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1. Proposed Names

The following is a table of proposed names for the club and reasons for the same.

DedSec	Digital Security abbreviated as DedSec
DefSec	A Portmanteau of Defense and Security
The Eye	Representing a skill or ability like a reference to sharp eyes
nullSec	A Portmanteau of "null" (which means nothing) and Security. Something like the "Anonymous" hacktivist group.

2. Club Goals and Activities

There is a plan to execute 5 Club Goals throughout the existence of the club. For the current academic year of 2022-2023, we decide to implement only 2 of the 5 Goals. Please note, that the aim and goals for the current academic year of 2022-2023 have been highlighted in yellow.

2.1. Conduct Workshops and Training

This is one of the 5 possible goals to implement in the current academic year of 2022-2023. We aim to conduct 3 Workshops throughout the current year.

We wish to name them the "TRIX" Series of workshops ("TRIX" as a word emerged from "Tricks" – aiming to teach what are technically tricks using computers).

The outline of the TRIX Series is as follows:

Name	Aim	Target Audience	Duration	Notes
TRIX-1	Cybersecurity Awareness	All Students and Faculty in PSGCT	2 Sessions. 1 Hour per session.	**Session 1** Real life Analysis of Security Incidents and how to be safe and report cybercrimes. **Session 2** Technical Training with simulated CyberPhysicalSystems, Web Attacks, Viruses and Ransomware, etc.
TRIX-2	Linux and Networking Basics	CSE Department, AMCS Department, Interested Faculty from any department	3 Hours	Will Introduce the audiences to Linux Operating System and basics of Operating Systems. Will also introduce the audience to Basics of Networking. The outcomes of this session will ensure the audience will be able to use any given Linux system and perform basic network administration.
TRIX-3	BurpSuite and Tor	CSE Students of 3rd and 4th Year, Interested Faculty from any department with a history of Cybersecurity in their Career	2 Hours	**Prerequisites** - Basics of Application Layer Services [Needs/Principles of Application Layer Protocols – Role of proxy, Web and HTTP -FTP - Electronic Mail (SMTP-POP3-IMAP-MIME)-DHCP-DNS-DASH-QUIC] [CO5 | 19Z504] **Content Covered** Installation and Usage of Burpsuite. Intro to Dark Web and The Onion Routing Project.

The dates can be fixed at faculty advisor's own discretion, taking into consideration a few hurdles for target audiences like Continuous Assessment Tests, Semester Examinations, etcetera.

These events would require no funding, except for – **if** the club wishes to provide refreshments during the progress of the event.

2.2 Work with Network Maintenance Cell to Secure PSG Infrastructure

As some of the members of the department may or may not know, PSG's Infrastructure is prone to security incidents which is indeed a concern as our Network and Servers are highly critical digital assets.

An aim of our club would be to constantly monitor PSG College of Technology's Digital Assets and perform routine Gray Box Penetration Testing Operations in order to ensure digital security for the institution.

2.3 Conduct Capture-The-Flag Competitions

Another goal for the club is to conduct competitions of "Capture-The-Flag" style. CTF (Capture The Flag) is a kind of information security competition that challenges contestants to solve a variety of tasks ranging from a scavenger hunt on Wikipedia to basic programming exercises, to hacking one's way into a given vulnerable server to identify key data. In these challenges, the contestant is usually asked to find a specific piece of text that may be hidden on the server or behind a webpage. This goal is called the flag, hence the name.

CTF Competitions require basic infrastructure to be organized as well as one or more skilled personnel (a team of organizers ranging from 1 member to a maximum of 5 members). The outline of the events planned for the academic year 2022-2023 is as follows:

Name	Target Audience	Duration	Notes
hack0de	Open to students of only Semesters 1, 2 and 3 from CSE Department	3 Hours (Preferably hosted during the Afternoon Session of College)	A beginner level CTF competition, which can be solved by anyone with knowledge in about 1 Hour, and hence will be restricted to beginners. This will feature 15 challenges within the CTF, and the participants will be made into teams of 2-5 (depending on rate of participation)
Cr4ckJack	Open to students of only 2nd, 3rd and 4th year from all Departments	3 Hours (Preferably hosted during the Afternoon Session of College)	An intermediate/advance level CTF competition, which has prerequisites of basics of Information Security. This will feature 60 challenges within the CTF, and the participants will be made into teams of 2-5 (depending on rate of participation)
Flash Surge	Open to all Interested Faculty	2 Hours (Preferably hosted during evening hours or Saturday)	A beginner/intermediate level CTF competition. This will feature 10 challenges within the CTF, and the participants will be made into team of 2-5 (depending on the faculty's discretion)

The abovementioned 3 planned hackathons for the academic year would require a small amount of funding as estimated below:

Details	Required Funding	Quantity
3 Prizes to Winners in a ratio of 5:3:2	At sole discretion of The Association (CSEA)	x3 (3 CTF Hackathons to be conducted)
Cloud Compute Instance for 2-5 days	USD5-7	x3 (3 CTF Hackathons to be conducted)
Refreshments for Participants	Minimum of INR1000, range will be based on participation levels	x3 (3 CTF Hackathons to be conducted)
Room Booking within PSG Tech	At sole discretion of The Association (CSEA)	x3 (3 CTF Hackathons to be conducted)
Room Décor and Aesthetic Management for attracting participants	INR1000 to INR2500	x1 (Décor Items purchased once can be reused)
Advertisement Banners and Billboard Digital Advertising	Dependant on Students Union and PSG College of Technology's Pricing	x3 (3 CTF Hackathons to be conducted)

The dates can be fixed at faculty advisor's own discretion, taking into consideration a few hurdles for target audiences like Continuous Assessment Tests, Semester Examinations, etcetera.

2.4 Work with intra-college clubs

This goal aims to work with other clubs within the college like the Coding Club, and other associations and councils like the Institution Innovation Council in order to assist secure other infrastructure that are under PSG College of Technology's Intellectual Property and Innovations.

2.5 Provide External Cybersecurity Solutions

This goal aims for PSG College of Technology to provide Cyber Security consultation as an independent consultancies services. Through this, PSG College of Technology can raise funds for training more students of our institution.

A list of possible services is as follows:

Offensive Security

red teaming simulation

vulnerability assessment/penetration testing

source code reviews / vulnerability research

Defensive Security

DFIR

threat hunting

cyber watchdog / continuous asset monitoring

threat intelligence

These services can be offered at minimal possible rates in order to gain as much traction as possible in the industry, and raise as much as possible.

Using the collected funds, these can be split into 50/50 – where 50% of the earnings can be saved and used for Club Funding, and another 50% of the earnings can be saved and used to provide students scholarships on Internationally Recognized Cybersecurity Training Programmes like the Certified Ethical Hacker programme by EC Council.

3. Club Wings

The club is proposed to have 5 wings, and 5 head members for each wing of the club. The wing head members must be separate; however, one club member can be a part of 1 or more wings.

It is suggested to conduct recruitments of club members through online Forms as well as personal one-to-one interviews in order to recruit members who are genuinely interested in the club and will upkeep the club and activities.

3.1 CTF Wing

The CTF (Capture-The-Flag) wing will be responsible for organizing CTF Hackathon Events (as described in "Goals" section **2.3**) throughout the academic year.

3.2 Workshops and Training Wing

The Workshops and Training Wing will be responsible for organizing Workshops and Training. Training Programmes can also be organized for peers, in order to train more students in our esteemed institution. This wing must consist of at least 2-5 members who are well-trained in the field – hence, recruitment for this field **must** include a Technical as well as Basic Theoretical Cybersecurity Assessment.

3.3 – 3.5 Projects

In order to be self-efficient and equip ourselves by preparing for the goals we aim to achieve in the forthcoming academic years (namely, "Goals" **2.2**, **2.4**, **2.5**), we must train ourselves and prepare for the same, and hence, there will be 3 wings performing projects to ensure the team is technically sound.

3.3 Projects: Research and Development Wing

The Research Wing will uptake Research and Development Projects in the field of Cybersecurity, in order to perform basic Research Tasks and Develop Proof of Concepts on Projects one by one.

A few proposed projects are described below:

Title
Analyzing Dark Web Leaks using Big Data Analytics to report leaks using M.L
Automating Security in SCADA and IoT
Training A.I/M.L to automate Dark Web Monitoring using NLP
Integrating A.I with SIEM to automate Blue and Red Teams

3.4 – 3.5 Projects: Critical Wings // "A-OPS" Wings

The last 2 wings will be considered as Critical Wings under the club, as they will be responsible for Critical Operations to be conducted as club activities. These are operations that will be of extremely high value to PSG College of Technology, and will assist the college in boosting its reputation as well as help identify the highly skilled members of PSG College of technology.

To be a member of these 2 wings, one will have to sign a Trust Policy agreement, which, if breached, they will be liable to suspension or expel from the College, in order to ensure the members recognize the criticality of their positions.

These Wings are also called the "A-OPS" wings which stands for "Attack Operations".

3.4 Projects: Bug Bounties Wing

The Bug Bounties Wing will consist of members who will secure external private assets of organizations that provide Bug Bounty Programmes, and on member's discretion, may or may not share a percentage of the earnt Bug Bounty in order to assist club funding. Anyone that secures a place on an organization's Hall Of Fame will be a great asset to PSG College of Technology.

These members will also be responsible for working on future goals (namely, "Goals" **2.2**, **2.4**, **2.5**), assisting to secure digital assets of the college through routine asset monitoring.

3.5 Projects: OpRaksha Wing

"OpRaksha" – stands for "Operation Raksha", is an operation that has been ideated for critical club activities. As a member of the OpRaksha wing, one will be responsible to constantly monitor Government of India's assets through Black Box Penetration Testing. If any information is found, it **must** be disclosed to PSG College of Technology, who will then contact CERT-IN or NCIIPC so as to secure the respective Government Asset.

For clarification, this operation is completely legal, and it is completely legal for anyone to perform penetration testing operations on Government Assets as long as they ethically report it to the respective authority in time. If students, through PSG College of Technology, report multiple vulnerabilities on Government Assets, it will increase the College Reputation as well as Student Reputation, and will be a huge Career Boost for the student.

The members of this wing will also be responsible for working on future goals (namely, "Goals" **2.2**, **2.4**, **2.5**), assisting to secure digital assets of the college through routine asset monitoring.

4. Club Members and Roles

The club is proposed to have 5 member roles, described in the table below:

Role	Role Description	Wings	Recruitment Criteria	Notes
Back-End Developer	To develop back-end systems using language of choice for ongoing Projects	- CTF Wing - R&D Wing - Bug Bounties Wing - OpRaksha Wing	Open to Students of All Years of CSE Department	
Front-End Developer	To develop front-end systems using language of choice for ongoing Projects	- CTF Wing - R&D Wing - Bug Bounties Wing - OpRaksha Wing	Open to Students of All Years of CSE Department	
DevOps and Projects Manager	To assist with DevOps, and manage Projects under the 3 Projects Wings	- R&D Wing - Bug Bounties Wing - OpRaksha Wing	Open to 3rd and 4th Year Students of CSE Department	Eligible for Wing Head for listed wings
Graphics Designer and Social Media Manager	To assist with Social Media Management, Advertising, and other tasks including Logistics and Media for Events	- CTF Wing - Workshop and Trainings Wing	Open to Students of All Years of CSE Department	
Skilled Personnel for Training and Events	To conduct training and events as well as for Critical Wings	All Wings	Open to 2nd, 3rd and 4th Year Students of CSE Department	Eligible for Wing Head for listed wings