

SEM 4 MICRO-PROJECT

VIRTUAL PROGRAMING LAB

PROJECT BY:

DSE_01_RHISHIKESH CHAUGHULE

DSE_03_VINAYAK KAPALE

DSE_ANIL SAHU

DSE_SANIKA VIDHATE

ABSTRACT

- VPL-Virtual Programming Lab is the easy way to manage programming assignments. Its features of editing, running and evaluation of programs makes learning process for students, and the evaluation task for teachers, easier than ever. Virtual labs is a web development technology. It does not require any additional infrastructural setup for conducting experiments at user premises. The simulations-based experiments can be accessed remotely via internet. This would help students in learning basic and advanced concepts through remote experimentation. VPL is an activity module that manage programming assignments and whose salient features are:
 - Enable to edit the programs source code in the browser.
 - Students can run interactively programs in the browser.
 - Students can test their knowledge through online quiz and assignments.
 - Even faculty members can do continuous assessment as per defined timeline and get feedback of conducted lab session

INTRODUCTION

- The teaching of programming is essential for the development of computer applications and for evolution of technology. The assignments of the early programming courses usually present difficulties for students and need teacher's strong monitoring, for correction and overall orientation towards correct assessment. In this context, virtual learning environment is an important tool on how to teach (and learn) programming. One of these tools is VPL (Virtual Programming Lab) a plug-in developed specifically for Moodle (Modular Object-Oriented Dynamic Learning Environment). This tool allows to edit and execute programs, in a large range of languages, and enables automatic assessment and prompt feedback VPL stores historic results about compilation and implementation of the proposed problems, tracking the student's submissions.

PROBLEM STATEMENT

- To develop a centralized system which will help students in their academics, as well as integrate a platform over which students, teachers from all departments can interact with each other for the overall growth of students.

OBJECTIVE OF PROPOSED SYSTEM

- To reduce the work of students as they keep on writing manuals which takes ample of time.
- The efficient way is after assignments, less effort is required as the student does not need so much attention and assignments grading is much easier using this VPL.

HARDWARE AND SOFTWARE DESIGN

HARDWARE REQUIREMENTS

- RAM : 512 MB RAM
- Hard Drive : 40 GB Hard Drive
- Processor : Intel Core 2 Processor

SOFTWARE REQUIREMENTS

- Languages Used:- CSS,HTML
- Platform:- Windows 10
- The above specified requirements are minimum to run the application.

DESIGN DETAILS:

Functional Requirements:

- In functional requirement, we describe the module we require to develop this project. Functional requirements should include functions performed by specific screens, outlines of workflows performed by the system and other business or compliance requirements the system must meet.

Interface Requirements:

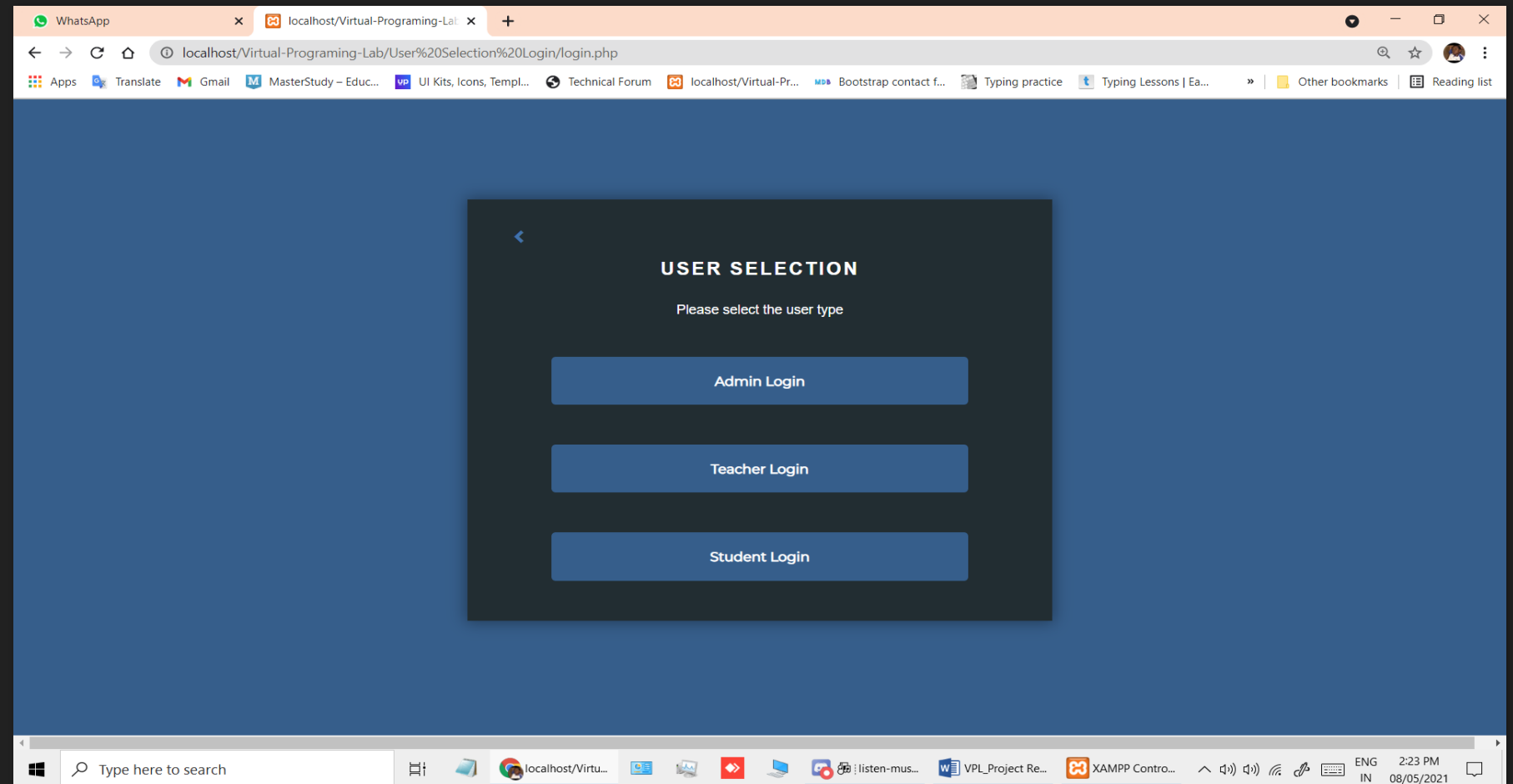
- Field accepts valid data like in password entry it should be more than 8 character-length
- Field accepts numeric data entry
- Field only accepts dates before the current date

Security Requirements:

- Students, Teachers and Admin can use their own username and password for login.
- Admins and teachers can view the the experiments performed by students and can change the introduction related to experiments accordingly

IMPLEMENTATION & RESULT

LOGIN FORM:



STUDENT HOME PAGE:



The screenshot displays a web browser window with the URL `localhost/Virtual-Programing-Lab/Student%20Index/studentindex.php`. The page features a dark blue header with the text "VPL" on the left and navigation links "COURSES", "ABOUT", and "LOGOUT" on the right. The main content area has a dark background with the title "Virtual Lab" in large white font, followed by the tagline "Perform, Practice and Learn". Below this is a search bar with the placeholder text "Search Courses.." and a red search button. The "COURSES" section is highlighted in blue text. Two course cards are visible: "java" with a Java logo and "c Programming" with a C logo. The Windows taskbar at the bottom shows the search bar, task view button, and several open applications including the browser, a music player, and a Word document titled "VPL_Project Report ...". The system clock indicates the time is 2:26 PM on 08/05/2021.

WhatsApp localhost/Virtual-Programing-Lab x +

localhost/Virtual-Programing-Lab/Student%20Index/studentindex.php

Apps Translate Gmail MasterStudy – Educ... UI Kits, Icons, Templ... Technical Forum localhost/Virtual-Pr... Bootstrap contact f... Typing practice Typing Lessons | Ea... Other bookmarks Reading list

VPL COURSES ABOUT LOGOUT

Virtual Lab

Perform, Practice and Learn

Search Courses..

COURSES



java

Java is a popular programming language



c Programming

C is a powerful general purpose

Type here to search

localhost/Virtual-Pr... listen-music - ... VPL_Project Report ...

ENG IN 2:26 PM 08/05/2021

JAVA COMPILER PAGE:

The screenshot shows a web browser window with two tabs: 'WhatsApp' and 'Java Console'. The active tab is 'Java Console', displaying the URL `localhost/Virtual-Programing-Lab/Online-Compiler-Windows-Server-master/javaConsole.php`. The browser's address bar and bookmarks are visible. The web application interface has a dark blue header with 'VL' on the left and 'HOME' and 'SUBMIT' on the right. The main content area is titled 'Java' and contains three sections: 'Code' with a text area labeled 'Write Your Code here', 'Input' with a text area labeled 'Enter Your Input', and 'Output' with a text area labeled 'Output appears here'. A blue bar with a play button icon is positioned above the 'Code' and 'Input' sections. The Windows taskbar at the bottom shows the search bar, task view button, and several open applications including 'Java Console - G...', '326811143 - Any...', 'listen-music...', and 'VPL_Project Rep...'. The system clock indicates 2:58 PM on 08/05/2021.

WhatsApp x Java Console x +

localhost/Virtual-Programing-Lab/Online-Compiler-Windows-Server-master/javaConsole.php

Apps Translate Gmail MasterStudy – Educ... UI Kits, Icons, Templ... Technical Forum localhost/Virtual-Pr... Bootstrap contact f... Typing practice Typing Lessons | Ea... Other bookmarks Reading list

VL HOME SUBMIT

Java

Code
Write Your Code here

Input
Enter Your Input

Output
Output appears here

Type here to search

Java Console - G... 326811143 - Any... listen-music... VPL_Project Rep...

ENG IN 2:58 PM 08/05/2021

C PROGRAMMING COMPILER:

The screenshot shows a web browser window with the address bar displaying `localhost/Virtual-Programing-Lab/Online-Compiler-Windows-Server-master/cConsole.php`. The browser's tab bar shows 'WhatsApp' and 'C Console'. The page has a dark blue header with 'VL' on the left and 'Exit HOME' on the right. The main content area is dark gray and titled 'c Programing' in the center. It features three main sections: 'Code' on the left with a text area containing 'Write Your Code here', a red 'Run Code' button below it, and an 'Output' section at the bottom with a text area containing 'Output appears here'. On the right side, there is an 'Input' section with a text area containing 'Enter Your Input'. The Windows taskbar at the bottom includes a search bar, task view icon, and several open applications: 'C Console - Goo...', '326811143 - Any...', and 'VPL_Project Rep...'. The system tray on the right shows the date '08/05/2021' and time '3:00 PM'.

WhatsApp C Console +

localhost/Virtual-Programing-Lab/Online-Compiler-Windows-Server-master/cConsole.php

Apps Translate Gmail MasterStudy – Educ... UI Kits, Icons, Templ... Technical Forum localhost/Virtual-Pr... Bootstrap contact f... Typing practice Typing Lessons | Ea... Other bookmarks Reading list

VL Exit HOME

c Programing

Code

Write Your Code here

Run Code

Output

Output appears here

Input

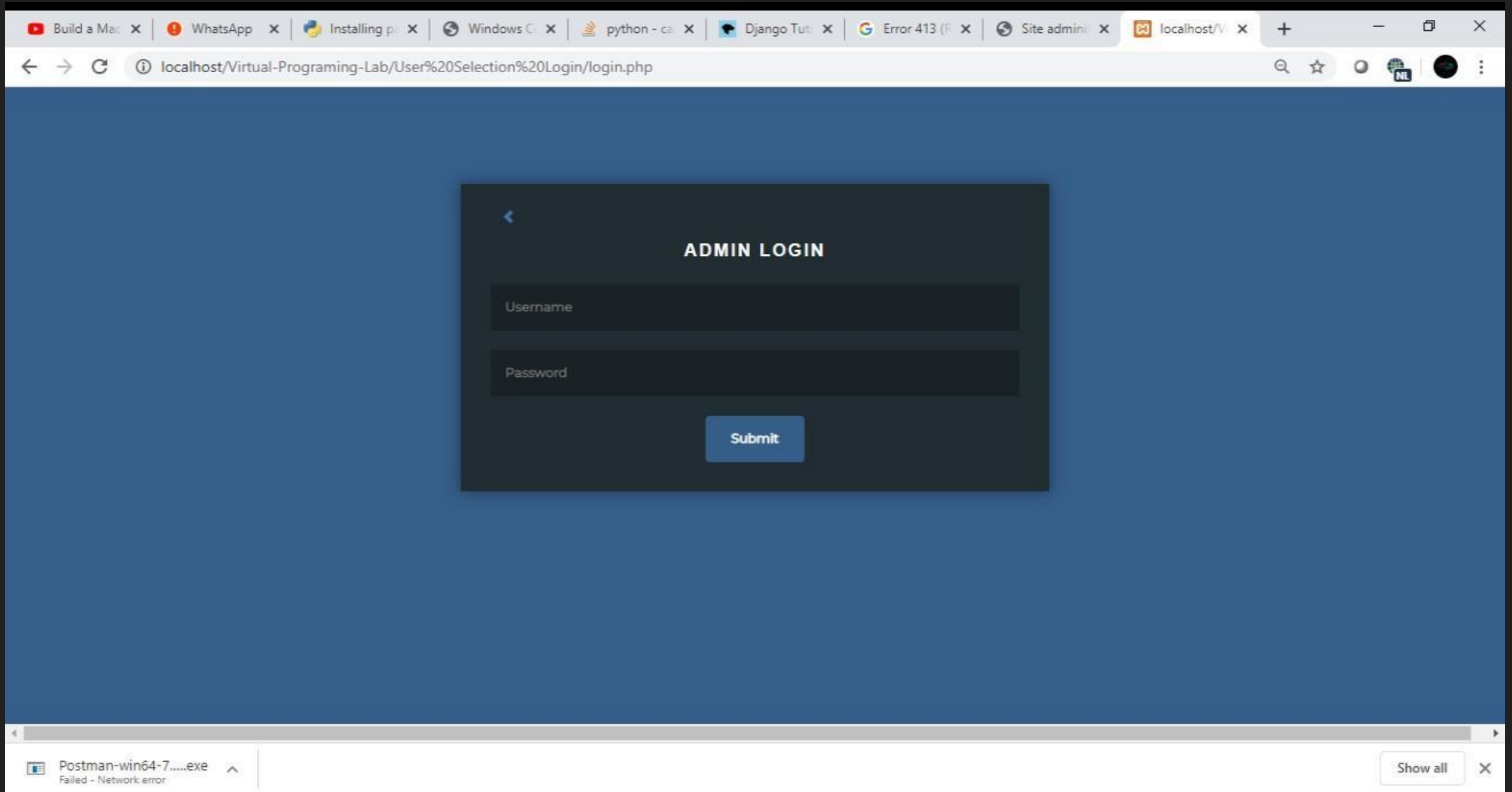
Enter Your Input

Type here to search

C Console - Goo... 326811143 - Any... VPL_Project Rep...

ENG IN 3:00 PM 08/05/2021

ADMIN LOGIN:



ADMIN PANEL:

Build a Mac x

WhatsApp x

Installing p x

Windows C x

python - c x

Django Tut x

Error 413 (F x

Site admini x

localhost/V x

+

—

📄

✕

localhost/Virtual-Programing-Lab/Admin%20Index/addadmin.php

🔍 ☆ 🔄 🌐 🖱

VLAdminTeacherStudentHOME

ADD ADMIN PANEL

USERNAME

Username

PASSWORD

Password

REPEAT PASSWORD

Repeat Password

Register Admin

Postman-win64-7.....exe

Failed - Network error

Show all

✕

Build a Mac xWhatsApp xInstalling p xWindows C xpython - ca xDjango Tut xError 413 (F xSite admini xlocalhost/V x

localhost/Virtual-Programing-Lab/Admin%20Index/viewadmin.php

VLAdminTeacherStudentHOME

ADMIN VIEW

#	Username	Options
1	gaurav	Delete
2	rohit	Delete

Postman-win64-7.....exeFailed - Network errorShow all x

TEACHER PANEL:

Build a Mac x WhatsApp x Installing p x Windows C x python - ca x Django Tut x Error 413 (F x Site admini x localhost/V x

localhost/Virtual-Programing-Lab/Admin%20Index/viewteacher.php

VL Admin Teacher Student HOME

TEACHER VIEW

#	Username	Options
1	gaurav	Delete

Postman-win64-7.....exe Failed - Network error Show all x

VL

Student

HOME

STUDENT PROGRESS VIEW

#	Exp-Name	Code	Input	Output	View All
1	exp1-palindrome	View	View	View	View
2	exp2-Simple Interest	View	View	View	View
3	exp3-arrays1	View	View	View	View
4	exp5	View	View	View	View
11	exp22	View	View	View	View
12	exp12345678	View	View	View	View
13	name	View	View	View	View
14	TestExp1	View	View	View	View

CONCLUSION:

- Thus, using these technologies VPL i.e. Virtual Programming Lab was developed for helping students increase their productivity and efficiency.
- With the help of VPL it will reduce the work of writing manuals which takes lot of time and also teachers can view the Student Progress.

FUTURE SCOPE:

- The student and mainly for the teacher. This is because the teacher must plan its activities accordingly, in order to prepare assignments, configure testing environments, and validation parametrization. These tasks take a lot of time. However, after assignments, less effort is required as the student does not need so much attention and assignments grading are much easier. With this system Prospects for all these systems would include to increase their efficiency and to improve their security.

REFERENCES:

- <https://getbootstrap.com/docs/4.0/examples/>
- https://codepen.io/?cf_chl_captcha_tk=6dc9d91c30f6b3eee674c1c12c6cdb1796ec2cd7-1588451736-0-ARNBgooOlwCe7CPgEvWqBNLDVEF35m7IztNyui1QGTrqt6ZBDIYJVB2BDv5mCoxjT-TxwiCScFsyoj5Fs_WPvYDZvmJ60hQ3Rkhd0HXzegcSkIF6k89gN5H0vXNHZ3E6UdTUz4j_6rtSZtumwEIUL53D20w949IJRHPmVmXuX3ZfD6bHpFJrAUq3QDIDe-1cj2LVacUITI7_fogEa5G3kZzCZJxL-cqH518QU9aUnTmntuZG6M4Fj5cm8xk1DgqQ5yAUS5uVTENfpmLK6biCRMeBW0i748KLKKfosdqpdVcvfUia7nYRL2b5yCC8Lc1KHGaX0hXJ753xgODEMuDTT8-AFGAS4ORYbM3CdZruPpXyRTOHETJ_G_V9R7G_jAo-6w1XAwe5LmUKpVtyjMNMwXCQfmyo8j1krIHlz7IR7YVviK8qOlubPPDQ81tFz-5bS-BxXRcXz5bLKPqYBpe2WGjti77TOZDbeYTzYbJ6d7ZxSbUizk5pwBAw05g9XHZ2kXHf0hqFOy1kcwpfus_jhRc9UcqX8QYDUrC_YP-FkPlId

THANK YOU