



# Software Hackathon

Once there was a meeting of the smartest and brightest minds of the country. The motley group consisted of people from disparate backgrounds ranging from mathematics, physics, and philosophy to social scientists, activists, and literature laureates. The group had a very specific purpose – “How do you impact lives of millions using few effective resources”. While the group was discussing its various solutions a computer scientist proceeded to the board and showed them how using a computer application we can implement this. But the team had no proficiency whatsoever in programming so they have decided to host a Hackathon to use the power of the development community and implement solutions on their chosen themes.

For all you aspirant developers there, IEEE-PEC brings to you a programming extravaganza, Hackathon, during PECFEST'18. We aim to provide a platform for the budding developers to design and develop technological solutions ranging from mobile apps to video-games for these themes.

## **Description**

Software Hackathon is an event for budding developers to test their mettle against their peers and develop a prototype application in 12 hours on the given theme(s). Before you can go all “Bazinga” in the finals and jump into coding those amazing application and concepts you have to clear the preliminary round. The details are as follows:-

## **Preliminary Round**

1. The preliminary round will be conducted online where the participants would be tested on:-
  - a. Programming Concepts:- Contestants would have to solve MCQs based on general development topics like OOPS, DBMS, OS, etc. These are designed to test their grasp of programming concepts and knowledge.
  - b. Competitive Coding:- Contestants would have to solve questions designed to test their problem solving. These would be based upon data structures and algorithms, mathematics, arrays, string manipulation, etc.
2. Platform for this round and link to the competition will be mailed to the participants who have registered for the event on Pecfest's website.
3. Link for the competition will also be posted on Pecfest's website and event page



[www.pecfest.in](http://www.pecfest.in)



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4. Duration for the round will be 3 hours that the registered teams can take any time from **October 20, 2018, 10:00AM to October 21, 10:00PM.**
5. If the team qualifies for the next round they will be required to fill a form to let us know whether they will be coming for onsite finals or not. The link will be mailed to qualifying teams.

### Final Round

All the qualifying teams are required to be present on site during one of the nights of **PECFEST from 9:30 PM till 9:30 AM on the other day.** The event will happen overnight. onwards. The candidates would be presented with **Theme(s)** on spot, for which teams have to develop an application as a solution. All the code and design pertaining to the application must be done onsite and during the 12 hours of Hackathon. All the teams must

bring their own systems (laptops, keyboards, mouse and extension cables). We will be providing the participants with a stable wireless connection for the internet but they are allowed to bring their own Wi-Fi as well.

1. The teams are required to submit:-
  - a. A **Readme file** with complete directions on use of the application, installation instructions, a specific step-by-step walk-through, and any application dependencies, if applicable.
  - b. An **executable application file or software package** for your solution.
  - c. **Image(s)/presentation/videos** that help demonstrate the functionality of your application.
2. **Platforms available** that participants can develop on are as follows:-
  - a. Mobile app(Android/iOS)
  - b. Website
  - c. Web Application
  - d. Game

### NOTE:-

1. **Theme(s) will be disclosed at the day of the competition.**
2. **The final event will be held at Punjab Engineering College (Deemed to be University) Campus during one of the nights of PECFEST and its details will be conveyed to all the shortlisted teams via registered email.**



## Scoring

1. The scoring criteria for preliminary round will be known to participants before they start the online test. They are requested to go through them carefully.
2. For the final round your app will be **judged according to** the following criteria:-
  - a. User friendliness (UI/UX): how easy, accessible and intuitive the application is for the user **(25%)**
  - b. Value/Effectiveness: What impact does the application have or can have **(25%)**
  - c. Design: The code structure, modularity, using comments and documentation, etc. **(25%)**
  - d. Uniqueness: How unique the idea is from current applications **(25%)**

## Eligibility

To be eligible to participate you need to:-

1. Be a student in a recognized university and have a Student ID card.
2. Have a team of a maximum of 4 members and minimum of 2 members.
3. All the members of the team must be students at recognized universities.
4. Teams can be formed within students of different universities.

## References

Refer to these links for starting with your journey if you are stuck somewhere. :)

1. <https://www.geeksforgeeks.org/top-algorithms-and-data-structures-for-competitive-programming/>
2. <https://www.hackerearth.com/practice/notes/getting-started-with-the-sport-of-programming/>
3. <https://discuss.codechef.com/questions/37684/learn-competitive-programming>
4. <https://medium.freecodecamp.org/want-to-learn-web-development-but-dont-know-where-to-start-478ed62e0e55>
5. <https://developer.android.com/training/basics/firstapp/>
6. <https://developer.apple.com/library/archive/referencelibrary/GettingStarted/DevelopiOSAppsSwift/>
7. <https://medium.freecodecamp.org/from-zero-to-game-designer-how-to-start-building-video-games-even-if-you-dont-have-any-experience-5e2f9f45f4bb>



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