

# **PROGRAMMERSTECH SUMMER INTERNSHIP 2024**

**PYTHON PROGRAMMING**



# WHO WE ARE

- **PROGRAMMERSTECH** IS A REGISTERED **GLOBAL** COMMUNITY THAT WORKS ON COMPREHENSIVE INFORMATION ABOUT UPCOMING AND LATEST **INTERNSHIPS** AND **JOB UPDATES**. WE ARE ON A MISSION TO BUILD GLOBAL COMMUNITY WITH VARIOUS STARTUPS AND **COMPANIES** WHICH WILL HELP STUDENTS TO BUILD THEMSELVES. MANY PEOPLE ARE NOT GETTING THE UPDATES DUE TO LACK OF **OPPORTUNITY**, LACK OF RESOURCES, LACK OF AWARENESS THAT WHAT IS GOING ON IN THE **CORPORATE** SECTOR. TO MEET THE NEED OF SUCH PEOPLE WE MADE **PROGRAMMERSTECH**.

**"BUILD YOURSELF IN WHICH YOU ARE PASSIONATE!"**





# LINKEDIN PROFILE IMPROVEMENT (MANDATORY TASK)

- MAKE A POST AND PUBLISH IT ON YOUR **LINKEDIN PROFILE** TO SHOWCASE YOUR SELECTION  
  
CERTIFICATE & OFFER LETTER(TAG **PROGRAMMERSTECH**)
- HAVE AT LEAST **500 CONNECTIONS** ON YOUR LINKEDIN PROFILE, LIKE:
- CONNECT WITH NEW PEOPLE ACROSS THE **GLOBE**.
- CONNECT WITH ALUMNI, TEACHERS FROM YOUR COLLEGE & AND OTHER COLLEGES.
- CONNECT WITH **INDUSTRIAL EXPERTS**.
- CONNECT WITH YOUR COLLEAGUES AND OTHER STUDENTS FROM **DIFFERENT COUNTRIES**.
- ADD "WEBSITE DEVELOPER INTERN AT **PROGRAMMERSTECH**" IN YOUR LINKEDIN PROFILE HEADER.
- ADD YOUR **WEB DEVELOPER** EXPERIENCE WITH PT IN YOUR SKILLS AND EXPERIENCE SECTION





# TASK 1

## CALCULATOR APPLICATION

CREATE A SIMPLE **CALCULATOR APPLICATION**

THAT CAN PERFORM BASIC **ARITHMETIC** OPERATIONS

SUCH AS

ADDITION, SUBTRACTION, MULTIPLICATION, AND DIVISION.

### **TOOLS/TECHNOLOGIES:**

GUI INTERFACE



## TASK 2

Demo:

[https://drive.google.com/file/d/1nw\\_Q86T7yurSCY6Px5Z\\_vVk5WIZ6zQgg/view](https://drive.google.com/file/d/1nw_Q86T7yurSCY6Px5Z_vVk5WIZ6zQgg/view)

# PASSWORD GENERATOR

A PASSWORD GENERATOR IS A USEFUL TOOL THAT GENERATES STRONG AND RANDOM PASSWORDS FOR USERS.

THIS PROJECT AIMS TO CREATE A PASSWORD GENERATOR APPLICATION USING PYTHON, ALLOWING USERS TO SPECIFY THE LENGTH AND COMPLEXITY OF THE PASSWORD.

USER INPUT: PROMPT THE USER TO SPECIFY THE DESIRED LENGTH OF THE PASSWORD.

GENERATE PASSWORD: USE A COMBINATION OF RANDOM CHARACTERS TO GENERATE A PASSWORD OF THE SPECIFIED LENGTH.

DISPLAY THE PASSWORD: PRINT THE GENERATED PASSWORD ON THE SCREEN.



## TASK 3

# Clone a Desktop Chat Application

- Objective:** Develop a desktop chat application resembling popular messaging platforms.
- Tools/Technologies:** Python, Tkinter (GUI), sockets (networking).
- GUI Design:** Create a user-friendly interface with chat history, message input, and user list.
- Networking Setup:** Implement client-server architecture using Python sockets for real-time messaging.
- User Authentication:** Optional user registration/login with authentication for chat access.
- Chat Functionality:** Enable text messaging, emojis, and file attachments between users.
- User Interaction:** Support group chat rooms, private messaging, and user status indicators.
- Persistence:** Log chat messages locally or in a database for reference.
- Security Measures:** Implement encryption for message security (bonus).
- Testing and Documentation:** Ensure functionality through testing; document usage and technical details.





# TASK 4

## QUIZ GAME

- DEVELOP A QUIZ GAME THAT ASKS USERS MULTIPLE-CHOICE OR FILL-IN-THE-BLANK QUESTIONS ON A SPECIFIC TOPIC. THE GAME
- SHOULD KEEP TRACK OF SCORES, PROVIDE FEEDBACK ON CORRECT/INCORRECT ANSWERS, AND OFFER A VARIETY OF QUESTIONS TO MAKE
- IT CHALLENGING AND ENGAGING.
- LOAD QUIZ QUESTIONS.
- DISPLAY WELCOME MESSAGE AND RULES. FOR DEMO: [HTTPS://DRIVE.GOOGLE.COM/FILE/D/1OGJY1NE0RHTKB-ZIWTFUN6JS-GLFBLU-/VIEW](https://drive.google.com/file/d/1OGJY1NE0RHTKB-ZIWTFUN6JS-GLFBLU-/view)
- PRESENT QUIZ QUESTIONS:
- DISPLAY EACH QUESTION AND ANSWER CHOICE.
- PROMPT THE USER TO SELECT AN ANSWER.
- EVALUATE THE USER'S ANSWER: AND COMPARE THE USER'S ANSWER WITH THE CORRECT ANSWER.
- KEEP TRACK OF THE USER'S SCORE. AND PROVIDE FEEDBACK:
- DISPLAY IF THE ANSWER WAS CORRECT OR INCORRECT & SHOW THE CORRECT ANSWER FOR INCORRECT RESPONSES.
- CALCULATE THE FINAL SCORE. , DISPLAY FINAL RESULTS & PRINT THE USER'S SCORE AND PERFORMANCE MESSAGE.
- PLAY AGAIN: ASK THE USER IF THEY WANT TO PLAY AGAIN.



# IMPORTANT POINTS

- YOU CAN ADD SOME MORE FEATURES ACCORDING TO YOUR INTEREST, IT SHOWS YOUR CREATIVITY.
- PUSH YOUR CODE TO **GITHUB** AND DO SHARE THE LINK IN THE **LINKEDIN** POST.
- AFTER COMPLETING THE TASK DO SHARE YOUR TASK VIDEO ALONG WITH THE GITHUB REPO LINK AND POST IT ON LINKEDIN AND DON'T FORGET TO TAG **PROGRAMMERSTECH**.
- ALSO, DEPLOY YOUR PROJECT ON **GITHUB** OR NETLIFY IT WILL BE AWESOME.
- YOU CAN ADD THESE PROJECTS TO YOUR RESUME AS WELL.
- SHOW YOUR DESIGN QUALITY THROUGH THIS **INTERNSHIP**