

Pre-Interview Exercises

Rules

- You are allowed to use any resource/help to *learn*
- All work effort must be individual however
- You should be able to explain whatever code you have written

What to submit, where to submit, when to submit

- In case of code:
 - Submit a link to a public git repository (e.g. on github.com or gitlab.com) which has your code
 - The repository should include a suitable README or other relevant instructions to run your code
- In case of demo video: submit a link to a short video demo (3-5 min) of your work; do not submit the video itself, but only the link, e.g. using Dropbox or googledoc; ensure that the link is viewable by all
- In case of text: submit a link to a text or HTML or PDF file; do not submit the file itself, but only the link, e.g. using Dropbox or googledoc; ensure that the link is viewable by all
- Where to submit: you will be given a link to a web form, corresponding to the position for which you are applying
- When to submit: you will be given a deadline, corresponding to the position for which you are applying

Exercise-1: Python, Graph Drawing

- Write code in python to draw at least 3 of the graphs from <https://tinyurl.com/u5india>
- For each graph there, the data source is given
- You will have to write code to suitably parse the data source (from xls or CSV) and then draw the graph (e.g. using pyplot)
- Submit: code and demo video

Exercise-2: Web Form

- Create the web form at: <https://happy22kids.uho.org.in/joinchain.php> and also the page at <https://happy22kids.uho.org.in/chain4childrenscheer.php>

- You can use PHP or any other technology (e.g. django python) for the backend
- You can use any popular current technology for the front-end (e.g. HTML5/CSS, ReactJS)
- You can use any popular current technology for the database (e.g. MySQL, PostgreSQL)
- Submit: code and demo video

Exercise-3: Online Courses

- Join at least 2 of the Computer Science courses at <https://garuda.bodhi.cse.iitb.ac.in> and solve as many in-video and out-of-video questions as possible
- Mention as part of your submission, the username/email using which you watched the videos and attempted the problems
- Summarize in about 1-page as to what concepts you learnt from these courses
- Submit: text/PDF of summary

Exercise-4: General Communication/Language Skill

- Summarize/review in about 1-page any book you have read outside of your subject matter (CS/IT): fictional or non-fictional
- Submit: text/PDF of summary

Exercise-5: Any Other Project

- Describe in about 1-page any other substantial programming or other project you have done, relevant to the project position for which you are applying
- Submit: code, text/PDF of summary