

The top right corner features a series of overlapping squares in various shades of gray, creating a stepped effect. The bottom right corner has a solid dark blue horizontal bar, with a pink geometric shape (a square with a triangle cut off its top-right corner) partially visible above it.

# NJACK

## Winter of Code 2018

December '18

### Student Manual

# What is NJACK Winter of Code?

You have seen the website of [NWoC](#) and now you want to know about it more. That's great! So, here we go :

NJACK Winter of Code is an initiative by Open Source Department of NJACK, IIT Patna for the students, who have never participated in Free or Open Source Software (FOSS) development before, to get them involved during the winter vacations and break the ice of Open Source contributions.

All of the work is going to be on [GitHub](#), a website which is used for source code hosting and collaborative software development. NWoC is modelled to be similar to but smaller in scope than [Google Summer of Code](#) (GSoC). GSoC is a global program that matches students up with open source, free software and technology-related organizations to write code and get paid for the same.

NWoC in a similar way, is aimed at introducing new students in the area. Registered students will have to choose one or more projects from the project list, which will be released in the end of November '18.

Every project list will have at least one mentor. Students will then contact the mentor who shall be guiding them on the project.

# Goals of the Program

The major goals of NWoC are :

- Inspire young developers to get involved in Open Source software development.
- Help 1st and 2nd year students to master the development workflow of Git and GitHub.
- Connect with the mentors in the campus, help them be in contact even after the program ends.
- Prepare for other Open Source programs like Google Summer of Code, Outreachy, Summer of Privacy etc. See an elaborated list [here](#).

# Why Should I Apply?

Well now you've known that NJACK Winter of Code seems like something productive to do this December. But shouldn't I just go on a trip or sleep my way through the vacations? Well here are some of the reasons why you should apply for it.

## Work Experience

NWoC is a place where you not only get to use your current skill set on existing projects, but you are definitely going to hone them. The feeling of working in collaboration is one important skill set which probably is going to be new to you. On the other hand, the mentors of the projects themselves have recently been through what you would be going through while creating your first code patch. So, you get to be patient while working on the small fixes and managing the git workflow.

## Acquiring New Skill Sets

While you'll be adding your piece of code to the existing piece of software, you will get to learn the structure of the software and more about the process of creating it from scratch.

That, in future will help you in creating your own software.

## Building Your Network

While being a part of NWoC, you will get to have healthy conversations with many helpful and talented mentors, most of whom would be your seniors.

This will help you build your network in your early days itself. You can then approach them anytime after the program ends. They remain with you, in your connections.

## Sense Of Achievement

It feels really great to have your first patch submitted. It feels like an achievement when your contribution goes online and is ready to be helpful to other folks throughout the world.

## Mock for GSoC

Many of the mentors of NWoC have been selected in Google Summer of Code before, both as students and as mentors. If you wish to apply for GSoC in the summers, NWoC is probably one of the best things going to happen with you in December.

## For The Love Of Code And Open Source

If you love to code and it relates even distinctly to your passion, then simply express that love, by being a part of the NJACK Winter of Code!

# Am I Good Enough?

Last year, four students from the freshmen year at IIT Patna made their way to GSoC. If they can, this simply rules out myths like first years are not meant for it. The skills you need to be a part of it are :

## Communication Skills

You will have to speak up. You will have to mail to the project mentor. You will have to submit your query to the mentor in case of any issue or facing difficulty in understanding anything. As long as you are able to express yourself, there is nothing to stop you from achieving it.

## A Working Laptop / PC With Internet Throughout The Program

Most of the time, you will be coding and pushing your code online. This requires you to have a computer and a working internet connection with you.

Tip: Don't be afraid if you don't have a Linux / Ubuntu operating system. Your mentor is there to help you out.

# Applying

## Registration

Navigate to the bottom of [NWoC](#) website and fill the form to register as a student.

## Leaderboard

The leaderboard which displays all the activities by registered students would be live at the [NWoC](#) website. Basically it represents the activity board of each and every student registered in NWoC.

## Making Contact

The contact details of each mentor will be available to you on the projects list. It is simple enough to understand that the details are public for no one other than you. So, you have every right to contact the mentor and ask for help on the project.

At the same time, we do hope that the participants be polite while making contact. One should realise that after all, the mentors are students themselves, and they might not always be available at the moment's notice. Ideally one should wait for at least a day for the mentor's reply.

# Coding

## Joining GitHub

Sign Up on [GitHub](#). Choose a username for you, and voila! You've met the first requirement of being a part of NWoC. Share your username with us!

## Choosing A Project

First of all, you can choose as many projects as you want. It's not about doing everything on just one project, but solving as many issues as you can, contributing as much as you can. Navigate over to NWoC website and hunt down projects by their description. All of the projects must be on GitHub.

Learn how to get acquainted with GitHub interface, by various resources available online.

## Adding Your Own Project

NWoC is about working on Open Source in December. In case you did not like any of the projects listed, contact us at [njack@iitp.ac.in](mailto:njack@iitp.ac.in). Tell us about the project you're working on, that will count as a valid contribution in NWoC as well, given that the project is not trivial enough and is approved by us.



## Coding Style

Almost all the languages have a definitive style guide for them. Putting correct indentation, obeying line lengths, etc. are the features which make the code more and more readable. Many of the projects follow [Google Style Guide](#). You should work with your mentor about the code styling.

## Software Development

Develop the project codebase. Write up test suites. Add third party integrations and lots of other cool stuff depending on your project. After cooking up the perfect recipe, use Git to keep track of the changes and create your Pull Requests on GitHub. Fix as many issues you can and add as many new features possible in the project. Communicate with your mentor about further requirements and / or improvements.

## Writing Documentation

The code that you have added must be documented thoroughly. Open Source is about writing code that humans can read and understand. Without documentation, it is so hard to read any code. Hence, add information in README, in the comments of code etc. Ask the mentor to help you out with it.