



# Mastering Heaps Data Structure

Special class



# Mastering Heaps Data Structure

**Part Of: Course on Standard Template Library (STL) in C++**

**Starting From October 14**

Let's crack Competitive Programming together!



# Sanket Singh



- Software Development Engineer @ **LinkedIn**
- Former Software Developer @ **Interviewbit/Scaler**
- Former Product Engineer @ **Coding Blocks**
- Cracked **Google** Summer Of Code 2019 under **Harvard University**
- Former Research Intern @ **ISRO (Indian Space Research Organisation)**
- Taught 7,500+ programmers in Data Structures, Algorithms and Fundamentals of Computer Science
- Work experience with Startups like **Kakcho**, **Talview**, **FableHQ**
- Got **Rank 1** in Codechef Long Challenges
- Won **Infosys** Digital Make-a-thon





# What we will discuss today??

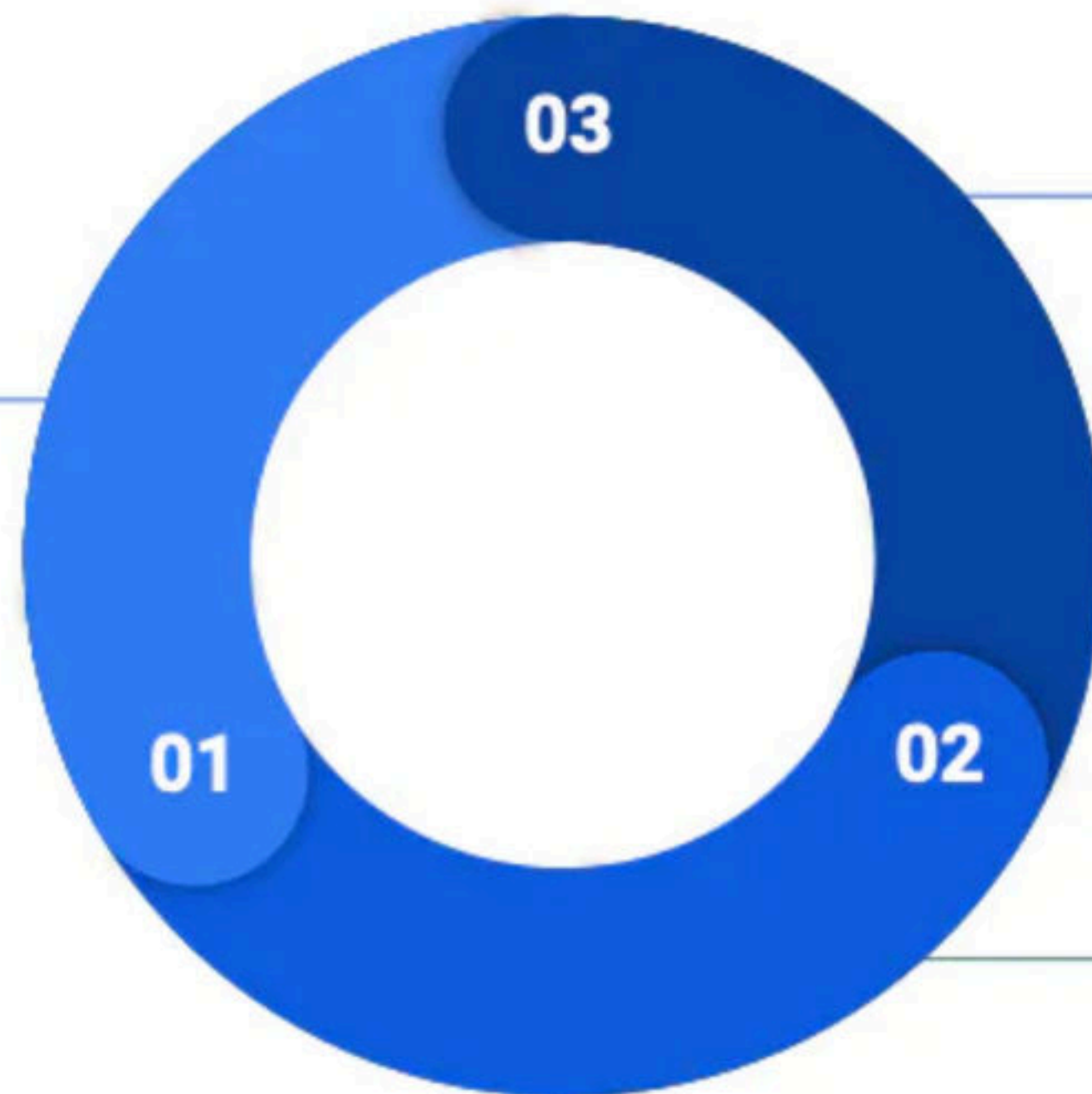
- Motivation Problem For Priority Queue
- Available Solutions with Arrays, LL, Queues, Stacks, maps, BBST etc
- Introduction To Heap
- Structure Of Heap
- Insertion And Deletion In Heap
- Why Heap is always a Binary Tree and a CBT
- Creating Heap From Array Inplace Good and Bad solutions Both
- Some Elementary Maths Incoming Beware!!
- Problem Solving



# What you will get

## Live Interactive Classes

Attend live interactive classes with our top educators.



## Doubt Support

Get your doubts resolved by our expert panel of teaching assistants and community members

## Practice Relevant Problems @ CodeChef

Each class comes with a set of curated practice problems to help you apply the concepts in real time.





# Educators

- **Curated faculty** with a strong **background in competitive programming** & hands on experience of educational training.
- Highly competent technical minds with **ICPC world finals, IOI medals**, IOI team training experience and Codeforces Grandmasters as accolades.
- Alumni of the most respected technology teams from around the world. (Google, Flipkart, LinkedIn, Facebook, Amazon, Goldman Sachs, AppDynamics)
- Young & dynamic faculty to make each class as engaging as they are informative.



# Educators



**Deepak Gour**

ICPC World Finalist 2020 | Former Instructor  
@InterviewBit | Software Engineer at AppDynamics



**Himanshu Singh**

World Finalist ICPC 2020, Winner Techgig Code  
Gladiators 2020, Winner TCC '19, 2020 CSE Graduate  
from IIT BHU, Works at Nutanix



**Arjun P**

I am an IOI 2015 bronze medallist, and my team  
qualified for the upcoming ICPC 2020 World Finals to  
be held in Moscow, Russia.



**Murugappan S**

Software engineer at Google. Have won many  
programming contests. Max Rating of 2192 in  
codeforces and 2201 in codechef.



**Triveni Mahatha**

Qualified ICPC 2016 World Final. Won multiple  
Codechef Long Challenges (India). ICPC Onsite  
Regionals' Problem setter and Judge. IIT Kanpur.



**Tanuj Khattar**

ACM ICPC World Finalist - 2017, 2018. Indian IOI Team  
Trainer 2016-2018. Worked @ Google, Facebook, HFT.  
Quantum Computing Enthusiast.





# Educators



**Riya Bansal**

Software Engineer at Flipkart | Former SDE and Instructor @ InterviewBit | Google Women TechMakers Scholar 2018



**Sanket Singh**

Software Development Engineer @ LinkedIn | Former SDE @ Interviewbit | Google Summer of Code 2019 @ Harvard University | Former Intern @ISRO



**Nishchay Manwani**

Hey I am Nishchay Manwani from CSE, IIT Guwahati and I'm a Seven star on Codechef and International Grandmaster on Codeforces.



**Pulkit Chhabra**

Codeforces: 2246 | Codechef: 2416 | Former SDE Intern @CodeNation | Former Intern @HackerRank

and many more joining soon...





# Topic-wise structure

<b>Beginner</b>	<ul style="list-style-type: none"><li>● Introduction to programming</li><li>● C++ Foundation</li></ul>	<ul style="list-style-type: none"><li>● Java Foundation</li><li>● Python Foundation</li></ul>
<b>Intermediate</b>	<ul style="list-style-type: none"><li>● Basic Data Structures</li><li>● STLs</li><li>● Sorting and Searching</li><li>● Greedy Algorithms</li></ul>	<ul style="list-style-type: none"><li>● Basic Data Structures 2</li><li>● Number Theory</li><li>● Recursion and DP</li></ul>
<b>Advanced</b>	<ul style="list-style-type: none"><li>● Segment Trees</li><li>● Trees and Graphs</li><li>● Advanced Dynamic Programming</li></ul>	<ul style="list-style-type: none"><li>● Graphs 2</li><li>● Computational Geometry</li></ul>
<b>Misc</b>	<ul style="list-style-type: none"><li>● ICPC Regionals + World Finals problem solving</li></ul>	



# Upcoming Courses



ENGLISH **INTERMEDIATE**

Course on Greedy Algorithms

Starts on Sep 21, 2020 • 8 lessons

Murugappan S



HINDI **ADVANCED**

Detailed Course on Graphs - I

Starts on Sep 21, 2020 • 9 lessons

Pulkit Chhabra



HINDI **INTERMEDIATE**

Course on Introduction to Number Theory

Starts on Sep 22, 2020 • 8 lessons

Nishchay Manwani





# Upcoming Courses



ENGLISH **BEGINNER**

Course on Recursion and Dynamic Programming

Starts on Sep 22, 2020 • 12 lessons

Arjun P



ENGLISH **INTERMEDIATE**

Course on Sorting and Searching

Starts on Sep 22, 2020 • 10 lessons

Riya Bansal



HINDI **INTERMEDIATE**

Course on Standard Template Library (STL) in C++

Starts on Sep 23, 2020 • 11 lessons

Sanket Singh



# Upcoming Courses



HINDI **INTERMEDIATE**

Course on Basic Data Structures - I

Starts on Sep 26, 2020 • 11 lessons

Deepak Gour



HINDI **INTERMEDIATE**

Course on Data Structures (Square Root Decomposition)

Starts on Sep 26, 2020 • 5 lessons

Tanuj Khattar



HINDI **BEGINNER**

Course on Introduction to Competitive Programming with C++

Starts on Sep 26, 2020 • 10 lessons

Triveni Mahatha





# Teaching Assistants support on chat and Doubts Forum



You may face issue with markdown in posts. In such cases, report it here along with the post link.

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# Course-wise Practice Problems



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## Learn Competitive Programming with CodeChef

### Trees and Graphs

Pulkit Chhabra

Starts on 21 Sep



CODECHEF

unacademy

🔼 Name

🔼 Code

🔼 Successful Submissions

🔼 Accuracy

Problems will be available in 6 days 7 hrs 23 mins 22 sec

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### Contest Starts In:

6

7

23

22

Days

Hrs

Min

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Go to Contest Ranks





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<input checked="" type="radio"/>	12 months	54% OFF	₹2,750 per month	₹33,000 Total (Incl. of all taxes)



SANKET10

Proceed to pay



# Upcoming Free Classes Schedule on website

FREE

## Live Classes

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Disjoint Set Union - II

Today, 7:00 PM

Pulkit Chhabra



Discussion on Merge Sort &...

Today, 9:00 PM

Riya Bansal



Headstart to Strings in STL

Today, 10:00 PM

Sanket Singh



ICPC past problems

Sep 19, 2020, 3:30 PM

Himanshu Singh