
No  
No

**Please Use q1.py file provided.**

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**Problem 2**  
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The first semester is quite hectic as first-year students and you have to open moodle and check discussions every now and then by surfing through links. You come up with an idea to have a database and just open it to see the comments and topics posted by Diptesh Kanojia for CS699.

You need to write a python program that (which when run) will create a database name **CS699\_DB** that contains Discussion topics in the **announcements** section by Diptesh Kanojia (on moodle for CS699) with table name as **ANNOUNCEMENT\_INFO**. The table should have three columns which contain the topic of discussion, the content of the parent post of the discussion (ignore replies) and the date of the parent post.

Create a class **CS699** which initializes a session and creates the database **CS699\_DB**. This init method should also create the table. Also, create separate methods for each of the following operation:

- Logging into Moodle
- Populating that table
- Printing content of the table

**Note:-** while taking a password as input use **getpass.getpass** method

The table structure is as follows:

Topic (Text)	Comment (Text)	Topic_Date (Date)
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Finally, print the contents of table **ANNOUNCEMENT\_INFO**.

**Input:-** ldap username and password used for logging into Moodle.

**Output:-** Database content

Example:-

```
>python3 q2.py
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Enter ldap Username:-

Enter ldap Password:-

'Printing the table'

For doing the above work you can follow these steps:

1. Take LDAP id and password from user input
2. Establish a login session in moodle
3. Find the link for the course CS 699 on your start page in moodle
4. Find the link for Announcement Forum on the course page
5. Establish Database link (create database **CS699\_DB**).
6. Create table **ANNOUNCEMENT\_INFO**.
7. Find Diptesh Kanojia name and insert topic, the content of topic and date of comment inside the table.
8. At last print the table **ANNOUNCEMENT\_INFO** with content from the database.

**NOTE:** The above 8 steps are given only to help you to solve the problem. You may use BeautifulSoup to do this.

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Problem 3  
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Write a separate Client (**q3c.py**) and Server (**q3s.py**) program where a client invokes a procedure **ISPALIN** created in OutLab Question1 on a server and the server returns the result of that procedure to the client using the concept of RPC (Remote procedure call - XML RPC module in Python). In this case the server will find whether the string given by the client is a palindrome or not and returns the corresponding result to the client who prints out the result.

For testing, you can create two terminal instances and run the server in one of them and client in the other. Also, note that you should run the server first and then the client.

Example:

**Input:**

AbcbA

XYZ

**Output:**

Yes

No

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## Problem 4

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Web scraping using StackAPI.

**Write a python program to** take multiword input from the user - example: "python Django".

Based on this input we expect you to extract questions from StackOverflow using StackAPI which contains all the words in the provided input i.e. "python" **and** "Django". Questions should be fetched only if there is an accepted (green ticked) answer to it.

Store in a CSV file:

1. the question links
2. their corresponding accepted answer links
3. all the tags which are attached to the questions

As an output, create a new CSV file with the name as ***tag1\_tag2\_.....\_tagn.csv*** for n-words in your input argument.

Example argument: ***python django***:

Filename: python\_django.csv

CSV file format:

**question\_id, tag, link, tags, accepted\_answer**

*the tag* should contain all the tags in the input separated by "\_".

Explore the use of StackAPI, this should be very useful for you.