Project Manager and Coordinator Application

2025-26

For

Mathematics Club

Centre for Innovation
IIT Madras

Instructions

General Instructions

- Mention the following details in the start of your application.

Name:		Insti Name:
Roll:	Room:	Hostel:
Phone (WA):	CGPA:	Email:

- Join the Aspiring Coordinators WhatsApp group for further updates: Aspiring Coordinators Whatsapp Group
- The recommended font is a standard font size 11-13.
- The applications have to be submitted in PDF format, named as:
  `<First_name>_<Roll_Number>_Mathematics_Club_ProjectManager.pdf`
  For example, `Navin_EE23B047_Mathematics_Club_ProjectManager.pdf`.
- You can upload the finished applications in this Google Form
- You may submit the completed application on or before **11:59 PM, 21st May 2025.**

Note:

- Be concise and to the point. Bullet points are preferred over sprawling paragraphs.
- It is fine even if you don't answer all the questions.
- Focus on the first few questions before attempting the bonus questions.
- If you have any queries, you can reach out to the heads anytime you want:
  - Navinkumar L (EE23B047): 9028770420
  - Karthik Kashyap (EE23B030): 8073978167

Project Management Section

Note: be as concise as possible. Try to avoid using too many words.

1. What does the PM team do and what is your motivation to join the PM team? As you will also be a coordinator in a club, do you think you will be able to manage both the PORs? Justify yourself.

2. PM reviews:

   a) Explain what PM reviews are and make a pros and cons list. Do you have any other suggestions on how to track the projects regularly?

   b) Imagine that you have booked a room for the PM review of your club and the professor has also arrived. But another club (outside CFI) has booked the same room for different, but more urgent purposes. What will you do:

      - In this situation
      - To avoid such situations in the future

3. Imagine you are among the first project managers at CFI, tasked with designing and executing flagship events to enhance the work culture, visibility, and impact of CFI. Assume no existing events like the Research Conclave, Open House, or Summer School. Propose a yearly timeline of events you would organize, explaining the purpose of each event, its timing, and how you would execute it. Try making comparisons with the existing events conducted by CFI.

4. Case Study: Software Project – AI-Based Resume Screening Tool

   Project Background:

   Recruitment processes are often time-consuming due to the manual screening of resumes. Your team is tasked with building a software solution that uses natural language processing (NLP) and machine learning to automatically screen and rank resumes based on job descriptions.

   Task Breakdown:

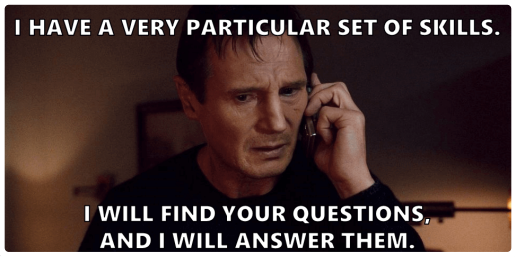
   - Project Charter
   - Work Breakdown Structure (WBS)
   - Budget Plan
   - Risk Register & Risk Mitigation Plan
   - Project Report
   - Closing Document for Knowledge Transfer

   Stakeholder Questions:

   - To Recruiters (Users)
   - To Technical Team
   - To Funding Bodies
   - To Procurement

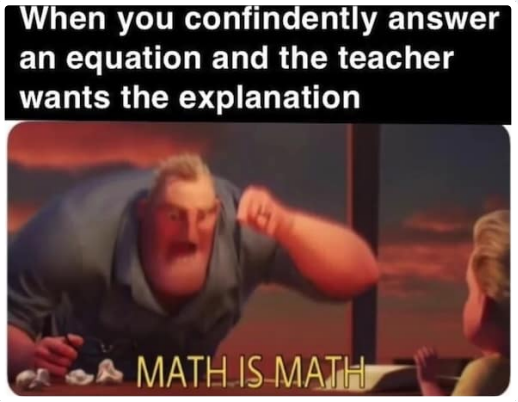
Club Coordinator Section

§1 Managerial Questions



1. Getting to know you!
   a) State your motivation to become a Mathematics Club Coordinator. Why should we select you?
   b) Expand upon your *strengths* and *weaknesses* (in a tabular form) that are relevant to the coordinator position. Also, use this opportunity to tell us about any previous experiences you've had.
   c) Mention all *PoRs/activities* you are planning to take next year. Weekly, how much time do you think you will be able to commit to this PoR? How much time will you commit to other PoRs and academic commitments?
2. What do you think will be your roles and responsibilities as a coordinator in the coming tenure? What do you expect to learn and gain out of your tenure as a Coordinator?
3. Some ideas :D
   a) Mention some events that you have attended as a freshie, and what you liked about them. Which event did you enjoy the most? What made it stand out?
   b) Propose *new ideas* for the club sessions, competitions and events that you envision implementing during your tenure as the coordinator.
   c) Come up with some fun ways in which you can *engage the audience* while they are waiting for an event to begin/in between two rounds of a competition.
   d) Apart from events and contests, what, according to you, are some other possible ways to interact with GSB next year?
   e) *(BONUS):* A lot of the audience for our events ends up being dominated by the freshie crowd. Freshies are well and good, but many other students have lost touch with Mathematics in the latter years. How do we reconnect with them?
4. Find out about the events the Mathematics club have conducted till now. Name all the events conducted and perform a SWOT analysis of any two of them (one session kind of event and one Problem-Solving event).
5. As coordinators you will be managing Deputy Coordinators (DCs) in the latter half of your tenure, who will be looking up to you as mentors.
   a) What is your understanding of the role of a DC in our club?
   b) What are some of the ways in which you would be engaging them in the tenure? Think of avenues such as mini-projects, DC organized events, etc.
   c) What were some shortcomings in the DC tenure last year? It is completely fine if you were not a DC this year. You are expected to take fundaes for this question.
6. What are some clubs you see as potential collaborators for an event or contest? Keep in mind the division of work between the clubs during the collaboration.
7. *(BONUS):* What do you think is missing in the Mathematics Club? What would you like to see us do that has not been done before?

§2 Technical Questions



§2.1 Perceptions in Presentations

Prepare a presentation on a creative topic of your choice, which you can use to have a short teaching session for about 10 minutes. You will be presenting this to us during your interview. Be prepared :)

You can use any tools to make the presentation (including Canva and PowerPoint, and preferably not AI tools). A good starting point would be to explore some ideas such as: Markov Chains, Fermat's Little Theorem, Fractal Geometry.

Note: These are just examples of the kind of topics that we expect from you, ***don't use*** *these as the topics directly! (Brownie points if you can teach us something that we did not know beforehand XD)*

§2.2 Arti-coal-ation

Write a brief and engaging article describing elegantly/express your views on any one the following in around 400 words:

1. The Axiom of Choice
2. The Collatz Conjecture
3. The Plateau Problem
4. Goldbach's Conjecture
5. Banach-Tarski Paradox

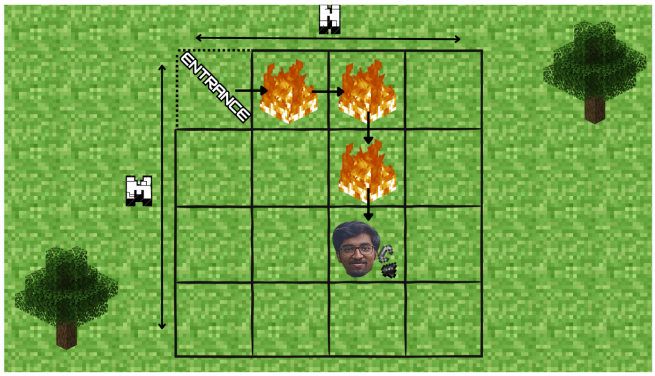
§2.3 Question yourself much?

As a coordinator, you will need to set intuitive and thought-provoking questions for contests. Design a scaled mini contest containing 3 questions with **varying difficulty keeping all the participants in mind**. Make questions on your own or take inspiration from existing questions and modify them, not just the values (Don't copy directly from the internet). For each question, clearly think about what it is that you are testing the contestant upon.

§2.4 Oops!... I Grid It Again

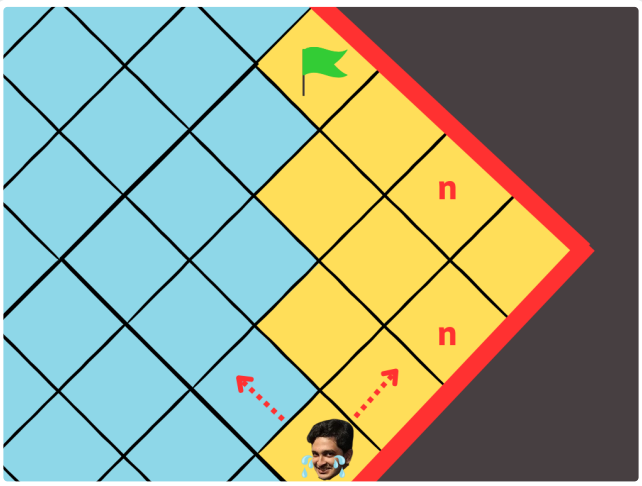
Here are some mind-boggling (and quite depressing) puzzles for you to ponder over and answer:

1. Navin, in a frenzy, ravages through the peaceful blocks of MathLand (an $m \times n$ grid of blocks with a single entrance-and-exit block at one corner) and is impinging chaos in a once harmonious world by burning each block that he passes through. He does not burn the entrance block and he cannot move diagonally. It turns out that Navin's actions would come to bite him in the end after all, as he won't be able to escape. What inferences can you make about MathLand, that is about m and n?



The arrangement shown above is just an example. In the image above, $m = 4$ and $n = 4$

2. KK mourns the untimely loss of his dear co-head and enters a drunkard state and starts walking along the shore of a beach with no guard-rails. Since he is drunk he CANNOT walk in a straight line and can only walk diagonally in steps as shown in the image. The region in yellow denotes sand on which he can walk on. If he steps foot on the sea shown by blue, he will get swept away. It is physically impossible for him to climb onto the mountain shown in grey.



The arrangement shown above is just an example. In the image above, $n = 4$

How likely (as a probability in terms of n) is he to reach the green flag without being swept away by the sea?

***** END *****


You're still here.
It's over. Go home.